

THE FUTURE OF MONEY

by Alexander Dolgin



Which is worth more — material or symbolic status? Why give away money? Why do we pay for what we can get for free? **Can money measure human dignity?** What happens when everything becomes free? Is consumer inequality rising?

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*With gratitude to the people of Cyprus,
for their wisdom and openness
to the future.*

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FOREWORD

Donations: The Future of Money

We created DonateOpen.com to bring Alexander Dolgin's vision to life. This book gave us the theoretical foundation; the practice is ours.

The problem Dolgin addresses is in plain sight: money — humanity's ingenious invention — stops working precisely where we now need it most. In the physical world, prices do their job. They compress information about scarcity and value, about supply and demand, into a single number, and that number guides our decisions, as Adam Smith explained. But try applying that logic to a podcast, a blog, a novel, or a piece of music — to digital content that can be copied at negligible cost. Here the price mechanism breaks down. It no longer tells you what is good. This failure is captured by the paradox of uniform prices: all content costs roughly the same, and price therefore ceases to signal quality.

This is not a bug in the system. As Dolgin shows, it is a fundamental failure of money's ability to measure value. George Akerlof demonstrated how markets break down when quality cannot be properly assessed. In such conditions, incentives begin to favor what harms quality. What takes over is adverse selection — the phenomenon for which Akerlof shared the 2001 Nobel Prize with Michael Spence and Joseph Stiglitz. Together, these economists helped shape the economics of information. A central precursor of this line of thought was Kenneth Arrow, who received the Nobel Prize in 1972.

Yet while their discoveries did not go unnoticed, they were never fully absorbed. Today, a wide range of industries are afflicted by adverse selection, yet they are treated with cosmetic remedies that do not address the root cause.

Taking this line of thought further, Alexander Dolgin shows how adverse selection works in today's information markets: bad content is like weeds. If it is not identified and rooted out, it overruns and suffocates what is truly worth growing. When content appears on digital shelves without meaningful price signals or markers of quality, creators are pushed to chase attention rather than deliver real value. As a result, "junk food" crowds the shelves. Consumers find it harder to reach genuine quality and, over time, even to recognize it, as their taste gradually erodes. A vicious cycle takes hold: quality becomes harder to find, taste deteriorates, demand for quality declines, producing it becomes less profitable, and the downward spiral continues.

What Dolgin contributes is a diagnosis, tracing adverse selection to its root cause. In information markets, it is not technology or taste that drives this process. It begins with a breakdown of money as a measuring instrument. As long as texts can be reproduced without limit, they have no natural scarcity, and without scarcity the price mechanism has nothing to work with. Bad content drives out good not because audiences are incapable of telling the difference, but because the signal that would allow them to do so has gone dark.

The consequences are evident. Navigating content becomes guesswork, leading to a mismatch between people and the texts they consume. The quality of texts, arguments, and doctrines spirals downward, while competition in the marketplace of ideas grows less fair, paving the way for post-truth. These are the consequences of the universal right to speak and of what Dolgin calls information superconductivity. Adverse selection flourishes whenever people cannot quickly tell good from bad — when they can be easily fed things that do not serve their best interests.

Dolgin went beyond simply identifying the helplessness of money in the digital realm — a condition we have grown so used to that we barely notice it. He also came up with a way to restore money's signaling function under conditions where the standard pricing mechanism no longer works. His solution is, once you see it, almost obvious — which is the hallmark of a good idea. It is both elegant and workable: donations. Not charity. Not tips. Donations as post-payment — money paid after consumption, when consumers already know from experience what they have received. That "after" changes everything. It turns the act of donating into a signal: a signal of quality recognized by the consumer. It answers the question prices no longer answer: what is this worth?

Dolgin's key insight is that donations already encode this information. They are capable of far more than most people realize. More than a way of showing recognition or encouragement, they are signals of quality. Every time someone makes a donation, they are sending a signal about quality. Right now, that sig-

nal evaporates: it stays private, invisible, and useless to anyone trying to navigate a world flooded with content.

The DonateOpen team's contribution lies in making these signals visible. We collect and surface donation data, and we have built a ranking system in which the weight of each donation depends not only on its size but also on the standing of the donor. The principle is similar to the logic behind Google's PageRank, except that here it is applied to people rather than web pages.

The result is something the internet has never had: a ranking of quality, not popularity. It cannot be gamed with bots because donations cost real money, and it gets smarter as more people use it. These rankings create a public competition for status and reputation — perhaps the most honest and noble form of social competition. They open an Achievements Fair: a new kind of Vanity Fair in which mastery and quality are translated directly into status and income.

We are also addressing a second urgent problem of the consumer internet: too little money circulates through it. There is a widespread misconception that the B2C internet is awash in money. It is not. In reality, it accounts for only 2–3% of global GDP. Compare that share with the amount of time people spend online and the value they derive from it, and the imbalance is hard to miss. Today's digital revenues, driven mostly by advertising, support less than 1% of the workforce. Meanwhile, tens of millions of writers, podcasters, educators, and other creators enter the digital space each year only to compete for a slice of a pie that is structurally too small. Creators need far more income than advertising alone can provide, and donations can supply it. Once donations become public and prestigious, they unlock a model of content monetization that does not depend on advertising.

Imagine that someone who resonates with you — someone who inspires you and regularly teaches you something or changes how you think — is part of this donation-ranking “game,” and you have the power to boost their standing with a donation. In that kind of environment, people compete through donations and draw their social circles into the process.

This book asks whether money can measure the value of texts, works of art, cultural production, and all kinds of expression. Some may see even framing the question this way as utopian. Others may read the book as a call to measure souls and react with anger, seeing in it a violation of something taboo. Neither reaction is new.

The ancient Greeks recoiled from measuring the physical world. Many scholars in the humanities approach the realm of “subtle matters” in much the same spirit: as something too messy and fluid to be captured in mathematical terms. To the ancients, measurement seemed philosophically out of place. Asking Aris-

tote “how many meters per second?” would have been like asking “how many kilograms are in a conscience?” Pose a similar question today about the symbolic realm, and you are likely to hear much the same answer. Behind it lies the feeling that quantifying such things degrades them, that inner life should not be reduced to entries in a ledger.

Dolgin wants to develop for symbolic value the measuring tools it currently lacks. He frames the issue clearly: the problem is not that symbolic value is inherently unmeasurable, but that the instruments we currently use are not suited to measuring it.

The Greeks believed that the earthly realm was beneath mathematics. We, the beneficiaries of modernity, know that it is anything but: it is eminently worthy of it. The founders of modern science proved this by developing tools to measure what had once seemed unmeasurable. Their work reshaped the physical world. The symbolic world is still waiting.

In matters of measurement, the author of *The Future of Money* turns not to the Greeks but to the Romans. The book’s cover bears a mosaic — the jewel of the ancient city of Kourion in Cyprus. In the hands of Ktisis, guardian of Kourion, is what at first appears to be a builder’s tool, but is in fact a standard Roman foot — a unit of measurement. She holds it like a scepter, a symbol of power over chaos — and this is precisely Dolgin’s message: great achievements begin with measurement. What gets measured does not lose its meaning; it gains legibility. Without measurement, value remains private, incomparable, and inert. The book cover is not an ornament. It is a thesis.

There have long been those who dreamed of something like a “second” kind of money for culture. They wanted creators not to live in need, and they searched for an alternative to money itself — but in vain. Dolgin understood that no special form of “cultural money” can be created from scratch — and that, fortunately, none is needed. The desired outcome can be achieved simply by putting good old money to a different use. *The Future of Money* points to a striking possibility: that with a single touch, one of civilization’s foundational institutions can be adapted to conditions radically different from those in which it was born.

We recommend this book and hope that, after reading it, you will feel inspired to try making a donation.

The DonateOpen Team

VOLUME I

THE ECONOMICS OF MASLOW'S PYRAMID

PREFACE

This book is about money and its future. Although money is a pillar of human civilization, it is by no means a static foundation; instead, it is continually enriched by innovations like cryptocurrency, blockchains, NFT, and a host of other technologies and practices. This innovative frontier is best understood in the context of a fundamental problem that has never been addressed and has intrigued me for some time: money's fundamental inability to express the value of symbolic forms (or texts, defined as broadly as possible). I present a solution to the problem in this book.

Every human interaction is an exchange: a process involving give and take. This holds true across all relationships, whether between an individual and a group, between two individuals, between an individual and a text, or within a single person. The exchange always involves a cost of some kind, with profit in some form as the goal.¹ The fairness of an exchange, its ability to deliver mutual benefits, the ease with which it can be repeated, and its sustainability all depend on how easy it is for the participants to tally up what they gave and what they received and compare those results with the results of other exchanges — both their own and those of other people.¹ In order for such comparisons to happen, the results of exchanges must be observable and, ideally, measurable. And since the range of things that can be exchanged is essentially infinite, it makes sense to measure results in terms of the participants' perceptions of those results.

Money conveniently establishes a common denominator for heterogeneous substances that would be impossible to compare otherwise. However, not every exchange is mediated by money, and in those exchanges where money does mediate it is not always uniformly revealing. The price mechanism is adept at valuing standard tangible goods and services that are utilitarian and intended for multiple use. Texts are none of those things, however, and once digitized, they can be reproduced at minimal cost and thus lose their scarcity. Here the price mechanism breaks down: if prices are a reaction to the scarcity of a good, then they are only meaningful when people pay for the right to possess that good. That is the only context in which prices are "...not any set of numbers but just those causing supply and demand to balance."²

¹ George Homans, author of Social Exchange Theory, described interpersonal relationships as fundamentally economic. While Homans' theory is referred to as "social," it could also be called "social-economic." *George C. Homans, Social Behavior: Its Elementary Forms (1961).*

Peter Blau was co-founder of the theory (Exchange and Power in Social Life).

² Kenneth J. Arrow, "The Potentials and Limits of the Market in Resource Allocation," in *Issues in Contemporary Microeconomics and Welfare (1985)*, 107–124.

Eighteenth-century Italian economist Ferdinando Galiani was the first to realize that value could be defined as the relationship between utility and scarcity. When a good is abundant, then there is no pressure on demand and nothing trips the price mechanism to balance utility and scarcity. In other words, no matter how useful a thing is, consumers won't pay for it if they can get it for free. This explains the paradox of value: when plentiful, essential goods can have a low exchange value or have no value at all. Texts — everything from music and images to journalism and blogs — fell headfirst into this unenviable category as soon as technology made them replicable at low or no cost. When there is no competition for consumption, prices approach zero and no longer provide information about quality

The inadequacy of money as a measuring instrument becomes clear: it can gauge the value of utilitarian goods but not of symbolic goods. This is a systemic failure of the institution of money, which completely breaks down when texts are reproduced in geometric progression. The internet has imposed the paradox of value on a significant percentage of the goods we consume, even things that are absolutely essential and take up a lot of our time. As an indicator of value, prices convey consumer experience, thereby establishing self-regulation in the utilitarian economy just as Adam Smith described. Non-utilitarian goods also need a self-regulating and experience-sharing mechanism that works, and pricing just doesn't cut it.

Money's failure in the realm of texts is taken for granted, but as Friedrich Engels noted, progress in any given field is determined by the degree to which it has been permeated by mathematics.³ There is no applied math without quantitative data, but who said we don't have any data? Plenty exists if you know where to look for it. Data science has infiltrated the humanities and generated a surfeit of all kinds of information, but coverage is spotty. Specifically, we don't have enough data on human perceptions of communication. It might seem that business and science have more than enough indicators to choose from,ⁱⁱ but the problem is how to combine those disparate indicators into a single system that conveys a value relationship. This ought to be the function of the price mechanism, but we have already seen how it fails.

Symbolic goods don't come labeled with the information we need: without additional research, they're missing all-important quality indicators that would help us figure out who likes (or doesn't like) which messages and how strongly they feel about those judgments. In essence, when we don't know enough about

³ Engels' idea could serve as the epigraph for this book. My goal is to apply mathematics to symbolic forms as an antidote to the lack of measurement in this area.

the speaker, we don't know whether or not we can trust the message. Without trust indicators, human communication breaks down and free speech gets twisted by post-truth, fake news, and other forms of adverse selection in the information markets. This is a direct result of the failure of money.

We see the same dynamic with social inequality and, for example, the right to respect. Without empirical data, discussions of inequality become intensely dogmatic, much to the disappointment of those who value objectivity over party affiliation. Abhijit Banerjee and Esther Duflo, who bring an experimental approach to their study of economics, have said that they are "...tired of watching at a distance while the public conversation core about economic issues — immigration, trade, growth, inequality, or the environment — goes on."⁴

Happiness, too, avoids measurement by money. Despite specialists' boastful claims, happiness is not on the rise. Even residents of first-world countries don't feel anywhere near as well-off as sociologists would have them believe.ⁱⁱⁱ Instead, happiness economics offered a more sensible approach, and the field's founder, Richard Easterlin, stunned the world in 1974 with his Easterlin paradox, which states that growth in happiness does not keep up with income growth.^{iv} Governments around the world ignored this discovery and made happiness their objective, selling it to their constituents. All these years later, humanity continues to strain at the oars of utilitarian economics, solving all manner of problems except this — naively formulated and thus unsolvable — question of happiness.

The same is true of the redistribution of cultural and tangible goods. It will be useful to touch on this topic in relation to money's inability to inform us of value and other hot-button issues.

GOVERNMENTALIZATION OF SUPPORT

"Social support" can be understood as the practice of guardedly giving money to those in need, even when the effort is largely canceled out by society's adjustments and reactions to those same government welfare policies. Think back to high school chemistry and Le Chatelier's Principle: when a system is in a balanced state and something disrupts it, the system will try to counteract

⁴ Duflo E., Banerjee A., *Good Economics for Hard Times: Better Answers to Our Biggest Problems* (2019)

that change to restore balance. The same is true of human systems, and yet government redistribution stubbornly lives on, generating reports year after year to create the illusion of success. The question is not whether or not we should help the poor, but how that help should be provided and who should give it.^v In most Western nations, the social support function has been handed over to the government as if there were no one else to take care of it.

But is that really the case? Or could support happen privately on a larger scale than we have yet seen? It's an open secret that government distribution of welfare is ineffective: funds are eaten up by the offices charged with disbursing them, and top-down planning frequently ends up directing assistance to those who don't particularly need it and withholding it from those truly in need. I would argue that there is yet another, even more serious argument against letting the government be the sole provider of social support payments: faceless charity becomes meaningless and morally hollow, harming both the givers and the recipients, some of whom are stigmatized, while others turn into professional leeches.⁵ It is entirely conceivable that the welfare state actually harms the general welfare by turning charity into a boring, soulless exercise that would better be served by the private gift economy^{vi} because the over-governmentalization of social support atomizes society and alienates people from each other. In order to avoid this argument look unsound, we need to learn to measure things that aren't captured by money.

MONEY AND DIGNITY

Banerjee and Duflo were awarded the Nobel Prize in Economics in 2019 for their experimental approach to fighting poverty, but the methods they identified aren't applicable to wealthy societies,⁶ where the majority of citizens are experiencing a different kind of difficulty. The problem concerns the symbolic. As Francis Fukuyama noted, a person's actions are influenced by complex mo-

⁵ David Graeber wrote about this: Graeber D., *Toward an Anthropological Theory of Value: The False Coin of Our Own Dreams* (2001), 225.

Jonathan Parry also noted that the "pure gift" of charity that is given without expectation of return can be "poisonous." Parry J., *The Gift, the Indian Gift and the 'Indian Gift'* (1986)

⁶ Michael Kremer, who shared the Nobel with Banerjee and Duflo, showed that a \$3.50 deworming pill was the best intervention for dealing with illiteracy because it solved the underlying problem causing children to miss school.

tives, such as a desire for recognition or a feeling of resentment caused by humiliation or lack of attention. Actions are often influenced by demands and interests that seem economic but cannot, in fact, be separated from emotions associated with identity and self-esteem.⁷ I would replace the word “economic” here with the word “money.” All interests involve resources and are therefore economic, but not all are concerned with money. People around the world suffer with good cause as they attempt to survive on a few dollars a day. And yet moral sensitivities can cause people with much larger incomes to torment themselves (and become infuriated with those around them).

Should handouts be used to dull the pain of unemployment? Economists overwhelmingly say yes, even though it feels like trying to make friends with a surly teenager by giving them an allowance to spend on junk food. Academics in the humanities validate this type of thinking with sententious rhetoric. The discussion is limited to the utilitarian side of the field, which happens to be the only place where arguments have any basis in empirical data.^{vii} Meanwhile, the danger growing on the other side is obscured by a dense fog generated by money. The Gini coefficient, which measures economic inequality, is critical, but what can we learn from the indicator of symbolic disproportions? A great deal, once we create it. So what grounds do we have to assert that we properly understand the gaps in subjective quality of life and that we can close those gaps with handouts?

On the road out of unemployment, people often encounter friction that leads them to pause their job searches. Sometimes that friction is self-imposed, the result of an impractical college degree (or two), excessive expectations, and a longing for creativity paired with a lack of discipline, as well as other virtues that employers tend to view with skepticism. Imagine an unemployed person who repeatedly turns down work they feel is beneath them. Giving them money will save them from losing the roof over their head, but piling on the psychological comfort and respect everyone asks for would be taking it too far. When we increase the tax burden on people who work to pay their own way and demand more financing to create and distribute a never-ending list of handouts, at some point we have to ask ourselves if we are solving the respect problem or some other, unnamed problem.

Everyone wants to be respected, and respect lies at the heart of all the plots of modernity (see Appendix 4 on meritocracy). Traditionally, there have been three ways people could earn esteem: their background (upbringing), their

⁷ Fukuyama F., *Identity: The Demand for Dignity and the Politics of Resentment* (2018)

The moral philosopher Michael Sandel also focuses on recognition: “When market reasoning travels beyond the domain of material goods, it must “traffic in morality.”

For more on this, see: Sandel M., *What Money Can't Buy: The Moral Limits of Markets* (2012).

talent, or their work. But what about all those who didn't luck out in the first category, don't stand out in the second category, and can't find a place in the third? If predictions about the future of work are correct, large numbers of people will end up without jobs. What are they supposed to do? They aren't at fault in any of the above scenarios (or of anything else, for that matter, now that free will is a thing of the past⁸), so it would be wrong of society to withhold its esteem and injure their self-worth. After all, we don't want to live in cities teeming with the unhappy and the unfortunate, surrounded by fellow-citizens driven to aggression by their own powerlessness and inability to prove that they aren't as worthless as everyone assumes. First of all, that would be unfair; second, it would be troublesome.

And there is a third, conclusive issue: we understand that much of the work that is considered socially useful is, in fact, unnecessary or even harmful. In this light, loafing is positive and the unemployed are not lazy or idle, but rather environmentally valuable sources of diversity who relinquish their jobs to others.⁹ This is where the idea of handouts originates. All of the hype about respect makes sense: we have transitioned from a classical system of absolute coordinates based on socially useful work to a relative system based on the individual and his or her right to recognition founded in a specific interpretation of equal moral worth.¹⁰

Is there any use in forcing people to respect each other by way of the tax system even though "much of what passes for economic motivation is... actually rooted in the demand for recognition and therefore cannot simply be satisfied by economic means?"¹¹

⁸ The ideologists of unfree will believe that all of our actions are determined by our hormones. That is not true. Studies by the renowned neuroscientist John-Dylan Haynes have not shown any restriction of freedom; instead, they demonstrate that there is a point of no return in the decision-making process after which a decision cannot be reconsidered.

Other good sources on this topic include:

Libet B., "Do We Have Free Will?", in Journal of Consciousness Studies 6 (8–9) (1999), 47–57.

Libet B., Mind time: the temporal factor in consciousness (2004)

⁹ One example of this phenomenon is all the young people who are neither working nor in school (the NEET generation, which stands for Not in Education, Employment or Training). According to World Bank data, in 2015 there were 260 million NEETs. Experts say the trend is fueled by excessive competition in fast-growing economies. In China, it took the form of the "lying flat" movement, which encourages young people to give up full-time work in favor of freelancing so they can spend their new free time on rest, entertainment, and self-improvement.

¹⁰ See Appendix 4, paragraph 6. for more on respect.

¹¹ *Fukuyama F., Identity: The Demand for Dignity and the Politics of Resentment (2018).*

How can the non-utilitarian realm develop a system for identifying value? I intend to work my way toward an answer to that question by performing a monetary analysis of the non-utilitarian economy in which I will demonstrate the current paucity of measurements and feel my way toward the line on one side of which money functions as a measurement of value, but on the other side of which it does not. Then I will look at two other aspects of the question: how much time people spend on various activities and what they receive as a result. Collecting information on time budgets in cultural consumption is a complex task that requires an innovative approach, but the internet is up to the challenge. Assessing the quality of time spent, on the other hand, is a groundbreaking challenge that can't be solved on paper or using spreadsheets. Instead, the answer lies in social exchange. In the second volume, I will propose and substantiate my understanding of the rules of social exchange in order to locate the information signals we will need going forward.

CHAPTER I.

NON-UTILITARIAN ECONOMICS

FORMULATING THE TASK

Let me begin by briefly explaining what the non-utilitarian economy consists of and how much it weighs when measured in money. (For an explanation of why it's called non-utilitarian and how it differs from utilitarian, see Appendix 1; for now, just think of this as everything that is not only functional or has a meaning that outweighs its simple utility.) My approach was simple: I identified the industries that serve the non-utilitarian economy, collected marketing data for each one, and added them up. I was primarily interested in revenue. The amount that these industries bring in is exactly equal to what people spend on non-utilitarian goods, so the distribution of this spending gives us a good picture of society's cultural consumption basket.

No one has ever attempted to calculate the size of the cultural consumption basket before because doing so is impossible without first setting a goal and developing a system to organize the data. None of the existing classifications follows non-utilitarian logic.¹² Official statistics lump media and entertainment into the so-called "tertiary sector" along with science, education, art, and culture. The

¹² It is worth noting that building such a system is not easy. There have been multiple attempts to do this for creative and cultural industries, but without much success. Part of this work focuses on the methodology for isolating and measuring the non-utilitarian.

North American Industry Classification System (NAICS)¹³ uses codes 51 and 71 for arts, entertainment, and recreation, but expanded data is not available.

This same issue plagues other non-utilitarian segments. For example, there is no data on architecture, and revenue for interior design and decor is drowned out in the reporting for furniture and fabrics. The jewelry industry brings in hundreds of billions of dollars in revenue each year, but the only available statistics are for gold and diamonds, and data is sketchy and incomplete for the mass-market segment. Until recently, outdoor recreation was dismissed as economically insignificant, despite the fact that the businesses in this sector account for 4.3% of US GDP when taken together, putting them on par with both the construction and mining industries.

Official statistics may all but ignore the non-utilitarian, but business reporting is a source of rich data. Companies have to monitor trends, as well as their competitors' moves, and this need is served by the market research industry. (In order to understand the value of the information it provides, it helps to know that market research generates revenue of \$50 billion each year.) I will use these industry statistics to fill in the blanks in my own data.^{viii}

There is no big picture of the non-utilitarian economy, much as there was no big picture of the basic utilitarian economy before Angus Maddison's tables¹⁴ and GDP reporting;^{ix} as a result, it is difficult to seriously discuss its prospects and digital future. When we ask about trends and where people are spending their energy, we need quantitative data. As an example, the non-utilitarian economy may very well hold the solution to the labor shortage issue, but no one will benefit from that possibility until we know more about it.

There are between five and seven non-utilitarian markets that get media attention these days, and most people with an interest in economics could name another dozen if given enough time. In reality, non-utilitarian markets are legion, and we need a bird's eye view of the whole non-utilitarian economy order to evaluate the prospects of any one of its markets (such as audiobooks, 3D movies, podcasts, videogames, smart trackers, or reef aquariums¹⁵). No industry is an island, and they all compete against each other for a larger piece of the human pie that represents our time, money, tastes, and preferences. That pie is

¹³ It is also a part of United Nations industry classification system (section R), International Standard Industrial Classification.

¹⁴ Angus Maddison, a British economist who studied quantitative macroeconomic history and documented various countries' economic performance over a period of 300 years.

¹⁵ These aquariums generate billions of dollars in revenue, joining the ranks of theme parks like Disneyland and Legoland, water parks, oceanariums, rides, and other elements of the entertainment sector with a total weight of over \$2 trillion per year.

getting bigger as people gain increasing control over their time, multitask more, and sleep less — statistics show that people have gained an extra hour and a half out of each day over the past 50 years — but that pie is still finite. We are going to take a closer look at this big picture and how it has changed over time.

1.1. THE MONETARY DIMENSIONS OF THE NON-UTILITARIAN ECONOMY

The non-utilitarian economy encompasses all the things that have no place in the regular market basket. These are all the purchases we make that are not necessary to our survival: the excessive, the aesthetic, the purchases that satisfy growth needs.¹⁶ True, this definition is not as precise as it could be. We can only draw a clear dividing line between the utilitarian and non-utilitarian economies once we have the numbers at our disposal, but, of course, any statistics will depend on our definition of what things are non-utilitarian. Appendix 1 provides a lengthier, theoretical explanation of the non-utilitarian economy and of the dividing line between it and the utilitarian economy, but for starters we can just look at the industries that obviously fall into this category.¹⁷

1.2. INDUSTRIES IN THE NON-UTILITARIAN ECONOMY

Fashion and luxury, drugs and alcohol, tattoos and piercings, videogames and cosmetic surgery: these are some of the typical items in the class. Brief consideration shows that yoga, hunting rifles, and Harley-Davidson motorcycles fit, too. In

¹⁶ Economics does not distinguish one from the other, and this is a problem because the highest goods do not obey the law of diminishing marginal utility on which economics is founded. According to this law, each subsequent portion of a good brings less satisfaction than the previous portion, but non-utilitarian goods are often collectible and confer prestige, and so their perceived utility can increase with each new portion (for more on this, see Section 3.6.2).

¹⁷ Their total revenue should be taken into account. But what about combined industries, such as the automotive industry: what percentage of their products should be assigned to the higher levels?

all, around one hundred industries participate in the non-utilitarian economy either wholly or with their premium offerings.¹⁸ I mainly rely on their revenue, but that is just the tip of the iceberg; looking past aggregate indicators reveals a massive amount of data on these industries' segments and subsegments. I collected year-on-year revenue data from these industries for the past 15–20 and broke it down by country.^x Here is a list of the industries in the non-utilitarian economy:

Alcohol	Dating	Luxury	Sex industry
Amusement parks	Drugs	Market research industry	Smart home
Antidepressants industry	Education	Mental health	Smart home entertainment
Apps	Energy drinks	Motorcycles	Smartphones
Aquarium market	Events	Museums	Social media
Architecture and design	Film	New legal services	Souvenirs
Bars and nightclubs	Fine arts	Newspapers and magazines	Sports
Boats and yachts	Firearms	Nightclubs	Sugary drinks
Books	Fitness	Opera, ballet	Tattoos and piercing
Cars	Flowers	Outdoor industry	Tea, coffee, cocoa, hot drinks
Charity	Food and drink (junk)	Perfume	Television
Clothing, jewelry, and accessories	Furniture	Photography	Textiles
Coaching	Funeral services	Radio	Tobacco
Cognitive behavioral therapy	Gambling	Real estate	Tourism and travel
Collecting	Healthy lifestyles	Recorded music	Toys
Collector cars	Jewelry	Religion	Video games
Construction and architecture	Landscaping and yards	Restaurants, cafes	Wedding industry
Consulting	Leather, footwear	Science	Weight loss
Creative crafting	Libraries and archives	Scents and scent delivery devices	Wellness and spa
Dancing	Live music	Self-care, beauty	Zoos and aquariums

Note: This list includes industries that do not belong entirely to the non-utilitarian economy, such as the auto industry, real estate, and food service, but my calculations only use the data from their non-utilitarian lines of business. There are approximately 80 industries on this list, but some of them are umbrella terms; expanding them would bring the total to 100.

The list is alphabetized to make it easier to skim quickly, but I will regroup some of the industries as my argument requires. Many of these industries have multiple segments. For example, “grooming” (total revenue of \$1.3 trillion per year) is

¹⁸ In addition to these hundred, it's worth keeping an eye on the newest industries, such as: Artificial intelligence, 3D technology, blogging, gene editing, quantum computing, cloud computing, electric and driverless vehicles, e-bikes, 5G, blockchain, cybercrime, smart watches and trackers, antidepressants, big data, doping, space, recommendations and personalization, organ transplants and donations, virtual and augmented reality, drones, robots.

listed as a single industry, but it actually represents five sub-industries, each of which has erected its own temple to serve different parts of the human body. There are entire industries built to serve specific parts of the body. All of these temples are maintained and supported by the industries that interest us.

How much does all of this weigh in money? While the rest of our economic life has been quantified down to the tenth of a cent, the non-utilitarian economy has largely been left out, as I explained, because any calculation of its monetary value will require careful preparation, starting with a definition of its conceptual boundaries. Some estimate that the value of the non-utilitarian economy is around \$5 trillion, while others put that number closer to \$10 trillion. Both estimates are off. In reality, my calculations show that the non-utilitarian economy weighs a whopping \$30 trillion.

1.3. NON-UTILITARIAN ECONOMY BY SECTOR

Global consumer spending, a measure of how much individuals around the world spend each year, reached \$62 trillion.¹⁹ This means that \$30 trillion in non-utilitarian spending accounts for around half of all spending. People spend just as much on extras as they spend on essentials. Who would have imagined? The world must not be that bad off if half of people's purchases are dictated by their desires instead of their needs. But what exactly is the world spending \$30 trillion on, and how much of that total is represented by each industry? For clarity's sake, I group them as follows:

Industry	Annual revenue, \$ bln
Food and Beverages (junk) and Luxury Foods	1855
Alcohol, Tobacco, Drugs	3153
Beauty, Fashion (including Grooming)	2031
Physical and Outdoor Activity	2100
Socializing/Interpersonal Communication	5753
Experiences and Entertainment (including Travel)	2069
Media and Consumption of Recorded Culture	1187
Tangible Aesthetics and Luxury	2758
Interests, Hobbies, Games, Crafts	1416
Science	2000
Education and Information	3363
Personality and Mental Health	1178
Consumer Electronics	617

¹⁹ The \$62 trillion estimate was valid at a time when GDP was about \$80 trillion. Global GDP in 2021 was estimated at \$94 trillion. Global GDP is expected to reach \$180 trillion by 2050.

1.4. DATA FOR SPECIFIC INDUSTRIES

The data reveals some interesting relationships: live music brings in four times more revenue than recorded music, and movies earn ten times the revenue of theaters. What about reading? It's definitely on the rise online, but print publications are in no hurry to give up ground. In India, print is actually growing. Or take blepharoplasty — plastic surgery on the eyelids — for example: it brings in \$3 billion per year and serves as a treasure-trove of information about cultural trends and codes.²⁰ And it's not the only “misprint” of nature that people want to deal with. Total revenue from invasive plastic surgery is estimated at \$30–40 billion per year, with approximately one-third of the total spent on breasts, \$3 billion on noses, and a little over \$3 million on cellulite.^{xi} Teeth are the most expensive item, both in terms of the size of the market — \$20 billion — and in terms of the acceleration in spending.

In the grooming segment, hairdressers are king, costing the public \$200 billion each year. Skin care comes next, at \$171 billion annually, and 90% of this

²⁰ According to a report by the International Society of Aesthetic Plastic Surgery, around 1.3 million people worldwide had eyelid procedures in 2017. The demand among Asians for a Caucasian eye shape is noteworthy.

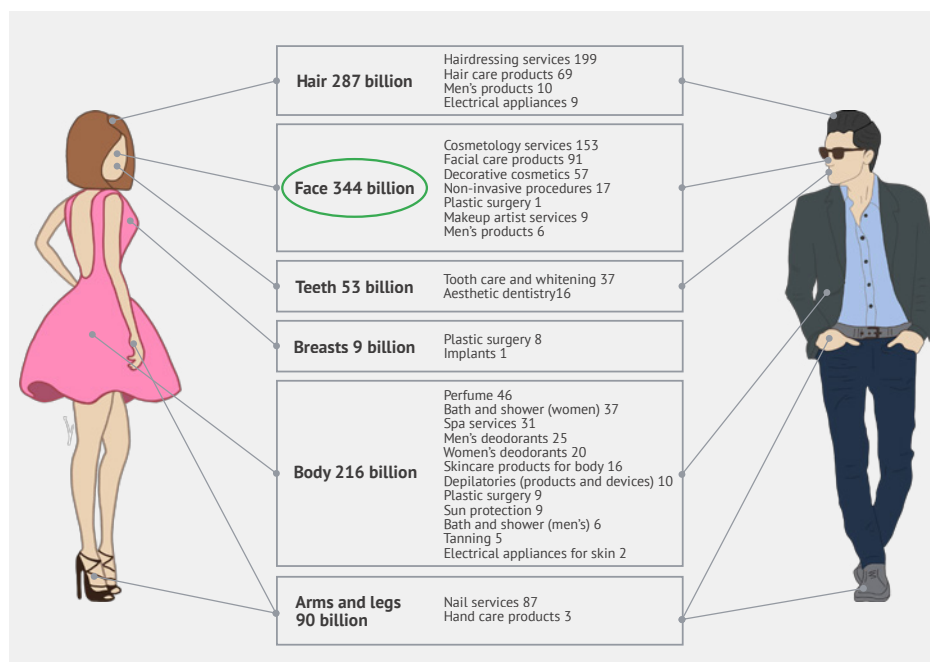


Fig 1.1 | THE HUMAN BODY TUNING INDUSTRY. 2015 DATA

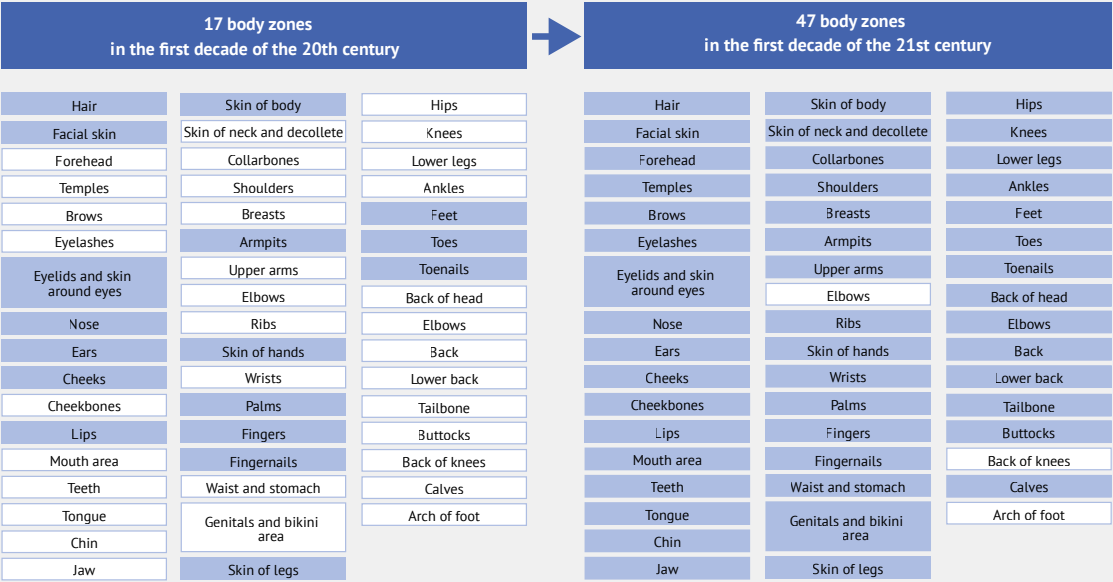


Fig 1.2 | THE HUMAN BODY GROOMING INDUSTRY EVOLUTION
Data based on a specialized study

total is spent on the face. Nails round out the top three (\$87 billion) while also earning the highest returns per square inch.

I couldn't help but wonder about the order in which the grooming industry conquered the human body (Fig 1.2).

While this table misses a few intimate areas, it does indicate that the 20th century saw the complete industrialization of the body. What's next, may one ask? Hypothetically, the only surface areas left for expansion are the insides of our elbows, the backs of our knees, and the bottoms of our feet; further expansion of the grooming industry will require surgical intervention. Tattoos and piercings round out the body-improvement industry, bringing in \$15 billion a year. This is almost incidental in the context of the trillion-dollar beauty industry, but tattoos and piercings create an on-ramp for newer, less-popular forms of body modification (see the distribution of tattoos^{xii} and piercings^{xiii} by body part).

Tattoo art (Fig 1.3) may never catch up with the rest of the fashion industry due to the nature of the canvas, but it's certainly trying: tattoo removal is growing faster than the application of new tattoos and brings in up to one-quarter of the segment's revenue.



Fig 1.3 | THE HUMAN BODY AS A TATTOO ART CANVAS

People spend close to \$2 trillion on physical activities. This includes athletics and sports (\$500 billion), fitness and wellness (over \$300 billion) and outdoor activities (\$900 billion). All told, Homo aestheticus (compared to Homo economicus) shells out closer to \$4 trillion on moving, packaging, and coloring their bodies. The beauty and fashion industry are under fire from the forces of naturalness, body positivity, and affirmative action.²¹ Is the podium about to fall? The industry's financials still look strong,²² but the alarm sounded when Victoria's Secret pulled the plug on its fashion show rather than change its aesthetics to conform with the dictates of affirmative action.²³

²¹ Positive discrimination, or affirmative action, is the provision of preferential treatment based on gender, race, ethnic group, religion, sexual orientation, or some other identity with the goal of achieving equality in job titles, education levels, and incomes. Positive discrimination can now be found at fashion shows, museum exhibitions, and athletic clubs.

²² The industry's financials didn't begin to slip until pandemic lockdowns hit. In 2020, it was not clear whether or not the industry would recover, but by 2022–2023 things were going well.

²³ We have the body positivists who took up arms against Victoria's Secret to thank: "Why do models have to be beautiful? We need more diverse images!" The brand's owners brought in a plus-sized model and a transgender woman, but that was not enough. In 2019 the show, which had been a major even in the world of beauty for a quarter-century, shut down. The show returned in 2023, but without the glamour.

The Outdoor Industry Association takes a healthy approach to the non-utilitarian. Public perception of the size of the industry was challenged when the Association released aggregate revenue data: instead of sagging tents, dirty bikes, and beat-up camping dishes, people discovered an economic powerhouse generating close to \$900 billion in annual revenue²⁴ and employing 8 million people. (This is data for the US alone. Global outdoor revenue is double or even quadruple these numbers.²⁵) It was this discovery that prompted the passage of the Outdoor Recreation Jobs and Economic Impact Act.²⁶

Creative industries are following in campers' footsteps: the data is limited to the US market, but even here we see \$44 billion in annual revenue.²⁷

Now that we have an idea of the size and makeup of the non-utilitarian economy, we can begin to analyze it. The internet affects goods' relative prices and availability, and people react to those changes by redistributing their resources between the various types of recreation; these two factors should be reflected in the performance of non-utilitarian industries. Changes in revenue can be quite informative, and I will attempt to observe several divisions within overall revenue: 1) online and offline consumption; 2) tangible goods versus symbolic goods; 3) goods versus services; and 4) the balance of active and passive consumption.

²⁴ The Federal Bureau of Economic Analysis (BEA) rechecked the association's calculations and reached a total of \$673 billion. This is less than the \$887 billion declared by the interested parties, but the gap does not exceed the margin of error for this type of data.

²⁵ The sector is comparable to construction (4.3% of US GDP), pharmaceuticals, and other major industries, although these are all more visible. It is growing faster than the US economy as a whole (3.8% against 2.8% per year).

²⁶ President Obama signed the Outdoor Recreation Jobs and Economic Impact Act in 2016 to promote recreation and prevent land from being bought up for other purposes.

²⁷ I give this figure in my compilation of non-utilitarian industries, although global revenue is many times higher as the United States usually accounts for anywhere from a quarter to a third of all non-utilitarian economic activity. As a result, the line for crafts undercounts by approximately \$100 billion. However, I did not resort to extrapolation here or elsewhere. The stated \$30 trillion size of the non-utilitarian economy can be seen as a cautious estimate on the low end. The amount is just shy of half of the \$62 trillion in consumer spending, but it would reach half if one were to add up every last dollar.

1.5. REMOTE vs IN-PERSON CONSUMPTION

In 2019, the industries where consumption is remote posted total revenue of \$1.8 trillion:

Sector	Annual revenue, \$ bln
Video games and e-sports	184
Newspapers and magazines	140
Online dating	6
Online education	200
Online fitness	10
Online casinos	45
Recorded music	27
Books	129
Movies home viewing	56
Apps games	75
Porn	22
Radio and podcasts	43
Social media	102
Television and video streaming	593
Photos	140
Total rounded \$ billion	1800

Accounting for just 5% of consumer spending,^{xiv} this group of industries managed to dominate up to 80% of people's free time. Compared to the Pareto principle, where 20% of the effort delivers 80% of the result, in online sales we see 5% delivering 80%: the internet is phenomenally effective!²⁸ In order to really understand internet economics, we have to travel 20 years back in time to the watershed moment when the file sharing service Napster²⁹ made it possible to circulate music online for free. This looked like the end of the music recording industry, films, and who knows what else. Miraculously, the industry survived by adjusting its business model and switching its focus from physical media to digital and streaming (Fig 1.4).

The music industry did, however, need a little time to survive the shock and change direction. It got that time from the courts, which took the side of rights holders in a case that became a turning point — or a point of no return — for the

²⁸ The 5/80 phenomenon can be explained by the fact that leisure has moved online (over the past 10 years, time spent online has increased from 2.5 to 6.5 hours per day), and digital almost always means cheap because it costs little to replicate and distribute internet goods.

²⁹ Napster (New Artist Program), founded by Shawn Fanning, who was 19 at the time, in partnership with Sean Parker and Jordan Ritter, was the first peer-to-peer file sharing network. It operated between June 1999 and July 2001, when it was shut down by court order. It was succeeded by decentralized peer-to-peer networks that were more difficult to monitor.

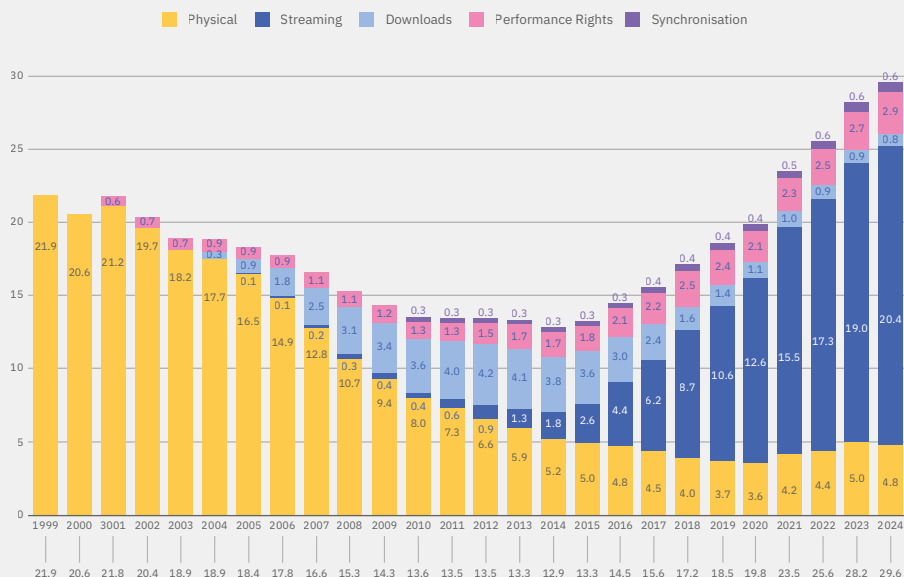


Fig 1.4 | GLOBAL RECORDED MUSIC INDUSTRY REVENUES 1999–2024 (US\$ BILLIONS)

Source: IFPI Global Music Report

internet³⁰ and ended with a ruling that made peer-to-peer content sharing a prosecutable offense. Napster was blocked. Eventually, the libertarian-leaning internet community was brought back into the fold by a combination of rhetoric and the threat of fines and prison time for illegal downloads.

While most users ended up migrating to legal platforms, the Robin Hoods of the music industry did accomplish one thing: music prices never recovered to their pre-dumping levels. The major music studios had to make some sort of conces-

³⁰ I analyze this collision in detail in my book *The Economics of Symbolic Exchange*, where a study of the recording market is presented in the appendix.

Judges seeking to uphold the public interest had to decide how that interest was affected by the free distribution of content. Napster made the case that the public interest benefitted from its existence, but the opposite view prevailed.

At that time, those of us who understood the significance of what was happening wondered whether the internet could have evolved differently and somehow maintained its independence from government. Today, I tend to believe that the trajectory was predetermined. Infrastructure connections always decide questions in favor of what Alfred Schuz called “supreme reality.” At that moment, it was a foregone conclusion: the party with its hand on the power switch is the one in charge. The creators of the blockchain and cryptocurrencies are trying to break through that blockade; the coming years will show whether or not their efforts are successful. For now, despite all the talk of relocating to the metaverse, it seems that the priority of the power switch is still in force.

sion in order to contain the piracy; after all, law-abiding behavior has its price³¹. Twenty-dollar albums are a thing of the past, and all the music in the world is available for a yearly subscription costing \$30–150. All the movies in the world can be had for about the same price.

Consumers don't seem to realize that the pirates did (and continue to do) them a favor. From their underground lairs, they continue to play the role of a built-in limiter on rights holders' appetites. All of the music, books, and movies in the world can be had for the price of dinner at a nice restaurant: how is this not cultural communism for consumers? And despite the pressure on prices, the market for recorded music has almost returned to its former size as soaring demand makes up for lower prices (although Spotify has yet to post a profit). The film industry looks healthy, too.

I doubt that this era of low prices will last forever. It may be difficult for providers to move the needle on sticker prices, but they have other ways to increase size of the average transaction, and they haven't yet made full use of all their price discrimination tools, including geographic tools.³² Furthermore, streaming services are motivated to create strong relationships with consumers as an additional form of insurance against free downloading.

There is no law that says that a 100-hour TV series should cost 100 times less than a half-hour live broadcast of a UFC fight.³³ Digital B2C industries need to continue to grow no matter what, but the advertising business model is close to saturation.^{xv} For now, the 5/80 ratio is an invaluable and underrated contribution to social equality by the free market. Just look at the 5% industries offline: it brings in twenty times more revenue than digital, but people spend less time offline. Per hour of consumption, offline entertainment is 100 or even 1,000 times more expensive than online, but the takeaway is not the relative low cost of online content. Rather, we ought to be surprised by the high price of tangible entertainment and by the fact that offline consumption somehow manages to survive.

Many goods cannot be digitized, but there are just as many that are consumed both ways. Recorded music sounds just as good as live music and it's free. Streaming a sporting event costs a fraction of what it would cost to get tickets.

³¹ In other words, cheating is more interesting when one saves \$20 than when one saves only \$1. The music industry's position strengthened over time, since legal content was higher in quality and pirated copies might be defective.

³² The same good can be sold to different people at different prices if one knows the difference in their incomes and purchasing power. Spotify charges subscribers in some regions five times more than its cheapest plan.

³³ UFC (Ultimate Fighting Championship) is the world's top promoter of mixed martial arts.

Why do we see this difference between real life and digital? One key factor is the group experience of interacting with content and performers in public in an atmosphere that makes such interaction possible.³⁴ Online offerings are weak in this respect, and there don't seem to be any opportunities on the immediate horizon for them to catch up. Will offline entertainment endure due to this advantage? Does it have anything else that online would have a hard time finding even an imperfect but low-cost replacement for?³⁵

This balance between in-person and remote consumption is crucial. It gets talked about plenty, but statistical data is scarce. For example, industry forecasts for offline recreation industries don't even take the online factor into account. Media consumption should be the subject of regular reporting, just like GDP. And the market basket should include a section for time spent online, broken down by socio-cultural and demographic groups.³⁶

The lockdowns in 2020–2021 could have served as a stress test, but that opportunity was lost.^{xvi} Therefore, all we have is a list of the factors affecting online/offline competition:

1. Both worlds offer a variety of goods that can fill up 5–7 hours per day.
2. Online leads offline in simple pleasures and socialization.
3. Mental and emotional screen fatigue does not seem to play a big role.³⁷
4. Advances in hardware are eating away at the offline world's head start (See section 10.2.1).
5. Offline is strongly positioned in games of status.

³⁴ From the point of view of the information economy, people communicate with each other because they benefit from doing so; live communication is helpful: "As soon as a person opens their mouth, everything becomes clear."

Dolgin A., Manifesto of the New Economy: Institutions and Business Models of the Digital Society (2012).

Fussel P., Class: A Guide Through the American Status System (1992).

³⁵ Tradition is on the side of live communication, while demographics works against it. The balance between the digital and the material is determined by the ratio between price and attractiveness, and online has a big head start in price. Ultimately, a person is not attracted by actual goods and services but rather by that which is extracted from them in the form of impressions, experiences, meaning, and other effects; therefore, when a need can be satisfied in different ways, demand favors the cheaper option.

³⁶ The UK Office for National Statistics calculates what it calls the "consumer price inflation basket of goods and services," which includes streaming multimedia.

³⁷ Endurance can be learned. It is normal for gamers to spend 8 hours in front of a screen (others spend half as much time), but this is in addition to working hours spent on a computer. If we add up parallel activities, some people spend more than 24 hours a day online. Thousands of studies show that a significant percentage have poor social adjustment and suffer from depression.

We see that some of these factors guarantee the offline world a minimum quota of people's time, and that's before we even look at the role of physiology.³⁸ I also see another two lines of defense, one of them built on empathy and oxytocin³⁹ and the other involving collective emotions.⁴⁰ Team spirit, group games, the crowd mentality, and even the enthusiasm we feel in a group of friends are all founded in collective emotions,^{xvii} and none of these things happen unless humans are in physical proximity and able to pick up on each other's subtle cues. High-quality video could solve this issue, but people still have a hard time focusing on one thing.⁴¹ When all the conditions are met, a group is seized by an excitement that takes the individuals in the group outside the bounds of their own egos.^{xviii} These rare — and therefore highly valued — emotions are the driving force behind the industries that produce events and shows, corporate culture, and mass gatherings; they also pull the trigger of history.⁴²

But are all these advantages enough for real life to hold onto the ground it owned at the end of 2019 before the pandemic? Prior to that point, none of the industries selling offline entertainment had shown any signs of decline. Even book publishing, print media, radio, and traditional prostitution were holding

³⁸ While it is impossible to imagine humans ever losing their need for skin-to-skin contact and social grooming, the dulling of sexuality raises questions about the limits of cultural reprogramming. According to transhumanists, there's no need to regret the loss of physiology; they believe in the unification of artificial intelligence and the brain, a union in which the body will be superfluous. Writers throughout modern history have meditated on what this might be like. In Professor Dowell's Head, the existence of a disembodied head kept alive artificially was described as nothing pleasant to the eminent Russian science fiction author Alexander Belyaev (who, himself, had spent years paralyzed by tuberculosis).

³⁹ Oxytocin is both a hormone and a neurotransmitter responsible for fostering empathy, trusting relationships, and attachment. It is released in response to touching, hugging, stroking, kissing, sex, and eye contact. Oxytocin deficiency can lead to depression.

⁴⁰ "Shared emotion" is the term for what happens when people's feelings are mutually amplified and resonate, such as in crowds, during games, at sporting events, and even in everyday life. Gustave Le Bon published *The Psychology of Peoples* and *The Crowd: A Study of the Popular Mind* in the 19th century, but science has progressed little since then in its understanding of both shared emotions and the dynamics of individual emotions. For more on this topic, see Scheve C., Ismer S., "Towards a Theory of Collective Emotions", in *Emotion Review* 5 (2013), 406-413.

⁴¹ This is why people most often call those they see frequently in person. Ling R., *New tech, new ties: How mobile communication is reshaping social cohesion* (2008). Meta is developing a VR headset with eye-tracking, which is important for fostering a sense of togetherness.

⁴² Elias C., *Crowds and Power* (1962).

onto their revenues. Many offline industries were growing at the same pace as GDP, while others, including museums, pets, and souvenirs, were growing even faster (Fig 1.4).

I couldn't guess exactly to what degree these industries would bounce back after lockdown, but I expected their revenues to return to their previous trajectories.^{xix}

Whether or not (and to what extent) paramount reality⁴³ loses ground depends on the next generation of virtual worlds being more vibrant than real life; there is plenty of room for such worlds to arise out of computer games, VR technologies, artificial touch sensations, olfactory simulations, and the use of psychotropic drugs. During the 5–10 years it will take for virtual worlds to reach the next level of quality, a new generation will grow up that sees VR as more genuine than anything on the other side of the screen, where real life consists of dull, boring routine.

The substance of real life will have to surrender some ground to virtual reality, but it still has enough muscle to survive for generations to come. I don't make that prediction because digital worlds require infrastructure and people to service them, nor because the creators of such worlds are interested in consumers with real money to spend and not just cyber hermits and

⁴³ This term was coined by Alfred Schütz, who analyzed the relationship between imaginary worlds and the real world. *Schütz A., "On multiple realities", in Philosophy and Phenomenological Research 5(4) (1945), 533–576.*

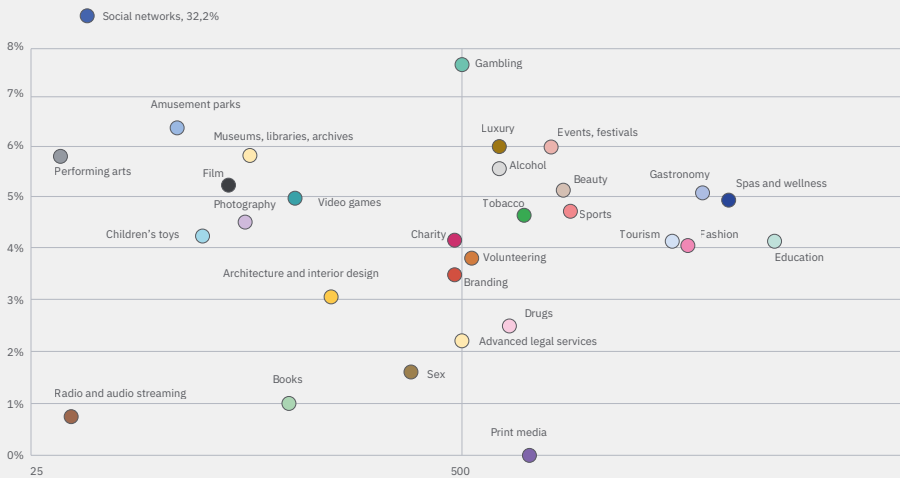


Fig 1.5 | AVERAGE ANNUAL GROWTH RATE FOR THESE INDUSTRIES BETWEEN 2000 AND 2016

hikikomori.⁴⁴ Rather, I say that because people tend to visit virtual worlds instead of taking up permanent residence there, since physical reality, with its authenticity and sociability, is what gives life meaning. Robinson Crusoe would never have succeeded as a character (or a beloved metaphor for economists) if he hadn't dreamed of rejoining human society.

In a thought experiment devised by Robert Nozick, the test subject is offered the choice of connecting to a magic machine that delivers pleasurable experiences, but the subject declines, preferring gritty reality instead.^{xx} Nozick's point was that there are things more important than hedonism and subjective experiences. Existing as a person means reacting to unpredictable events, while connecting to Nozick's imagined machine would be a sort of anesthetized suicide because of the artificially limited nature of the experiences.

Over the past half-century, that thought experiment turned into a real experiment, and we discovered that Nozick simplified the task by offering his imaginary test subject a predetermined sequence of events. The actual situation is more complex and interesting, and people move freely between worlds without getting sucked in. Moreover, artificial intelligence promises a range of nondeterministic, self-developing worlds. For people who are still on the fence, the magic machine will clear up their concerns about determinism.⁴⁵

In his thought experiment, Nozick both crosses the line and judges the question from this — the “real life” — side of the line, which is not exactly fair play from the philosophical point of view. (His line of thinking is understandable to anyone who has ever grown dissatisfied with psychedelic trips where everything is cool but nothing is real.^{xxi}) If we avoid slipping into transhumanism and expecting more from artificial intelligence than it is capable of, then the matter of how to answer Nozick's question hinges on the authenticity of activity within the imaginary worlds. Humans want their virtual worlds to be as real as possible. Dream-like visions won't cut it. But physical actions in VR can't be confirmed by bodily sensations, including uncontrolled pain. Such sensations are a prerogative of paramount reality, which ideal components cannot be produced by virtual experiences.

⁴⁴ Hikikomori voluntarily choose social isolation, minimizing contact with people — including friends and relatives — and sitting in their rooms for months on end while depending on others for food and shelter. In Japan, there are around a million people who live this way.

⁴⁵ Few people share Nozick's reverence for a world that is deeper than socially constructed reality; the majority are in no hurry to break out of the matrix. *Berger P., Luckmann T., The social construction of reality. A treatise in the sociology of knowledge (1966).*

1.6. ACTIVE vs PASSIVE CONSUMPTION

The non-utilitarian economy can shed light on another global trend — the migration from passive leisure to more active forms of recreation. The gradations along the scale are subtle, so I will give some background explanation before attempting to do any quantitative assessment. When people are actively consuming, they are cognitively engaged and influence events or the perception of those events. The highest forms of activity include engagement, involvement, and collaboration. Pursuits that require a person to react — such as computer games — are active.⁴⁶ Roller coasters are a perfect example of a passive pursuit. Armchair sports fans could also be seen as passive.⁴⁷ In the same sense, eating sweets, smoking, and using drugs are all passive pursuits. It's harder to judge things like watching movies and reading books unless a person's involvement is something we can see. Think fan fiction or cosplay. In industries that produce live events and shows (plays, concerts, sporting events), everything is in plain sight.

Even though all the gradations along the “passive-active” axis are approximate at best, I decided to attempt to locate industries along the axis (see table^{xxiii}). When I was done, I had far more items on the active side than on the passive side: \$3.1 trillion compared to \$1.7 trillion. Real-world industries skew active, with three or four times more revenue in active pursuits than passive ones (\$2.2 trillion compared to \$600 billion). Virtual industries are split approximately 50–50, with \$1 trillion in revenue on each side. These results pass the common sense test, but we will need to see metrics over time in order to say more. My reasons for running this comparison go beyond just wanting to harp on the ineffectiveness of money. Businesses compete for user activity because that activity creates strong ties with their target audience. This has always been the case, but we are seeing record levels of competition for user activity today. In Section 7.6, I will explain how this competition for activity creates incentives for measuring the value of symbolic goods.

⁴⁶ This describes all industries that combine both motor and gaming activity: sports and fitness, tourism, personal care, crafting... Plot forks and other options created by player-trained artificial intelligence are an innovation in gaming. Stuart K., “Keith Stuart on AI, acting and the weird future of open-world games”, Eurogamer (2015). The science fiction film *Black Mirror: Bandersnatch* lets viewers choose the plot, which can last from 40 minutes to several hours.

⁴⁷ One could argue with this. Fan's do not see themselves as passive — they're in the game. Communication, by definition, cannot be one-way, unless someone is talking to inanimate objects. Given the ascendancy of the internet of things, however, those inanimate objects will start talking and turn into Bruno Latour's network actors. It will be interesting to see were neurophysiologists place such communication on the activity scale in relation to ordinary human conversation.

CHAPTER II.

THE ECONOMICS OF MASLOW'S PYRAMID

With this data in hand, a considerable opportunity presents itself (I see multiple opportunities here, but this one seems the most intriguing): performing a quantitative study of growth needs. In previous chapters, I looked at revenue for non-utilitarian industries and their segments. Now I want to look at the data from a different angle — from the demand side — and identify the distribution of consumer expenditures by the life essentials they expect the goods and services they acquire to serve.⁴⁸ Ideally, I would like to get a picture of the emotions, feelings, and anxieties that go into the cultural consumer basket, with the goal of measuring in money how much people spend on laughter, prestige, nostalgia, nirvana, and anything else they need. Say, getting scared out of one's wits costs humanity so many billions (equal to the revenue from horror films), and gambling fever costs something like half a trillion dollars.

In the early 1960s, researchers attempted to sequence the genome of cultural products, specifically of painting. Nothing came of it, however, because the tools that were available were too imprecise. But then came the revolution of digital

⁴⁸ People are keen on the effects of their purchases, after all; the objects and texts are incidental. As market researchers put it, the consumer doesn't want a drill — she wants a hole in the wall. See also Stigler and Becker's Z theory. *Stigler G., Becker G., "Degustibus non est disputandum", in American Economic Review 67 (1977), 76–90.*

music and art that began to approach handmade. This is not what I set out to do. My approach isn't concerned with production and instead focuses on the end effects of cultural consumption. How can we see them through the lens of money?

We have revenue data at our disposal. With that data, it would be easy to calculate how much people spend on a given growth need if all the industries and segments specialized on a single need. Obviously, that is not the case. Industries generally serve a range of needs, but there are some exceptions, such as video games, cut flowers, amusement park rides, rich desserts, pornography, and casinos, just to name a few of the single-need segments. Then you have industries like education, movies, and luxury goods, each of which serves an assortment of needs. The question of how much people spend on any given need is not a straightforward one. Industries duplicate each other's efforts as they serve our growth needs with no clear division of labor in sight. (Couture fashion and sporting events target different needs.)⁴⁹

The rich multitude of needs poses another difficulty. There are over fifty basic emotions⁵⁰ if we count secondary emotions, plus all the cognitive needs, communicative needs, and so on and so forth. Even when revenue is broken down by goods and services, there is no way to say how much people spend on a specific need. There is, however, a workaround if we group needs in levels like we see in Maslow's hierarchy of needs^{xxiii} and then fill in the pyramid with the revenues from industries serving those levels (Fig 2.1).

In this book, I examine the relevance of money when analyzing growth needs in order to uncover what can and cannot be expressed in money. This is the main case study of Volume 1, and it leads us to the necessity of measuring the symbolic. For that reason, I want to pause to look at Maslow's pyramid. Anyone who ever took a psychology class remembers it: that's how we are taught what to strive for. Learning about the hierarchy of needs is the first time many of us understand that although collective values are often forced onto us as individual ones, these are two different categories.

The importance of Abraham Maslow's achievement is hard to overstate, as he founded humanistic psychology and set out the liberal discourse that continues to lead human conversations today. Before Maslow, psychology was dominated by Freud with his subconscious and the behaviorists with their stimuli and reactions.

⁴⁹ Predictability in supply and demand: consumers need to know what to expect from their purchases, but industries have nothing to gain when people spend their time comparing options instead of spending money.

⁵⁰ Research psychologists employ a variety of arguments to identify the so-called basic or fundamental emotions. There is no single accepted list. See Carroll I., *The Psychology of Emotions* (1991).

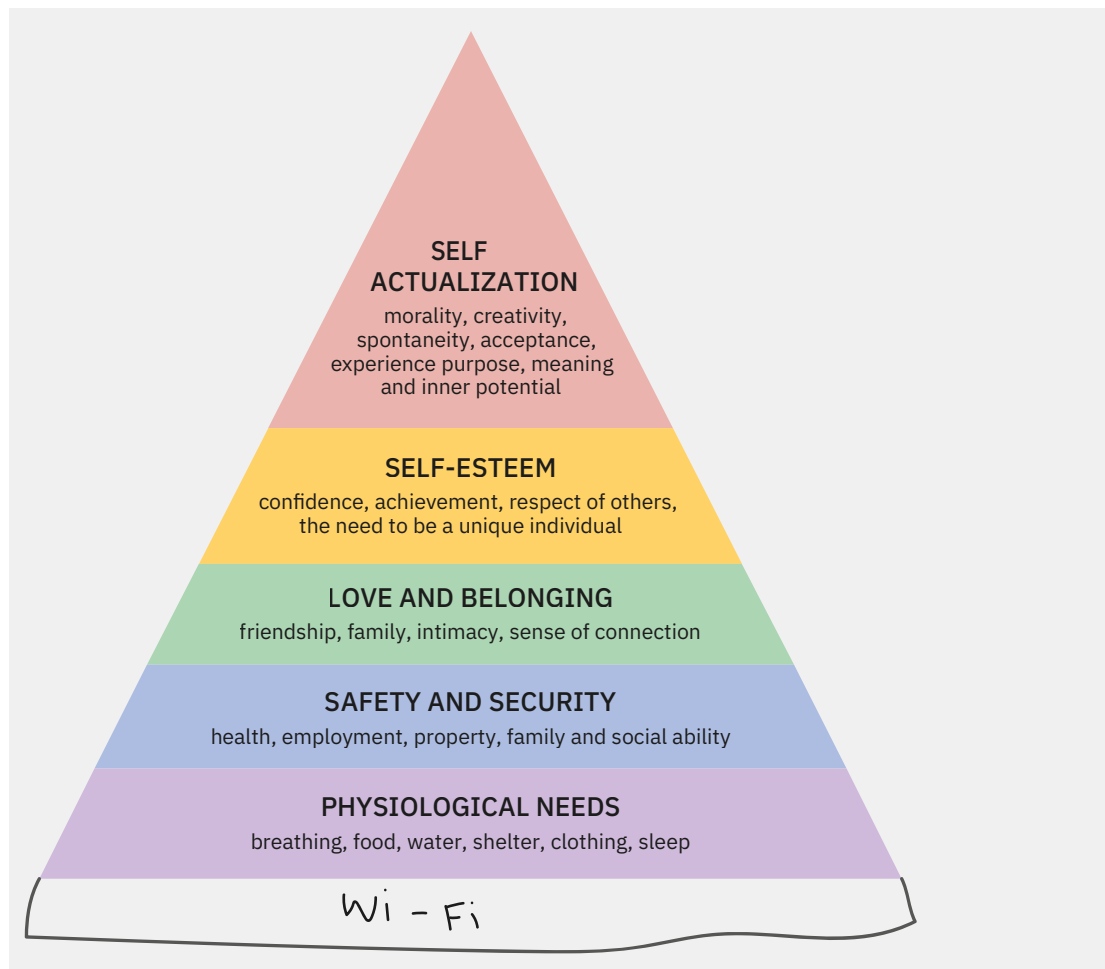


Fig 2.1 | POPULAR UNDERSTANDING OF MASLOW'S PYRAMID

The individual was imprisoned by the determinants of behavior until Maslow appeared with his liberating concept: humans “weren’t acting on the basis of these uncontrollable, unconscious desires ... behaviour was not just influenced by external rewards and reinforcement, but there were these internal needs and motivations.”⁵¹ The pinnacle of his pyramid, self-actualization, became the brand of the era.^{xxiv}

The brand soon ran into trouble as positive psychology⁵² fixed its attention on happiness and infected the public — and even governments — with the idea that happiness was something we ought to achieve; however, positive psychology has

⁵¹ From Lachman’s comments to the BBC.

⁵² Positive psychology is the study of the conditions for human happiness, optimism, meaning, and spirituality. It was founded by Martin Seligman with the help of Mihaly Csikszentmihalyi.

not been very successful at helping people with that so far. Where and how can a person get their hands on that promised self-actualization? How, in practical terms, can one follow the advice to “find a job you love and never work a day in your life?” According to Maslow, the path leads up the pyramid’s steps toward self-actualization and toward a pragmatic identification of one’s abilities (over time, “self-actualization” has been transformed into “self-fulfillment”⁵³). Specific instructions, however, are lacking. People crave self-actualization, but when they follow promising avenues of approach they often find themselves in a crowd of others pushing for the same thing. What are they supposed to do? Theory has no answer. It’s telling that the percentage of people who reach self-actualization is the same today as it was during Maslow’s lifetime: around 1%.^{xxv}

Let’s imagine a young person who is close to earning a bachelor’s degree or a few years out from college. They want to feel like they’re making the most of life, but so far nothing much is happening. On the internet, they see people enjoying success: here’s someone throwing a quadruple back flip, over there is someone founding a project like YouTube (or at least starting their own YouTube channel), and on the other side is someone with hundreds of thousands of followers on Instagram. What is our young friend supposed to do to enjoy even a modicum of success? Karl Polanyi called it tacit knowledge, the expertise that was once passed down from master to apprentice in workshops and is now so hard to find. Our young person (who might even be close to 40) trying to figure out life has heard of Maslow’s pyramid and the Dilts pyramid,⁵⁴ as well, but personal growth is often determined by whether or not an individual has access to the right scales and norms for comparison. What pyramid levels does our young person need to work harder on, and where should they ease off? If only they had access to information about standard cultural consumption! This, of course, leads to the question “Whose standards?” One way to personalize the levels is to use statistical standards identified at the intersection of psychology and economics:

1. The pyramid is hard to use for practical purposes. Its layout is clear enough in general terms, but using it is like trying to follow a map that wasn’t drawn to scale.⁵⁵

⁵³ See Endnote XXIV on self-actualization.

⁵⁴ The Dilts pyramid was an attempt to create practical applications scientific knowledge. Critics call it pseudoscience (Robert Dilts is a proponent of NLP), but that does not prevent coaches from using it for business training and psychotherapy.

⁵⁵ Furthermore, the pyramid’s scientific underpinnings are problematic: it is impossible to confirm or deny the existence of the pyramid or the order of its layers as long as the needs go without direct measurement.

2. Proceeding from economic data poses the opposite problem: we can measure how much money people spend on various needs, but it isn't clear how to use that information to analyze growth needs and behavior.

Maslow's diagram is the key that opens the door for economists who want to study needs.^{xxvi} Psychology isolates what to measure, while economics brings the measurement tools. My idea for a monetary analysis of the pyramid involves estimating the aggregate revenue of the industries that serve needs on every level. I was extremely curious to see what I would find in terms of per capita data. Once we have the data broken down by country, region, age, profession, and property status, all of us will be able to see what our peers are spending on various levels of needs. This promises to be every bit as interesting as finding out how much our peers earn. (Norway allows people to do this.)

Let's do the math. As I previously tallied, the top levels of the pyramid account for half of the world's consumption. (The bottom level, which weighs the same \$30 trillion as all the top levels combined, represents basic needs.) I calculated the monetary weight of each level in Maslow's pyramid by assigning it the revenue from the industries that serve needs at that level. In a number of instances that was easy enough to do. For example, it made sense to assign the revenue from social networking sites, cafes, and restaurants to the pyramid's third level, where social needs are grouped.⁵⁶ Chocolate and other sweets can be categorized as hedonistic needs. For movies and television shows, it made sense to use more granular data showing revenue by genre or type of show. The list goes on.

Some segments are trickier than others. For example, money spent on brick and mortar education should be split, at a minimum, between self-actualization needs (growth, understanding) and socialization needs (affiliation, belonging). For now, I added this revenue to level 5 (cognitive needs) and decided to consider the social aspect of education as a secondary effect, even though the opposite is often true. Once the prices for online education stabilize, it will be possible to calculate the value of socialization as the difference between what people spend on brick and mortar education versus online learning.⁵⁷

One difficulty crops up right away: there is no place on the pyramid for simple pleasures. We know they exist, but the pyramid ignores them in an

⁵⁶ From the revenue of restaurants and cafes, we have to subtract the direct cost of preparing and serving food and assign a portion of revenue to the aesthetics level (epicureanism).

⁵⁷ When students were stuck at home during lockdowns in 2020 and 2021, the world's top universities stuck to their prices, despite the fact that the same courses — in some ways even better courses — were offered online at a miniscule fraction of the cost. Students fell for it.

unanticipated oversight. Perhaps there was no time for hedonism in the 1930s and 40s? I doubt it — hedonism has probably always had a foothold in society. We can probably assume that Maslow's omission was a result of the immaturity of consumer standards at the time. The world had not grown up enough for the cult of desires as well. If someone had tried to calculate the size of the pleasure economy (a fashionable branch of economy today), they would have found precious little to count beyond alcohol, tobacco, and luxury goods.

Seventy-plus years ago, the world was not mature enough for the industrial mass production of experiences and, thus, an economy of experiences.⁵⁸ There is no separate line in the pyramid for the need to be informed and “in the know,” but we can fit it into socialization and cognitive needs. In other words, the pyramid is a pretty old-fashioned concept, but I think we can work with the original pyramid in the form in which it came down to us on a stone tablet. After all, there's no reason we can't maintain separate accounts for hedonism, experiences, and the rest of the items that don't quite fit, and then add their revenues to the table later.

Most industries aren't known for specializing in a narrow area, but the hedonism subgroup is a delightful exception to the rule. This industry includes, among other things, desserts and sugary drinks (including carbonated drinks), which bring in \$1.8 trillion per year.⁵⁹ It also includes tobacco (\$800 billion), pornography and sex work (\$200 billion, of which I decided to assign half to pleasure and split the other half between cognitive needs and experiences), one-third of the revenue generated by amusement park rides (\$50 billion out of a total \$150 billion)⁶⁰ and at least one-half of the revenue from computer games, or about \$50 billion. When rounded, people's spending on the small joys of life add up to about \$3 trillion, or one-tenth of the entire non-utilitarian economy.

I categorized spending on media consumption as meeting information and cognitive needs. With education, I split up the total revenue of \$6.5 trillion per

⁵⁸ Psychologists classify the need for experiences as an independent need that does not lead to any other need. Remember that Maslow conceived of his hierarchy at the height of the Second World War. While I can't be sure, I wouldn't be surprised if many of the draftees from the corn belt were motivated by a desire to have experiences and discover the world.

⁵⁹ Desserts and sugary drinks are included in social practices. We could try to parse out the role of gastronomic aesthetics, the art of confectionery, and epicureanism, but this is no time to get caught up in fine points of the second order.

⁶⁰ As with sex, the remaining two-thirds is divided between social and cognitive needs and experiences.

year⁶¹ like this: \$2.66 billion went into the cognition category, including the \$2.4 billion spent on higher education at universities and colleges, \$200 billion spent on online education, and \$60 billion spent on infotainment.⁶² Fundamental science, at \$2 trillion, found a spot on the fifth level.^{xxvii}

Easily half of the industries in the non-utilitarian economy take aim at more than one level of the pyramid, and social networks have helped them by adding an element of prestige where there was none before. Food, fitness, spiritual practices, and even museum visits have become public as people share that sort of information with their social circle.⁶³ This means that any economic analysis of the pyramid will be lacking in mathematical precision, but it will not be haphazard, either. Errors introduced when assigning industries and segments to levels of the pyramid will come out in the wash.

Here are the totals for spending at each of the pyramid's levels:

Hedonism	Experiences	Social needs	Prestige	Cognitive	Aesthetic	Self-actualization
3	1.6	8.7	4.7	6.8	2.5	1

Note. In trillions of dollars. See the next table for a breakdown by industry.

The first thing we notice: almost half of non-utilitarian spending is directed toward social needs, including prestige. This seems surprising, even given the high level of social content in industries like food service, beauty, fashion, and large-scale events, and it speaks to the dual social and individual nature of a human being.^{xxviii} It would be difficult to say exactly what it means without breaking it down by duration of communication and perceived quality, but the sheer amount of money spent on social needs makes it worth watching, even if only to monitor disconnectedness in society.

Let's look at which industries serve social needs:

Production of social goods	Share of industry that serves social needs	Social	Prestige
Hard liquor	0.7	320	
Low alcohol beverages	0.9	1000	
Wearable fashion and jewelry	0.6	–	400

⁶¹ According to HOLON IQ.

⁶² The non-utilitarian realm does not include K-12 education or the corporate sector.

⁶³ “Have you seen the latest Gaultier?” is not a question, but a statement: “I’m in Montreal (or Brooklyn or Stockholm, wherever Gaultier’s latest show was running): *Loriot T.-M. (ed.), The Fashion World of Jean Paul Gaultier: From the Sidewalk to the Catwalk (2011).*”

Production of social goods	Share of industry that serves social needs	Social	Prestige
Grooming	0.7		950
Fitness and wellness	0.5	100	150
Amateur sports	0.5	300	
Outdoor activities	0.5	400	
Restaurants, cafes	0.8	1800	–
Bars	1	185	
Nightclubs	1	45	
Tea, coffee, cocoa	0.8	400	
Flowers	1		105
Corporate events	0.8	400	
Weddings	1	200	150
Funeral services	1	100	70
Dating services		12	
Volunteering	1	547	
Charity	1	330	200
Live music	0.5	70	
Museums	0.3		30
Social media	0.7	60	10
Architecture and non-standard construction	0.8		1300
Interior design	0.7	200	500
Yachts, motor boats, runabouts	0.5	10	83
Cars and motorcycles	0.6		400
Landscaping and grass	0.4	30	80
Collections	0.2	15	5
Personal weapons	1	100	
New legal services	1	520	
Religion		500	
HR-industry (recruiting)		480	
Consumer electronics		150	150
Miscellaneous		500	
Total, rounded, billion US dollars		8800	4600

The first column of numbers shows the share of the industry's revenue that I subjectively assigned to social needs. The amount assigned to prestige is also subjective.

Second, we notice that people spent \$4.7 trillion on prestige. This is approximately one-third of total social spending (\$13.4 trillion).

Third, we end up with a layer-by-layer financial cross-section of Maslow's pyramid. This is the goal of the whole exercise and the material we will be focusing on from here on out.

2.1. FINANCIAL PROFILE OF MASLOW'S PYRAMID

While I was collecting data by industry, I didn't have time to worry about what it would look like. Once non-utilitarian spending is arranged like the original pyramid, a most curious picture emerges (Fig 2.2). This certainly gives us food for thought. My own first reaction was that Maslow got it right! There may be all sorts of objections and exceptions to the table,⁶⁴ but the statistics are on his side: the closer you go toward the base of the pyramid, the greater the spending.⁶⁵ Margie Lachman, a follower of Maslow who occupies what was once his office, told the BBC in an interview in 2013 that Maslow had always wanted someone to subject his theory to stringent scientific testing but that it never happened during his lifetime. Until today, no one has attempted to verify that what the pyramid tells us is true.

Maslow's dream has come true. We now know that actual consumer spending on needs follows the shape of the pyramid.⁶⁶ Consumer spending data tells us a great deal — but not everything — about people's priorities. We already knew that basic needs are the first to be satisfied (with a few exceptions), but by looking at the difference in spending on growth needs we can judge how they rank. Looking at the graphic above, it's clear that Maslow was spot on. If aesthetic and

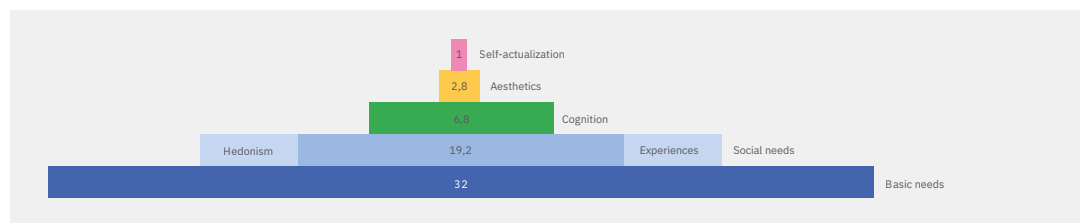


Fig 2.2 | MASLOW'S PYRAMID WITH NON-UTILITARIAN SPENDING

⁶⁴ There are dozens of counterexamples: a starving poet, a hermit, a climber who neglects to follow safety practices, the enthusiasm of the builders of socialism...

Hall Khalil T., Nougaim E., "An examination of Maslow's need hierarchy in an organizational setting", in *Organizational Behavior and Human Performance* 3(1) (1968), 12–35. See other articles on this topic, as well as this overview for the layperson.

⁶⁵ We must repeat the calculations and observe how the picture changes when others distribute revenue by level.

⁶⁶ As already mentioned, the main problem in testing the theory of the hierarchy was the lack of a quantitative yardstick for needs. The sequence of needs in the hierarchy was also disputed. In response, Maslow admitted that in some people some of the needs may appear in a different order or be absent altogether. Hollyforde S., Whiddett S., *The Motivation Handbook* (2002).

cognitive needs were to switch places in the ranking, that would indicate deep changes in humans and human society. Mastering quantitative methods for teasing out those changes are the key to understanding our changing world.

2.2. MASLOW'S PYRAMID UPDATED

Maslow's pyramid is a true cultural asset, and as such I felt it would be wrong to carve up the classical configuration for trivial reasons. Still, I was curious to see how the pyramid would change if we added in the needs that Maslow did not include (such as hedonism, experiences, and the like⁶⁷). Simple forms of hedonism and experiences are distinguishable in the context of particular industries' profits; whereas, more complex forms are served by all the non-utilitarian industries and thus are distributed between multiple pyramid's levels (I will explain more about this shortly). I wasn't sure where to put the needs that hadn't previously been included. As I saw it, I could: 1) add them to the basic needs, 2) slot them in above basic needs but below social needs, 3) place them above social needs, or 4) come up with something else entirely.

With the second option it got deformed, and with the third option the original shape didn't change again.^{xxix}

You saw the classic representation of Maslow's pyramid in the illustration in the previous section, and here is the pyramid with the previously unidentified needs added above social needs (fig 2.3).

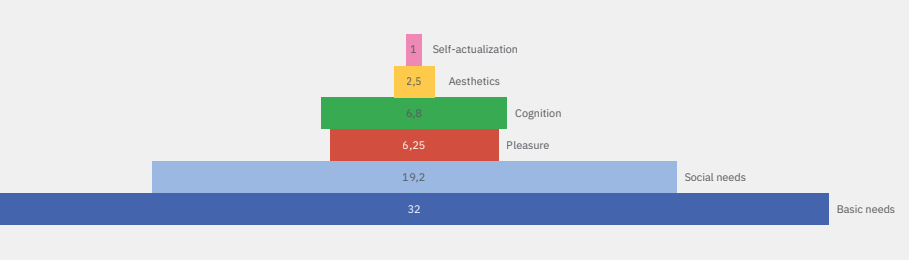


Fig 2.3 | MODIFIED MASLOW'S PYRAMID WITH NON-UTILITARIAN SPENDING ADDED ABOVE SOCIAL NEEDS

⁶⁷ Physical activity is not represented in the pyramid, either. As for nature, perhaps the need for it fits within Maslow's existing levels. There is a fine point to consider with the need for variety, as well, since it has much in common with the need for impressions. Within the framework of a monetary analysis, this need — like complex forms of hedonism and impressions — remains on the pyramid without having a specific address.

The pyramid's money profile is sensitive to lifestyle changes, and these can be identified through ongoing financial monitoring. The layers look different today than they did in the pre-internet era, if only because the internet snatched a sizable portion of consumers' time away from offline non-utilitarian industries — approximately four hours per day on average. Miraculously, the offline industries serving growth needs continued to grow anyway,^{xxx} ignoring both the internet and a whole host of technology-induced shocks. Things continued this way until 2020. Repeating the measurements I've done here every few years will show whether or not this trend continues.

Looking at this financial cross-section of the pyramid, it's impossible to ignore the method's limitations. The main problem, however, is the lack of two types of data about time. With that information added to money spent, the pyramid will become three-dimensional — expressed in money spent, time spent, and the quality of that time — and the true shape of Maslow's pyramid will be revealed. Each of us will be able to find our place on the pyramid and see what our next moves should be.

2.3. TOP LEVEL OF MASLOW'S PYRAMID

Maslow's highest level of bliss is called self-actualization, or self-realization. For obvious reasons, it's hard to find empirical data for this level other than the money spent on tools for self-realization. The pyramid's money profile is an investment portfolio of sorts that shows how much money people invest in various activities, but it doesn't show the extent to which their needs are satisfied. The lower on the pyramid we look, the clearer the connection between spending and need fulfillment; that link becomes less and less obvious as one moves up.

That said, some reckoning is possible. Coaching (\$32 billion), self-help books and online services, (approximately \$10 billion⁶⁸), religion (\$100 billion⁶⁹), psychotherapy (\$50–150 billion⁷⁰) and yoga (\$33 billion⁷¹) are all focused fairly

⁶⁸ The US market for self-improvement products and services was projected to be worth over \$13 billion by 2022.

⁶⁹ Or one-sixth of religions organizations' \$600 billion in total revenue.

⁷⁰ There is a wide range of published estimates for psychotherapy; however, we do know that cognitive-behavioral practices in the US generate \$40 billion in revenue, which is about half of all psychotherapy.

⁷¹ US data.

narrowly on self-realization. To the above, I added 1/5 of the revenue from the beauty, sports, and athletics industries. Contributions to self-realization from literature, movies, fashion, design, and other realms of both high and low culture cannot be expressed in financial metrics.

A modest, unassuming group of activities turned out to have a strong claim to the pyramid's penthouse: games, hobbies, collecting, gardening, amateur music, dance, and crafting... One might be tempted to ask what twerking has to do with self-actualization.⁷² According to Mihaly Csikszentmihaly, all of these activities promote a "flow" state that people claim is the best part of their lives.^{xxxix} Hours fly by like minutes; a person in flow state is unaware of interruptions or even hunger — everything else recedes into the background.⁷³ Like a master carpenter or sniper, they do not even worry about their hand slipping: "Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost."⁷⁴

Characterized by extreme clarity and effortless focus, flow is the opposite of mental chaos, where images and associations flit through the mind without becoming complete thoughts. You try to focus on a single idea, but it darts off into the mud like an eel. People experience the concentration and clarity of the flow state as pure bliss.

By connecting flow with happiness, Csikszentmihaly follows Aristotle's interpretation of virtue as the realization of a person's innermost self.^{xxxix} He sees flow as a universal mechanism for achieving personal strength that is available to all, regardless of status or profession. Not reserved for the elite, flow is for everyone: builders, gamers, athletes, diamond cutters... Unlike Maslow, who believed that self-actualization was reserved for spiritual leaders who worked hard for it, Csikszentmihaly is emphatically democratic: every person can use the flow state to grow and reach fulfillment. This explains and to some extent resolves the Easterlin paradox of happiness, which — like this understanding of the flow state — dates to the 1970s. But does the flow state really give everyone the same shot at happiness as Csikszentmihaly believed?

⁷² Twerking is a sexually provocative dance move involving the buttocks and thighs. It emerged in the early 1990s in New Orleans as an offshoot of Southern hip-hop. Miley Cyrus made it popular nationwide in 2013.

⁷³ This is a characteristic feature of quality time: it flies by quickly but is remembered as taking a long time. Dolgin A., *The Economics of Symbolic Exchange* (2009).

⁷⁴ From an interview with Csikszentmihalyi in Wired: Geirland J., *Go with The Flow* (1996).

2.3.1. The Hierarchy of Pleasures

Like any other state, flow can be described in terms of quality of time spent. People's subjective evaluations of flow are high, almost by default, but what about objective evaluations? Are there different types of flow? And do we, by asking that question, actually speak about high and low culture? Csikszentmihalyi states that any flow is good. He doesn't care if you are ironing laundry, carving meat, playing cards, or writing poetry. In some sense, this makes flow like the universal basic income of happiness.

But is this true? Can you experience the same flow state sitting in your cubicle and following orders as your boss in the corner office? Reviewers have opined that flow can actually inhibit growth because it allows a person to escape reality instead of confronting and overcoming difficulties. (Gamers came in for the harshest criticism for their addiction to dopamine.) Csikszentmihalyi did not see this as a problem: once a person experiences even a low level of flow state, they will grow and progress beyond that level.

"When we choose a goal and invest ourselves in it to the limits of our concentration, whatever we do will be enjoyable. And once we have tasted this joy, we will redouble our efforts to taste it again. This is the way the self grows."

"If we focus our mental energy on a goal," Csikszentmihalyi says, "then everything we engage in will bring us joy. Experiencing that joy will motivate us to come back again and again for more, which naturally leads to personal growth."⁷⁵ (This fits nicely with Lev Vygotsky's concept of the zone of proximal development: when a task is too easy or too difficult, our motivation fails to switch on.⁷⁶) The conclusion is that if a person is allowed to move at their own speed, they will reach their own top level.

Again, is this the case? Perhaps it is true for some people and not for others. What does it matter if someone never rises above the level of hedonism? Csikszentmihalyi knew about being stuck, about being enslaved to one's habits, and about the similarities between the flow state and addictions,^{xxxiii} but he also knew that the truth was somewhere in the middle, so he stood his ground at the far end from which that middle would be found. The way he describes it, being in thrall to one's habits isn't all that bad. For a surgeon, the operating room might have a similar allure as that of heroin.

⁷⁵ Csikszentmihalyi M., *Flow: The Psychology of Optimal Experience* (1990).

⁷⁶ Vygotsky defined the zone of proximal development as the difference between what a person can do on their own and what they can accomplish with guidance.

Flow is like pleasure: each of us sets the bar where we want, but it's helpful to know where others are setting the bar in their own lives. It also helps to have access to the kind of instructional scaffolding⁷⁷ used in education. As we discovered above, unpretentious, mass-market hedonism brings in \$3 trillion per year, which comes out to \$400 per person, newborn babies included. More complex pleasures that reflect individual preferences are spread across the levels of Maslow's pyramid and poorly correlate with financial indicators. We can note the difference between different levels of flow and between high and low pleasures while looking at the rankings of the needs they are associated with. Maslow places socialization below cognitive and aesthetic needs, so we can say that the poems of Robert Frost answer a higher need than a plate of bratwurst and a pint of beer. But consumer spending tells a different story, perhaps because sinful gastronomic pleasures are always appreciated.

We still can't compare the degree of pleasure or dissatisfaction from one person to the next. We don't know how the experience of a wealthy man deprived of luxury compares to the experience of a poor man forced to wear a dirty shirt or a teenager prevented from playing Doom. According to Jeremy Bentham, the founder of utilitarianism, it is not the source or nature of a pleasure that matters, but its quantity. "The utility of art and sciences," writes Bentham, "... is exactly in proportion to the pleasure they yield. Every other species of preeminence which may be attempted to be established among them is altogether fanciful. Prejudices apart, the game of push-pin is of equal value with the arts and sciences of music and poetry."⁷⁸ For centuries, the world laughed at Bentham's ideas⁷⁹ while making deft use of them in politics,⁸⁰ just as Machiavelli would have advised long before Bentham's time.

John Stuart Mill expanded on Bentham's concept, with pleasures differing by quality, not just quantity. "Some kinds of pleasures are more desirable and

⁷⁷ The theory of instructional scaffolding was proposed by Jerome Bruner in the late 1950s. Instructional scaffolding includes:

- interaction between student and instructor
- instruction within the zone of proximal development (the instructor must know the student's current level of knowledge)
- decreased support and increased autonomy as the student gains experience

⁷⁸ Bentham J., *The Rationale of Reward* (1830).

⁷⁹ Thomas Carlyle labeled it "a philosophy fit for swine." Nozick used the epithet "utilitarian monster."

⁸⁰ But not where it comes to covid policy, which seems to follow Dostoyevsky's idea that the world is not worth a child's tears. Economists attempted to underpin covid policy with a utilitarian rationale by calculating the cost of lives saved, but, as we will see in Section 4.2, those calculations turned out to be baseless.

more valuable than others. It would be absurd that while, in estimating all other things, quality is not also considered as well as quantity.”⁸¹ Higher pleasures were associated with the mind, aesthetics, and morality, while lower pleasures were sensual.⁸² Pleasures derived from activity were of a higher quality than passive ones. And Mill used a perception test to validate pleasures: the more desirable of two pleasures was the one preferred by both of two imaginary persons who had experienced it.

While this criterion is modern, it is shaky. If we follow it, then many of the so-called pleasures of the flesh will come out above spiritual pleasures, which is exactly the opposite of what Mill expected. Physical pleasure is entwined with experiences, aesthetics, and many other things; it matters who is experiencing the pleasure and with whom, and how prepared the person is. There are other nuances, as well. In the end, it looks like Bentham’s equalizing tendencies weren’t all that far from the truth. Mill’s formula can be improved by expanding it to account for the symbolic capital of the person experiencing pleasure, but that would take us too far from our original topic.

Today, economists have a term for what Mill was thinking about: revealed preferences. I propose that we can judge the quality of a pleasure using feedback from a person’s associates. Pleasures are ranked by the reactions of those in one’s social circle. As a result, even if hedonism has no assigned level in a subjective measurement, it emerges in the social dimension.⁸³ (Richard Posner reached the same conclusion.^{xxxiv}) Hedonism finds footholds at every level of the pyramid depending on the results of the activity in question. Public recognition, both financial and symbolic, acts as feedback. By tracing it, we can distinguish “lower” states from “higher” ones. The more symbolic capital people have invested, the higher the potential good for those around them and the higher the standing of the pleasure.

Contribution of industries to the state of flow is estimated to be \$500 billion. (How many hours does that represent? It will be impossible to find out without first inventing methods for measuring the quality of time spent, several of which we will consider shortly. Labor is the first candidate for such measurements, since ideally it ought to generate flow.) All told, I esti-

⁸¹ Mill J., *Utilitarianism* (1863).

⁸² Driver J., “*The History of Utilitarianism*”, in *The Stanford Encyclopedia of Philosophy* (2009).

⁸³ In his *Nicomachean Ethics*, Aristotle builds a hierarchy of actions and arts using objective characteristics. Since the art of making a bridle serves as a means to the art of riding horses, the former is less complete than the latter. But the latter is a part of larger military affairs and, as such, is subordinate to them.

mate that the top layer of the pyramid is worth \$1–1.5 trillion. Wouldn't that make it a trapezoid instead of a pyramid? As a matter of fact, Maslow called it neither, and his theory was later illustrated in pyramid-form as a nod to the power of visual images.⁸⁴

2.4. REACTUALIZATION OF MASLOW'S IDEAS

Maslow remade the idea of the calling in a secular mold just at the moment when its religious grounds were beginning to crumble;⁸⁵ he laid the foundation of our modern understanding of a human being. Self-discovery existed before Maslow, of course, just as people asked themselves “To have or to be?” before Erich Fromm posed the question. True, people have always engaged in self-discovery, but their numbers were small. When the growth in prosperity reached the masses, people were faced with a choice. They discovered all sorts of new things to want, and it took time and effort first to obtain those things, then to learn use them, and then to find some kind of balance between procuring things and using them for good.

In the past, elites had always “had” things, so they could afford to just “be.” Newcomers to prosperity had to figure out both, and having took time away from being. People spent years learning to master consumerism but mostly stuck at base camp although these years were often full and productive. Elites observed that the culture, and individuals within the culture, were becoming shallow. The Frankfurt School set the tone, and its leaders described in painful detail how industrial culture corrupted and worked against everything they held dear.⁸⁶ They believed that people had been tricked into the cult of consumerism, which had become a disease of the mind requiring a radical cure. Thankfully, they never suggested what the methods for achieving that cure might have been, and they never understood consumerism as a mighty engine in history: an increasing variety of goods and services gave people wider horizons, freedom, individuality, and — contrary to all expectations — created the conditions for culture to bloom.

⁸⁴ Maslow A., “A Theory of Human Motivation”, in *Psychological Review* 50 (1943), 370–396.

⁸⁵ Watson P., *The age of nothing. How we have sought to live since the death of God* (2014).

⁸⁶ See Expanded note on Dialectic of Enlightenment and the Blossoming of Culture.

All of us are living witnesses to superior achievements in every area, but that was not perceived at the time.⁸⁷

Were people really incapable of seeing difference between high and low culture? Indeed, they were – this directly follows from the Maslow's theory given that a portion of naturally limited personal resources needs to be spent to climb up the hierarchy of needs.⁸⁸ How can we avoid exhausting ourselves as we pursue self-actualization? By making use of instructional scaffolding. However, existing scaffolding can't begin to compare with the scaffolding needed to properly construct the interior of a person.

Here's what we've learned so far:

1. The non-utilitarian economy accounts for half of all consumer spending, or \$30 trillion per year. In monetary terms, growth needs weigh just as much as basic needs.
2. Half of that half is spent on social needs, of which one-third goes to prestige.
3. The pyramid's financial profile mirrors its traditional shape, with spending following the same order as Maslow's levels. This was the subject of unverified speculation until my calculations were complete, but we still need time data in order to understand the big picture.

⁸⁷ Some people, though, saw the meaning behind what was happening, including, Ludwig von Mises. In his book *von Mises L., The Anti-Capitalistic Mentality* (1956) he formulated objections to the critics of industrial culture using social and economic positions. See also *von Mises L., Bureaucracy* (1944) and *von Mises L., Planned Chaos* (1951).

⁸⁸ There is less momentum as you move upward. If we imagine the hierarchy of needs as a reservoir in the form of a ziggurat, then the lower layers (hedonism and social needs) are filled first, while the upper levels get filled if there are enough resources.

CHAPTER III.

WEALTH AND MASLOW'S PYRAMID

3.1. IS CONSUMER INEQUALITY ON THE RISE?

Online industries bring in a tenth of the revenue of offline, even though people spend more time on those activities. How can we assess inequality without considering that fact? Let's say you've identified an increasing income gap of a certain percentage (the methodology is shaky, but we will assume it's possible for the sake of argument⁸⁹). How do we account for the fact that the internet has caused the prices of symbolic goods to plummet? Or the fact that — disregarding prestige — decent-quality utilitarian products are available at fairly low prices, making them accessible to everyone? Is inequality really as vast as we are told, and is it really Problem No. 1?

If this was the focus of my book, I would show how digitization saves each of us over \$10,000 per year on content and communications, which significantly makes up for the supposed drop in standard of living for the middle class

⁸⁹ Chambers J. et al., “Better Off Than We Know: Distorted Perceptions of Incomes and Income Inequality in America”, in *Psychological Science* (2014).

Kapelyshnikov R., “Inequality: How not to primitivize the problem”, in *Voprosy Ekonomiki* 4 (2017).

(Tyler Cowen⁹⁰) and is in fact equivalent to a doubling of global GDP. In this chapter, I will look at inequality from the point of view of non-utilitarian economics. Because if we don't understand how the non-utilitarian economy works, we persist in diagnosing society with the wrong disease.⁹¹

I categorize the data on the symbolic based on how hard that data is to obtain. 1) Money spending: the groundwork has already been done. We have a list of non-utilitarian industries and their revenue, change over time, etcetera. The next step should be to identify non-utilitarian spending in different regions and among different social and cultural groups. 2) Data on time spent: IT companies can monitor to the second how much time people spend on various activities (see Appendix 2).⁹² Data matching (tying data from multiple sources to specific individuals) makes it possible to generate time budgets and consumer profiles. 3) Statistics on the quality of time spent: this is the hardest information to acquire, and the second volume of this book deals with how to obtain the information and what to do with it.

Here I will touch on the second of those items while considering material status and symbolic status. Without them (and they are rarely considered by anyone), we would only get an uninformative average.

⁹⁰ Cowen T., *Average is Over: Powering America Beyond the Age of the Great Stagnation* (2013).

⁹¹ Take, for example, the influence of social networks on society. There is no clarity on the topic, despite the fact that so much has been written about it, and each new study flips the assessment of the situation to its polar opposite (Henry F., "The Consequences of the Internet for Politics", in *Political Science* 15(1) (2012), 35–52); this brings us back to the necessity of measuring the symbolic.

If we possessed the appropriate methodology, we could finally come to a conclusion about the ownership of raw materials and products based on information; without this, we cannot resolve issues that arise around personal data, digital authoritarianism (Dragu T., Lupu Y., "Digital Authoritarianism and the Future of Human Rights", in *International Organization* 75(4) (2021), 991–1017). The authors conclude that technologies work to strengthen authoritarian control, making it easier for authorities to conduct mass surveillance and deal with pockets of resistance before they get out of hand), the reliability of information, trolling, the indoctrination of society, extremism, and other issues. Likewise, we will not be able to resolve what to do about freedom of speech: does anyone have the right to "supervise and punish" and exclude people from the public sphere? If so, who?

⁹² So far, the data available is used mainly for content personalization and advertising targeting.

3.2. MATERIAL STATUS AND SYMBOLIC STATUS

Profiling based on personal information is worrisome, and not only in the context of China's social credit system.⁹³ (The random ads that show up in your social media feeds are a clue to the current level of profiling,⁹⁴ but eventually it will improve.) Leaving aside both digital authoritarianism and the technical aspects of profiling, I want to focus on the subject of inequality in order to demonstrate how flawed the popular perceptions of inequality are when material and symbolic statuses are left out of the picture.^{xxxv}

Data about money, time spent, and its cumulative quality are all categorized as so-called flow variables that stand for quantity per unit of time (not to be confused with Csikszentmihalyi's flow), while statuses are stock variables (financial and symbolic capital), a change of which create flow. Consumption indicators both depend on and influence statuses: the more money and time a person invests in an activity, the more satisfaction it brings and the greater the progress they make. Thus, the statuses grow. This works in the other direction, too. The three types of data and two types of variables are interdependent in the aggregate and individually. A hidden recursion passes through an alternative value of time: statuses determine this value and, accordingly, a person's readiness to spend time on a particular activity, which again influences the statuses.

As I've already explained, despite their significance, statuses are generally a hidden variable. This gives rise to the confusion between cause and effect, logical mistakes such as assuming that x happening after y means that x is caused by y (post hoc ergo propter hoc), and flawed interpretations of correlations. A case in point is Walter Mischel's marshmallow experiment on delayed gratifi-

⁹³ Strittmatter K., *We Have Been Harmonized: Life in China's Surveillance State* (2018).

Hill D., Jones Z., "An Empirical Evaluation of Explanations for State Repression", in *American Political Science Review* 108 (3) (2014), 661–687.

Dragu T., Lupu Y., "Digital Authoritarianism and the Future of Human Rights", in *International Organization* 75(4) (2021), 991–1017. The authors conclude that technology reinforces authoritarian control by facilitating mass surveillance and making it easy to put down pockets of resistance.

Digital authoritarianism: A global phenomenon, 2022

B2C services that create profile noise will prevent total surveillance of citizens: the app Fake Contacts litters the user's Android address book so that everyone who copies it receives a "poisoned" set of data.

⁹⁴ For example, software that manages on-the-fly (RTB – stands for real-time bidding, an instant online auction for buying and selling ads) advertising is not yet all that effective, and retargeting – repeatedly displaying something a user paid attention to – is even less so.

cation and the partial rebuttals of its results, which point out that the original study failed to consider the material status of the subjects' families and therefore missed entirely the fact that the marshmallow prize did not have the same value for all the children.⁹⁵

Identifying income status is a manageable task. (Google and other players see users' budgets, and the rest is up to computer science and algorithms.) Symbolic subordination is a tougher nut to crack. I decided to follow the lead of the utilitarian markets, which are all structured so that their various and sundry goods and services are concentrated around price steps (see Appendix 1). There are usually six price steps, or price clusters, and it is reasonable to assume that this holds true for the prices for symbolic goods. However, while an individual's utilitarian needs tend to hover around a single price level determined by income — making it possible to look at how much they pay for a few things and guess how much they pay for other things — the link is less clear-cut for cultural interests and tastes.⁹⁶ The same applies to reputation and influence in different circles. (It is no accident that elites are divided into political, cultural, professional, athletic, scientific, military, and criminal elites, as well as simple jet-setters.) Be that as it may, the internet is ready to interpret statuses, and figuring out how to do so would lay the groundwork for advancements in science and practical disciplines.

In the next volume, I will go into this question in detail and propose a method for value mapping the symbolic; for now, let's look at how it helps us deal with hedonism and Csikszentmihalyi's flow states, differentiating them by quality and productivity. According to Lev Vygotsky, a reward system promotes growth when the task is neither too simple nor too difficult for the person. In this respect, playing shooter games differs little from listening to opera or writing poetry: in the first instance, the reward is doled out for precision marksmanship; in the second, for singing; and in the third for finding the right word. How are they different? Why do we praise a person for one and criticize them for the other?

⁹⁵ Mischel W., Ebbsen E., Zeiss A., "Cognitive and attentional mechanisms in delay of gratification", in *Journal of personality and social psychology* 21(2) (1972), 204–218.

⁹⁶ I examined the links between tastes in film, literature, and music using a database maintained by the recommendation service Imhonet.ru. The weakest correlation was between literary and musical tastes. In its simplest form, the question was: if people have the same literary preferences, does that mean they will like the same music? The question is significant for cross-cultural recommendations and much more.
Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012), 252.

Csikszentmihalyi explained that once a person experiences flow state, they will strive to reach it again and again and grow in the process. Unfortunately, it doesn't always work that way for everyone. In Chapter 2, I linked the quality of a pleasure with the level of the need it satisfies. Hedonism varies along a hierarchy of needs. But there's a problem: needs don't exist alone — they exist in groups. Rebuking a gamer will cause them to react with a whole set of justifications, but none of them stand up to the argument about status I'm about to make. An objective marker of a worthwhile activity is that it raises the person's statuses; empty activities add nothing. (This criterion applies to smartphones, which are widely held to be harmful.⁹⁷) Expected incremental improvements in status are an indicator of the quality of any activity, and tracking statuses is decidedly easier than dissecting flows.

This dialectical link between statuses and pleasures is part of the socio-cultural dynamic. Non-utilitarian industries stratify society, the many flavors of content they put out acting like selective filters. Consumers settle at one of society's taste levels, of which we are assuming there are six. (Many sports and even professions have a similar number of levels.) Mass culture is disparaged for pandering to the "lower impulses," but in fact it pursues the noble cause of structuring and thinning out the competitive landscape, thus reducing the competitive pressure in all areas of life.

Symbolic statuses are the key to social tension, which is supposedly kindled by economic inequality. But doesn't the symbolic sphere have anything to do with it? Should we ignore the symbolic just because we don't have enough information about disparities in the distribution of cultural, human, and social capital? These disparities go undetected by both the Gini coefficient⁹⁸ and by sociology, and it will be interesting to see what we can discover by measuring the non-utilitarian economy. If we had enough information about material statuses, we could build out financial profiles for Maslow's pyramid by income bracket, thus adding greatly to our understanding. In the meantime, we are limited to looking at country-level data, which is plentiful enough to make a start.

⁹⁷ According to data from the Anxiety and Depression Association of America (ADAA), "scrolling" worsens a person's mood and increases their anxiety. People who spend seven hours a day or more on social networks are twice as likely to need psychiatric help. See also *The Effect of Social Media on Teenagers*.

⁹⁸ The Gini coefficient shows income differentiation (as a decile, the relationship between the average incomes of the top 10% of wealthy individuals and the bottom 10% of low income individuals. It is calculated neither precisely nor regularly.

3.3. NON-UTILITARIAN ECONOMY BY COUNTRY AND SOCIAL STRATA (BEGINNING)

How wealth influences the distribution of spending on various needs is fascinating, especially in the context of inequality. Non-utilitarian spending is equal to utilitarian at the global level, but does that hold true when comparing wealthy nations with poorer ones? And how does that spending differ across social groups within a single country? How does it change over time?

While it seems reasonable to assume that the pyramid's upper layers are wider for wealthy individuals, countries, or regions, perhaps to the point of the pyramid losing its characteristic shape, it would be rash to jump to conclusions. The rich eat better, take better care of their health, spend more on physical and environmental safety, value their time, and respond robustly to risks; this means that their basic, utilitarian needs take up more financial room before we even start counting their higher, non-utilitarian needs. These factors can be measured and corrected for (the method is described in Appendix 1), but I want to provide some context before we get started.

3.4. HYPOTHESIS OF THE NON-UTILITARIAN CONSTANT

How has the relationship between utilitarian and non-utilitarian spending changed over the course of history? Answering this question would require calculations for centuries past, and we have nothing even close to complete statistics for any historical period, much less the kind of data that would allow us to reach an acceptable level of accuracy. But what about the future? Those measurements will have to wait, as incremental changes may not show up over short periods of time. All we really have is data for the past two decades, and they show a gradual, synchronized upward trend for the industries we are interested in (Fig 3.1).

The utilitarian economy grows in parallel at essentially the same rate, which means that our target ratio remains unchanged. But should we expect to see it change? Here's my hypothesis: although it seems that growing wealth ought to lead to a greater share of non-utilitarian spending, a counterintuitive idea may, in fact, be true. At all times and in all societies, utilitarian and non-utilitarian spending account for approximately equal shares of total resources. This parity

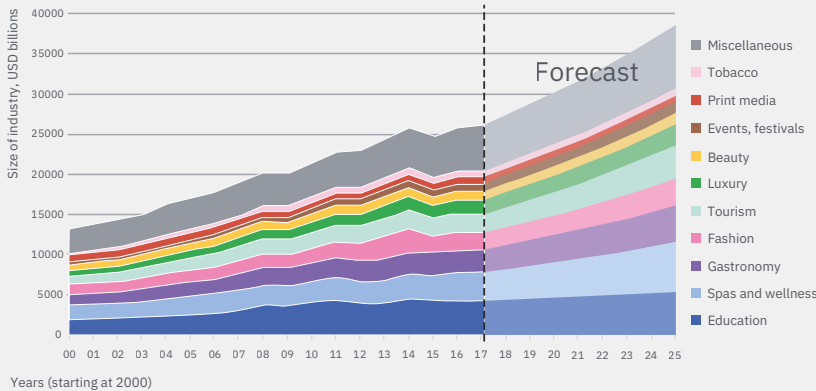


Fig 3.1 | CHANGE IN NON-UTILITARIAN SPENDING

* *Miscellaneous: drugs, sports, alcohol, volunteering, TV and video streaming, advanced legal services, branding, charity architecture and interior design, museums, libraries and archives, photography, video games, children's toys, amusement parks, social networks and blogging, radio and audio streaming, performance arts.*

is not ideal, but it is sustained on a global level over significant periods of time. I call this the non-utilitarian constant.

This constant would have found favor with Georges Bataille, who pursued a formula for global sustainability.⁹⁹ According to Bataille, humanity is motivated not by the fight for material resources or the idea of increasing wealth, but by a “political economy of unproductive expenditure:” in his discourse on “general economy,”^{xxxvi} people work in order to destroy that which was already created, thereby clearing the field for activity. The modern non-utilitarian economy follows this logic, and Bataille, with his neo-Marxist inclinations, would be surprised to discover that he prophesied the advent of consumerism. Of course, there is no need to destroy the symbolic, as there is room enough for everyone and symbolic goods go extinct on their own.

The balance between utilitarian and non-utilitarian is not always visible to the naked eye — seeing it requires properly presented financial indicator, if only we had them — but sometimes it is readily apparent. One example would be the Egyptian pyramids, those black holes of the symbolic that devoured the lives of millions of people.^{xxxvii} Another example is Selinunte in present-day Sicily, known for its ruins of ancient temples. Visiting the site, one can't help but wonder why they built so many temples, and why in the middle of no-

⁹⁹ Bataille G., *The Accursed Share: An Essay on General Economy* (1949).

The book is based on an article from 1933 Bataille G., “The Notion of Expenditure,” in *The Bataille Reader* (1984), 116–129.

where. Two ideas present themselves: the symbolic is more prevalent than we think, and it's always been this way.

Architecture, sculpture, folios, fine clothes, jewelry, luxury goods, furniture, interiors and decor, crafts, theater, dance, celebrations and spectator entertainment, sports and martial arts, thermal baths, silks and spices, illusionists and magicians, perfume and incense, fireworks, maps, music, alchemy, religious cults... Without half trying, I can list two dozen non-utilitarian sectors that existed in pre-industrial economies. And, of course, there were courtesans,¹⁰⁰ the Sun King's Versailles — where the fashion industry was born — and other little luxuries that saved people from boredom and created a demand for labor. Today, the global economy produces enough of everything to effectively feed and clothe double the Earth's population, and the excess production capacity is spent generating a surfeit of symbols. But when we look back at history, we see that the relationship between higher and lower needs, in fact, ancient: they are linked like the roots and crown of a tree (Fig 3.2) and comparable in size (one occasionally is greater than the other).

Gazing at the Temple of Hera (Fig 3.3), one is drawn to speculate on what this explosion of architectural megalomania actually means. And remember, there are eight of these in a relatively small area — the few thousand families living in the region did not need this many temples. So why did they spend their energy and resources building them? (If we wanted to, we could estimate those resources; after all, construction methods haven't changed much since then). Modern settlements do not have that many places of worship per capita. Did Selinunte host events equivalent to G7 summit? Did the temples function as builder showrooms to attract construction clients? How can this phenomenon be explained?

The mystery was solved in 2018, when archaeologists searched a 100-hectare plot near the temples of Selinunte. When they turned their ground-penetrating radar system on the layer in question, it revealed the outlines of hundreds of structures.¹⁰¹ They were looking at the remains of a city of one hundred thousand people, and the buildings were as architecturally advanced as anywhere in Greece. That's why they needed so many temples! Instead of an extraordinary concentration of temples, the archaeologists realized there had been a much higher concentration of people than anyone expected. If I had known then about the non-utilitarian constant, I could have told them to keep digging (even without the GPR).

¹⁰⁰ The troubadours united as a guild at the end of the 11th century. William IX, Duke of Aquitaine was the first troubadour to compose in the Occitan dialect. Eventually there were around 600 of them. *Duby G., Love and Marriage in the Middle Ages (1985).*

¹⁰¹ This discovery was made by Italian geomorphologists using a drone equipped with a thermal camera.

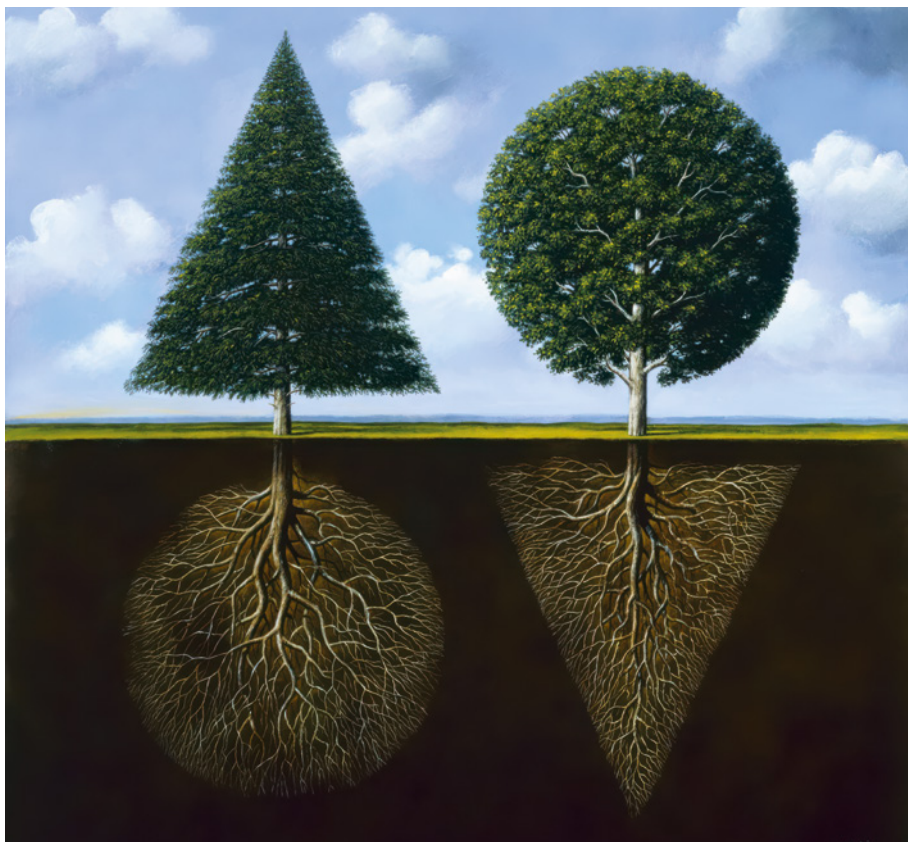


Fig 3.2 | THE RELATIONSHIP BETWEEN THE VOLUME OF ROOTS AND THE CROWN OF A TREE



Fig 3.3 | TEMPLE OF HERA IN SELINUNTE

3.5. ON EQUILIBRIUM IN TERMS OF HUMAN RESOURCES FLOW

Like the law of conservation of energy, general equilibrium theory raises the question: has everything been accounted for? Life happens both inside and outside of markets. We don't know how resources are used in the shadow economy outside of the market, so the existence of an equilibrium between utilitarian and non-utilitarian spending is not a postulate but a theorem that is reinforced by economic achievements. With tangible goods, that balance is intuitive. Natural resources are more or less sustainable and our ability to process and use them changes only gradually; even the advent of nuclear technology, which rebuts the foregoing principle, has had little impact on economies.¹⁰²

When applied to the symbolic, general equilibrium theory is counterintuitive. To begin with, the symbolic is somehow unlimited, so how can it contribute to an equilibrium? And in the second place, it exists outside of markets, and that portion of the symbolic that does exist within markets is not fully expressed. The shadow segment (that part of the economy that is hidden from money) gets included in the analysis of economic equilibrium "in the same, almost tautological, way that postulating the existence of (sometimes unobserved) uses of energy completes the energy system, and preserves the law of the conservation of energy."¹⁰³ According to Becker, the key issue is how fruitful any method for closing the system is, how the invisible substance that holds the system in equilibrium is identified.¹⁰⁴ Herbert Simon's focus on information and Ronald Coase's transaction cost were far-reaching methods for closing the system and revolutionized both economic thought and practice.

If we raise the question of a global equilibrium between the economic and the symbolic, and between the utilitarian and the non-utilitarian, then it's reached through human costs and their measurement; this is a new direction for a breakthrough. And we won't exaggerate the significance of parity between the symbolic and the material. The ratio between symbolic and material for consumer expenditures is mere coincidence, and it makes little difference whether it is a 50/50

¹⁰² Coal is still being mined; China accounts for about half of all production and has no plans to reduce it any time soon.

¹⁰³ Becker G., *The Economic Approach to Human Behavior* (1976).

¹⁰⁴ Economic equilibrium is a state of the economy in which supply is perfectly matched with demand, resources are utilized with 100% efficiency, and proportions are quickly restored after a disturbance. The modern concept of general equilibrium developed in the 1950s based on the work of Kenneth Arrow, Gerard Debreu, and Lionel Mackenzie.

split or a ratio of 38 to 62 or some other ratio. After all, there is no comprehensive system for comparing the utilitarian and non-utilitarian spheres, so we can only talk about parity in the context of a financial or temporal cross-section.

It isn't a question of consistent financial proportions, whatever those proportions may be. If we looked at time spent instead of money spent, the equilibrium would change. Then if we looked at the quality of time spent instead of the quantity,¹⁰⁵ it would change again. And one can always alter the financial equilibrium by outlawing markets, for example, as the Bolsheviks did in the Soviet Union. Today, given what we know about the financial shape of Maslow's pyramid, we can say that the symbolic economy contracts almost by half as a result. The non-utilitarian realm doesn't disappear if markets are prohibited; cut off from monetization, they instead turn to onerous barter in the shadows. Some barter always remains under socialism, since societies can't get by without hierarchy (no matter how persuasively the despotic ruling caste tries to convince those it rules that this is not the case). Does the symbolic decrease in quantitative terms? Looking at how many talented lives were wasted, censored, and exchanged for "slave hymns,"^{xxxviii} we can say it does.

What happens to human resources when markets cease to exist? The Soviet Union prided itself — perhaps justifiably — on the quality of its human resources, but the social system discounted them cruelly, wearing them out with double-think, long lines, and transaction costs. We can, of course, remember the literature, the ballet, the chess masters, the fleeting sparks of freedom and creativity during the thaw. And we can take consolation from the fact that poor people warmed themselves in the light of those sparks and how, despite being oppressed by lies and fear, humanity grew up through the asphalt. If we had data on the quality of the time people spent in those days, we would not have to guess. And if the data had been available then, time itself, fearful of the comparison with free market economies, would have been different.^{xxxix}

So the ratio of \$30 trillion in consumer spending on utilitarian goods and the same amount of spending on non-utilitarian goods does not hold true for all eternity. Parity isn't to be found in money. If we can speak of parity at all, it is only in the context of the flow of human resources, which assign themselves to various activities based on the expected return in the form of quality time. People maximize the accumulation of quality time to the best of their ability for any given set of circumstances: this is the motive that powers society's evolution, and institutions can either help or hinder it.

¹⁰⁵ Personal (subjective, psychological) time is a person's inner experience of objective time. Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012)..

3.6. ECONOMIC AND SYMBOLIC AMBIDEXTERITY

3.6.1. The Metaphor of the Two “Invisible Hands.” Postmarginalism

The ratio between utilitarian and non-utilitarian spending is established as a society governs itself, regardless of the institutional framework around that society. To expose the mechanism by which this happens, I fall back on the metaphor of the invisible hand that Adam Smith used to explain how people decide what to produce and what to buy without discussion, guided only by prices.^{xi} (Metaphors tend to break down and are easily abused,^{xli} but this particular metaphor is considered one of the highest achievements of social thought.

I assert that the distribution of activities in the utilitarian and non-utilitarian markets is another self-correcting process based on Adam Smith's mechanism, but with two hands instead of one: the classical invisible hand is complemented by a second hand that is invisible in the very same way. The first hand governs the utilitarian economy through prices expressed in money, while the second coordinates the symbolic sphere through non-price signals. This second hand is responsible for all the things that cannot be accomplished by money or signaled by prices.

Both hands operate according to the same principle. They are invisible, but they control their spheres using tools that are visible: individuals acting in their own best interests keep track of prices (the first hand) and other signs and signals (the second hand), and their functioning is coordinated by the fact that each individual can see both sets of signals and knows that all other individuals can see them, as well. If you don't like to multiply entities without necessity, we could say that one and the same hand governs two different substances (utilitarian and non-utilitarian) — that is a matter of taste. The important thing to remember is that the signals that coordinate the behavior of the hand (or hands) are different. In the first case, they are numerical (prices), while in the second they are textual. All sorts of games exist around the differences between the two types of signals based on different degrees of focus on one or the other, the desire and ability to interpret them, and opportunities to conceal or otherwise play around with information. In the second case, playing games becomes harder due to the reduced repeatability and the plethora of nuances and other special features that I won't take the time to list here. As a result, the mechanisms of what I call the second hand have been studied far less than Adam Smith's hand. The rules governing the domain of the second hand are also far from perfect.

The second hand is older than the first, for prices were preceded by thousands of years of barter using items whose values were situational and included a fair amount of wiggle room. As exchange developed, relations between the values of various objects were tested and money started doing a better job of weighing values. It began to encroach on the second hand's territory, taking over its functions and increasing its dominance. I have written about this issue before (in 2006 and 2010¹⁰⁶), so I will only return to the topic within the framework of how resources are distributed between the utilitarian and non-utilitarian economies.

While each of the hands has its own priorities, their realms overlap and their actions are coordinated due to the ties between their resources. At any given moment, resources are finite.¹⁰⁷ When resources are coopted into one region, the other experiences a deficit, and that affects the cumulative quality of human time. Here's simple illustration: when a person's work is extremely challenging, they use their leisure time to recuperate. This upends their work-life balance and reduces their subjective wellbeing from what it would have been if that balance was optimized.¹⁰⁸ The same thing happens when the quantity of consumption greatly exceeds its quality. When the balance is off and the more agile hand (whichever that is) gains an advantage, the other underperforms.

The main postulate of economic theory states that resources are distributed to goals in accordance with the principle of maximum return, which applies to both individuals and groups whether or not people are aware of the principle.^{xlii} For the individual, that return is expressed as a subjective sense of wellbeing, and its upper limit depends on the skill with which the individual navigates the space of goods and, therefore, on the existence and informativeness of value markers for those goods. The second hand controls very complex materials (people and signs), and it is forced to operate without the support of simple, clear prices that would allow one to compare, plan, and choose.¹⁰⁹ Cognitive

¹⁰⁶ Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012).

¹⁰⁷ Resources are finite not when they are non-renewable, but when they have limited power, meaning a limited flow per unit of time. This is how well capacity is described.

¹⁰⁸ Bartolome F., *The Work Alibi: When It's Harder to Go Home* (1983).
Pinchuk A., Tikhomirov D., Kulikova A., "Balance of work and personal life in the perception of civil servants of the metropolitan megalopolis", in *Vestnik Instituta Sotziologii* 15(1) (2024), 143–164. Studies show that many people would choose to work less and earn proportionally less.

¹⁰⁹ I am exaggerating the clarity of prices for polemical reasons. Today, of course, they are a very complex tool; moreover, they are constantly growing more complex due to the multifunctionality of goods, the abundance of opinions, price discrimination, and the dual utilitarian and symbolic purpose of products and services.

and other resources flow in the direction of issues that can be handled with greater precision and less effort, where it is easier to calculate the chance of success, and where the result is undisputed and generally recognized. This explains the inclination toward the utilitarian.

I want to add two ideas to this discussion.

The first idea concerns the resource affiliation between the two invisible hands. As I mentioned above, the balance between the utilitarian and non-utilitarian realms is multidimensional, and the revenue from various industries is just one of those dimensions. There is also the time balance, expressed by an equation that uses the total number of hours available for utilitarian and non-utilitarian pursuits (equal to humanity's time allowance of 180 billion hours each day). Supply and demand exist in both the utilitarian and non-utilitarian spheres. These two types of supply and two types of demand are connected both in parallel (supply to supply and demand to demand, or utilitarian supply to utilitarian demand) and diagonally (utilitarian supply to non-utilitarian demand, for example). This is because their connections are determined by human resources, not just by the money and time required by an activity. There are also forces like the van der Waals force involved: the two types of demand are coordinated by means of habits (or *habitus*, according to Pierre Bourdieu), lifestyles, and attitudes.

People's investments in one sphere are effective until the returns are surpassed by the returns from investments in the other. This instant is impossible to glimpse in real time, and society always overshoots the ideal moment for changing tack. But while people may not grasp that moment in time, much less ahead of time, eventually they start to feel that it's time for something to change. (Humanity seems to be living through something of this sort right now, with material wellbeing generally on the rise while subjective perceptions of wellbeing are not.) It is difficult to know what exactly needs to change, for the two spheres are bound by many ties. However tangled the threads, though, the cause is limited resources — material, natural, financial, time, human. The latter includes motivations that prompt people to search for and master new areas of activity.

My second idea is post-marginalist in nature, inspired by deviations from the law of diminishing marginal utility (Gossen's first law) applied to basic goods. According to Gossen's first law, the returns derived from a good grow at an even slower rate, with the utility of each subsequent unit of return smaller than the one before it, much like physiological satisfaction.^{xliii} This is the starting point for all of economic theory.^{xliv}

However, there are situations and goods for which Gossen's first law works either peculiarly or not at all. Examples include addictive goods — such as drugs,

electronic devices, and social media — identity goods, and others. What makes the present stage fundamentally different is the magnitude and domination of these situations and goods: they offer increasing returns, and the drive to consume them might not be sated and continues to grow. Economists have not paid enough attention to this phenomenon, just as they have passed over the difference between basic needs and higher-order needs. Higher-order needs — including the needs for identity, dignity, activity, attention, and recognition — are like cannabis candy: a weighty share of the associated social challenges is caused by the amplification of the role and significance of a category of goods whose economic nature has yet to be grasped and taken into account.

This drift from necessities to needs, from needs to higher-order needs, then to desires and on to the desires of our desires cannot be dismissed as one of the contrived effects, attempts to consider which Becker called “tempting materials ... and useless explanations of behavior.”¹¹⁰ Temptation or not, much of the criticism leveled at economists by humanities scholars is rooted in economists’ disregard for this particular feature of symbolic goods. Becker believed it was insignificant and refused to consider it,^{xlv} but he was wrong.

(The economic concept of utility is hard to grasp. The Marginalists hit on the brilliant idea of using the attractiveness of the last (marginal) portion, but that solution has a false bottom; more than one, in fact. A product’s utility diminishes during a single act of consumption, but after a certain amount of time the need for the product is reactivated. The person was sated and later felt hungry again. In this sense, vital needs can’t be alleviated like higher-order needs, but I maintain that there is a difference between them that one must work hard not to notice.)

Satisfying higher-order needs is like learning a language or becoming a collector.¹¹¹ Searching for new things, creating one’s own image, and choosing tools for growth brings people the same kind of pleasure a collector experienc-

¹¹⁰ In his best-known article, Becker points out that attempts to distinguish between the market for creative or intellectual services and the market for everyday goods have been inconsistent and confusing and concludes that economists tend to complain that human behavior is irrational when they don’t understand it.
Becker G., *The Economic Approach to Human Behavior*, (1976).

¹¹¹ Bianchi M., “Collecting as a Paradigm of Consumption”, in *Journal of Cultural Economics* 21 (1997), 275–289.
Viner also noted that collecting is an exception to the law of diminishing marginal utility. See Viner J., “The Utility Concept in Value Theory and Its Critics”, *Journal of Political Economy* 33(4) (1925), 369–387.
For more, see my book: Dolgin A., *The Economics of Symbolic Exchange* (2009), Section 4.1.4. *Consumption as Collection: the paradox of non-diminishing utility*.

es when scouting for the latest addition to their collection. There are two key similarities: 1) the experience of ongoing and unquenchable consumption; 2) the value added by the new acquisition may be orders of magnitude greater than its value alone, outside of the set. (In this way, a cheap set of curtains on the rear windows can add thousands of dollars to the price of a luxury car; customization of a Haute Horlogerie watch result in the price growing geometrically, not arithmetically.^{xlvi})

Becker saw no need to differentiate between the utilitarian and non-utilitarian markets, between lower-order and higher-order needs, or to adopt a special approach to the latter; however, I reiterate that this difference cannot simply be dismissed. Lower-order and higher-order needs must be differentiated because of the differences in how they are satisfied. And furthermore, markets for ideas, ideologies, values, texts, and the internet must be regulated differently than utilitarian markets. There is no need for this if we take Becker's idea to its logical conclusion,^{xlvi} but if that is the case, then what position do economists adopt on issues like free speech, monopolies in markets for online internet goods, or ownership of personal data? Quite frankly, there aren't many voices offering recommendations on this topic.

If we take Becker's word for it that all markets are the same, that means leaving the information markets to the mercy of the bureaucrats, but, as Bertrand Russell reminds us, "[f]reedom of opinion can only exist when the government thinks itself secure." As far as I can tell, Becker had no intention of carrying water for governments attempting to control freedom of speech.¹¹²

As a person ascends Maslow's pyramid, a switch — or rather a fine tuner — comes on and flips the marginalist principle inside-out. Classical utilitarian goods give way to non-utilitarian goods. (Frankfurt School theorists missed this, just as today's critics of industrial culture overlook it.) Once the exception that proved the rule of diminishing utility, non-utilitarian goods have now become the rule. (Economists love examples like these: "The second glove is worth more than the first," or "A single pearl is worth as much as an entire necklace if it completes the necklace." There are also known exceptions to Gossen's law. For example, safety does not always obey the law of saturation.^{xlvi})

Expressed mathematically, the function for the utility of a good crosses an inflection point, after which the second hand takes up the load previously carried by Adam Smith's hand. This handoff goes more smoothly when people are

¹¹² Like Ronald Coase, the author of the non-state approach to the problem of social cost, Becker liked the idea of self-regulation. Coase R, "The Problem of Social Cost", in *Journal of Law and Economics* 3 (1960), 1–44.

better able to recognize value, hence the demand for improvements to the system of signs, since the complexity of humanity's current stage is rooted in the very things that take place beyond the boundary where we start to see deviations from Gossen's law.

The value of higher-order goods can grow in leaps and bounds instead of at a constant rate. There may be a cumulative process, or even a regression, followed by a jump to a new level, just as we observe in interpersonal relations. Taste, cognitive ability, and mastery all follow a similar trajectory, which is also known in the fields of pedagogy, developmental psychology, coaching, and sports, where professionals have made immense but unfinished contributions to mapping out the path of personal growth. The math behind higher-order needs functions differently than the math for basic needs; it's still waiting for formulas that will carry the theory behind these needs into the applied realm, as the Marginalists were able to do with basic needs.

3.6.2. Creative Consumption and a "Rationally Designed Moral System"

If this were an essay on the psychology of consumption, I could introduce even more arguments to support the idea that higher-order goods are profoundly different. All of the differences center around one fact: the consumption of symbolic goods is simultaneously an act of their production. If the consumption is aware and engaged, then it results in the creation of quality time, the development of taste, the acquisition of various skills, an increase in status, and so on. Together, these effects lay the groundwork for the future. That is what is meant by creative consumption.¹¹³

Labor may or may not obey the law of diminishing utility, depending on the kind of work it is. The law applies if the worker is motivated to earn wages with which to satisfy needs, but it stops applying when work has intrinsic value.^{xlix} People have a hard time coping when deprived of activity, so they compete for it. This competition is what powers civilization.¹ (Laments about the disappearance of work are the result of a hazy notion about non-utilitarian dynamics and about just how much work humanity has yet to do.)

Both symbolic goods and human resources are characterized by increasing returns. Advocates of equality of outcome do not wish to know this: they are annoyed by how much money Internet personalities make and infuriated by the

¹¹³ This concept echoes Schumpeter's creative destruction.

golden parachutes handed to bankers. But Adam Smith explained that inequality is inevitable, saying “in a profession where twenty failures stand against one success, that one should receive all the revenue which might have been accorded the twenty failures.”¹¹⁴

Alfred Marshall stated that the fee earned by a talented individual is determined by the value of what is at risk: “...a rich client whose reputation, or fortune, or both, are at stake will scarcely count any price too high to secure the services of the best man he can get.”¹¹⁵ Sherwin Rosen and Moishe Adler, who went even further, offered an explanation that laid the foundation for the modern theory of “superstars.”¹¹⁶ (This phenomenon, known as the Matthew effect,^{li} is prevalent and perhaps the most important idea in the modern world. (I have written about it before, and I touch on it again here in the Appendix on the light and dark sides of meritocracy).

However one explains it, the facts are obvious: talent is auctioned off at the highest price. Anyone who doesn’t like that needs to explain how we can purchase something — in this case brains and charisma — for a thousand times less than our competitors are prepared to pay for it. So far no one but Marx has found an explanation, and his explanation didn’t work out well because the task is an impossible one.

Harvard professor Michael Sandel, who is renowned for his lectures on ethics, also notes the failure of money.¹¹⁷ By enlightening everyone that not everything is for sale, Sandel did me a favor. If he had done it more rigorously and without playing up to left-wing resentment, this book would be shorter and I would already be discussing the mechanism for measuring the symbolic that are at odds with money. Having spied the root of evil in the monetization of values, however, Professor Sandel proceeded to follow in the footsteps of Karl Polanyi (*The Great Transformation*¹¹⁸) and blame everything on the mar-

¹¹⁴ Smith A., *An Inquiry into the Nature and Causes of the of the Wealth of Nations* (1937), 126.

¹¹⁵ Marshall A., *Principles of Economics*, 8th ed. (1947), 685–686.

¹¹⁶ Rosen S., “The economics of superstars”, in *The American Economic Review* 71(5) (1981), 845–85.

Adler M., “Stardom and Talent”, in *The American Economic Review* 75(1) (1985), 208–212.

¹¹⁷ Sandel M., *What Money Can’t Buy: The Moral Limits of Markets* (2012).

¹¹⁸ Polanyi K., *The Great Transformation: The Political and Economic Origins of Our Time* (2001).

This is Polanyi’s magnum opus. The book sets out a doctrine I will refer to in the second volume of this book in my discussion of the future of money. Someone once said that “new generations do not read the minutes of the meetings of the past.” Polanyi, however, is read and re-read as a “last of the Mohicans” who laid the foundations for the political discourse of our time.

kets. Like his famous predecessor, he failed to notice that the problem does not lie in the markets, but in money's capacity as a measuring tool. Sandel, Polanyi, and many others are preoccupied with finding a way to, if not cancel, then at least hobble the markets. Thankfully, they don't know how, because it would mean throwing the baby out with the bath water. Perhaps it's an exaggeration to say they "don't know" how to thwart the markets: Polanyi puts his faith in forces external to the markets and in an increase in government planning, regulation, and control, even at the price of infringements on freedom. Sandel takes the same path, trusting in government as the bearer of the highest wisdom and capable of creating better order.

At one time — in the last decades of the 20th century — these humanistic ideas were successfully resisted by liberal conservatives — proponents of negative liberty who, like Frédéric Bastiat, Friedrich Hayek, Thomas Sowell, and others, believed that the invisible hand was more skillful than the hand of government and that attempts to do the world a favor via top-down order only make it worse.^{lii} Hayek removed the halo of righteousness from a “rationally designed moral system [emphasis added] whose appeal depends on the instinctual appeal of its promised consequences.”^{lii} But then the concept of positive liberty prevailed, and the welfare state was given a mandate to create order instead of spontaneous “disorder” (with the consent of the majority).^{liii} Would it be fair to say that Hayek went unheard? Quite the opposite: he was given the Nobel Prize. Was his thought too complex for people to understand? No, it's perfectly clear. And yet, over the past several decades we can see the opposite process, with governments getting stronger and stronger.

After explaining the evils of money,¹²⁰ Sandel came out swinging against meritocracy (Appendix 4). The media duly praised his book on the “tyranny” of merit,¹²¹ even though it reeks like an epitaph to ethics as a worn-out, useless discipline that can't let go of the dogmas of the past; a field that keeps hounding the rest of us about a trolley^{liv} and a fat man whose fate we must decide for some reason; a specialty that cannot weigh the pros and cons of an argument and grabs for the handrails where it would be impossible to fall down. Sandel offers no remedy for any of this; he suggests that it requires consideration. By whom? By the government, as the least hierarchical institution.

¹¹⁹ Hayek F., *The Fatal Conceit: The Errors of Socialism* (1988).

¹²⁰ Sandel M., *What Money Can't Buy: The Moral Limits of Markets* (2012).

¹²¹ Sandel M., *The Tyranny of Merit: What's Become of the Common Good?* (2020).

In my view, the way out is not through fewer markets but through more markets. The same is true of meritocracy: we need more of it, not less. Societies do not exist without hierarchies, so instead of canceling them we should balance them by adding symbolic status and verification of reputation to the existing concept of material status. There are negative aspects to stratification, but it is natural for human society to segregate by qualifications and experience, to split into guilds and leagues; disrupting this process is only in the interests of those who were taught that to want something is to deserve it.¹²²

As for money, it is still the locomotive of civilization and will remain as such. Sandel presents society with an almost unsolvable dilemma: on the one hand, it cannot exist without money; on the other hand, money imposes its own rules on life. As I've stated before, I see the solution to this quandary in improving the mechanism for indicating symbolic values, because clarifying the symbolic hierarchy will balance the monetary hierarchy. This mechanism would both compete with and cooperate with money in what would be a step forward instead of a step back. More markets instead of fewer markets. Like cures like (*similia similibus curantur*): instead of running away from money, we should run out to meet it.

3.7. NON-UTILITARIAN ECONOMICS BY COUNTRY AND SOCIAL STRATA (MORE ON INEQUALITY)

Let's continue the discussion of inequality that began in Section 3.3. What can the hypothesis of a non-utilitarian constant introduce to the topic? Can it shed light on the problem of inequality? Does it create a framework for rethinking how the problem is posed? Data on how much the rich and the poor spend on higher-order and lower-order needs — including money, time, and other personal resources — would be helpful. Unfortunately, that data does not exist. We don't even have summary data akin to Maddison's that could be used to analyze non-utilitarian spending by country, much less by stratum.

¹²² Michael Foley linked the rise in mental temperature with the inflated, delirious sense of specialness that liberalism and individualism gave people. The "human rights" culture of 1970-s (that doesn't tolerate any manifestations of inequality) convinced that our craziest desires are deserved to be satisfied only because we want it. He also points out that things we have today lose their value when compared the things we want to acquire tomorrow. Foley M., *The Age of Absurdity: Why Modern Life Makes It Hard to be Happy* (2011), 272.

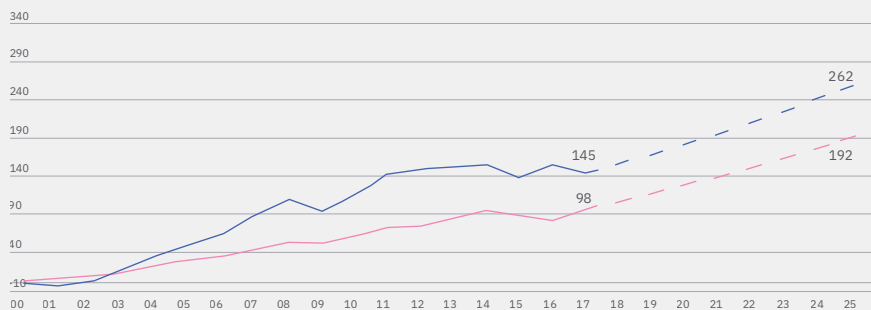


Fig 3.4 | COMPARISON OF THE GROWTH DYNAMICS OF A UTILITARIAN AND NON-UTILITARIAN ECONOMY

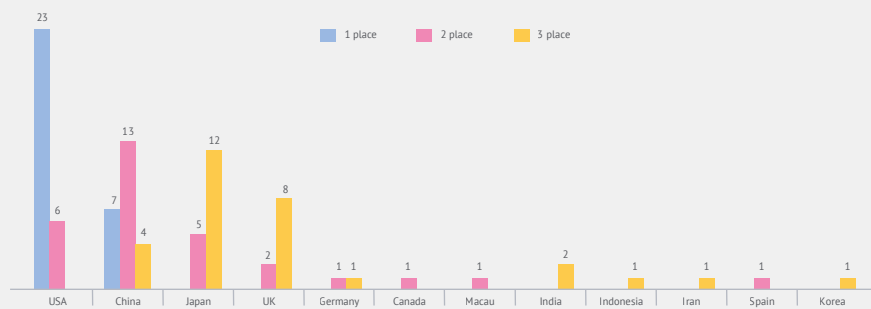


Fig 3.5 | NUMBER OF NON-UTILITARIAN INDUSTRIES FOR WHICH A COUNTRY IS IN THE TOP 3

Industry analysis data is grouped, but the data shows revenue, not consumer spending. That isn't a huge problem for a global analysis, since the amount business (B2C) earned is the same as the amount people spent. But when we look at countries, we have to remember that some of what is manufactured gets consumed elsewhere.^{lv} There is also the issue that non-utilitarian spending is not properly isolated in consumer spending reports. With these caveats in place, we can continue to work with what we have already collected — data on revenue. We can start with some examples that provide a general idea of spending over time and what we can learn from it.

Indicators for 30 industries show that globally, the non-utilitarian economy lags slightly behind the utilitarian economy; since 2009–2010, their growth rates evened out and the gap stabilized (Fig 3.4)^{lvi}. The United States is the top producer of non-utilitarian goods in 23 industries; China leads in seven (Fig 3.5).

For the past decade, the United States' non-utilitarian economy has grown at the same pace as GDP. China's lags behind its GDP in terms of growth rate, but if we believe the forecasts it will catch up soon (Fig 3.6).

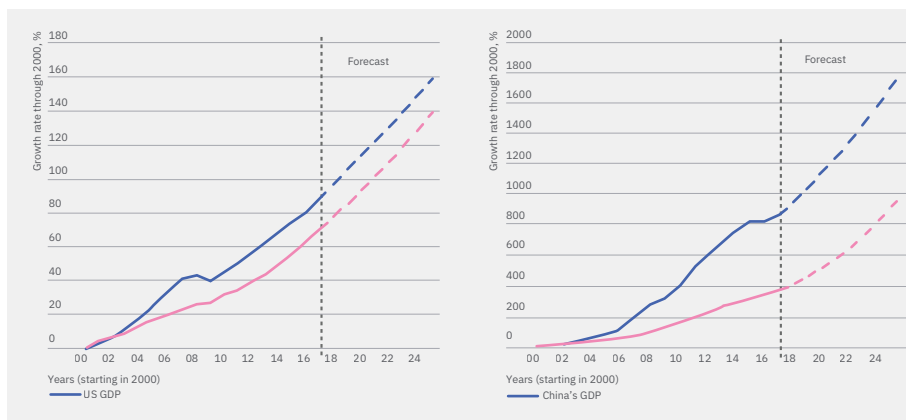


Fig 3.6 | GROWTH IN NON-UTILITARIAN ECONOMY AND GDP IN THE UNITED STATES AND CHINA THROUGH 2000, %

Can the non-utilitarian economy catch up with and outstrip the utilitarian economy, or is that basically impossible? Other than GDP, what influences its weight: the political system, values, income inequality?

We have data on non-utilitarian industries for certain countries, but that is insufficient for a fundamental analysis of social stratification in terms of consumption, and none of the data includes information about consumer status (see 3.2 for the significance of this). Given the meagerness of the initial data, it seems pointless to start a conversation; after all, there has already been plenty of empty rhetoric around this subject. As I explained at the outset, the goal of this stage of my project is to reveal the scarcity of the data to the greatest extent possible. My goal is for the reader to truly see the nature and scale of the problem so that, in the context, the difficulties of solving it do not seem excessive.

One of these manifestations is inequality. What would the ideal state of affairs look like? As an initial approximation, let's imagine a situation where everyone has the same income¹²³ and it grows in lock-step with GDP. It matters whether that income is low or high. In poor countries, incomes are far from the plateau in the utility curve for utilitarian goods,^{lvii} and these goods generate GDP because they deliver increased quality of life. In this instance, non-utilitarian spending grows slower than GDP.

In rich countries, things are different. On the one hand, you would think that people can't consume much more than they already do — take clothes and food, for example — and everything else ought to go into the non-utilitarian economy.

¹²³ They also have equal savings and property, and they are economically equal in all things.



Fig 3.7 | THE GROWTH OF JAPAN'S NON-UTILITARIAN ECONOMY VS GDP

But on the other hand, social competition requires us to look just as good as everyone else; for this reason, even though money flows into non-utilitarian purchases, yesterday's hopes become today's norms, the boundary of what is non-utilitarian gets pushed upward, and we end up right back at the starting line. The frame of reference is relative and mobile (more about this in Appendix 1), resulting in a zero-sum game and stagnant levels of happiness despite rising incomes: it would be one thing if you were the

only one whose income was rising, but everyone around you — the people you compare yourself with — all have more money, too.¹²⁴

What does inequality within a country look like? That depends on the maturity and authenticity of the country's democracy. If a country is democratic and its Gini coefficient is high, then it will have a large population of poor people who use their electoral weight to hog the blanket, if you will. This is not true of informational autocracies, where non-utilitarian spending is more likely to grow.

These are just preliminary observations. We would need more data in order to understand how average income, financial inequality, and political systems really affect the ratio of utilitarian to non-utilitarian in a country. If we had that data, we could test my model using representative examples.¹²⁵ For places like New York or Moscow, we have an intuitive understanding of their position in the system of coordinates labeled "Per capita GDP — degree of inequality — political regime," but we need an evidence base in order to give voice to that understanding. And, of course, there are more than three factors: these factors would not be enough to explain the growth of Japan's non-utilitarian economy (Fig 3.7), which is growing faster than its GDP.¹²⁶

¹²⁴ Exactly the same thing happens when the first rows of the audience in a theater rise to give a standing ovation; like it or not, the rest of the audience has to stand up, too. As one scholar noted, "A professor doesn't need much to be happy: just a salary that is higher than the other professors'." According to Milton Friedman, a sustainable sense of well-being requires GDP growth of 3% per year, no more, no less.

¹²⁵ I would start with the United States, Sweden, Finland, Russia, the United Arab Emirates, and China, and I would use Iran, North Korea, Venezuela, and Bhutan as reference points.

¹²⁶ Culture is the obvious explanation, but existing research methods, including the sociology of values, provide little clarification.

What we see in the data for the United States, China, and Japan is that spending on higher-order and basic needs grows at a commensurate rate. How is that possible in a moral society? Why don't people build up the base of the pyramid first so that they can indulge in profligate spending with a clear conscience? Proponents of utilitarianism (its negative version prioritizes minimizing suffering over acquiring pleasures) argue that this is the only acceptable path, since people are more upset by a loss than they are overjoyed by a gain of the same scale (this is known as emotional asymmetry or loss aversion). John Rawls, the author of *A Theory of Justice*, in which he set up an alternative to utilitarianism,^{lviii} was also in favor of eliminating the scourge of poverty before ordering custom-tailored clothes.

So why is inequality still with us? Daron Acemoglu and James Robinson explained that some countries are rich while others are poor because of differences in the quality of their institutions, which either encourage enterprise or hinder it.¹²⁷ And yet there is plenty of inequality in successful countries with seemingly functional institutions. How can civilized people with consciences put their needs ahead of those who are in worse shape? The explanation is found in the relative system of social coordinates: what looks like excess when viewed from below is just the average rule — one that must be complied with — when viewed from above.

People are subject to emotional asymmetry: they notice losses more than gains. Subjective wellbeing follows the hysteresis loop, rising slowly but accelerating during descent.^{lix} Here's another explanation: the force of an emotion is a function of how frequently it is stimulated. For the wealthy, comfort is the norm and discomfort is a rarity; therefore the former is taken for granted and the latter elicits a strongly negative reaction. The opposite is true for the poor. In this way, differences in subjective perceptions of wellbeing balance out across the various strata. In other words, inequality is self-moderating. (Emotional asymmetry works in favor of the poor.)

Thus, the problem of subjective wellbeing is not limited to the kind of excessive sensitivity described by Michael Foley, and it cannot be resolved by means of income redistribution. When welfare states target material welfare at the same time as perceived welfare — which is conflated with happiness — they undertake impossible obligations that arise in two different systems of coordinates: the absolute and the relative. The latter of these systems (which reflects perceived quality of life) has its own metabolism that is difficult to influence through actions aimed at the first system, and this is positively outside governments' grasp.

¹²⁷ Acemoglu D., Robinson J., *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (2012).

In addition to the mobility of the reference point, the fact must also be considered that there are many different quality criteria, and a breakdown of one of them attracts negative attention, outweighing the wins in many areas. It was a mistake for governments to get mixed up in this process; even if they were able to satisfy hedonistic needs — which they can't, as the bar keeps rising — that still would not equal happiness, and they have no power over the conceptual realm, at least not directly.

The fight against poverty involves that part of the satisfaction curve where small changes deliver noticeable growth. This is the rationale behind distributive policies; however, they are pursued at the expense of the strata living on the flat portion of the curve, so no one can claim that such policies lead to a general increase in happiness. Let's imagine that Bentham's dream of a utilitometer for measuring perceived utility came true and that governments now have access to personalized data on the quality of time spent by their subjects. How embarrassed they will be when they start receiving signals of trouble from every level of society. In political terms, it all comes down to what the mass voter wants: a piece of the pie that, while small, is the same as everyone else's, or a slightly larger piece of the pie with the understanding that some people will get more and some less?¹²⁸ What do status games add to this picture?

3.7.1. The Connection Between Material and Symbolic Statuses

Material inequality creates symbolic inequality. Or is it the other way around? Weberians and Marxists discussed this question, but the key to inequality lies in a different plane. Symbolic goods are distributed by the second hand, the one that helps people sort themselves into social groups, clusters, and communities where they can share with each other (or, speaking in our terms, where symbolic exchange is more effective and the quality of time spent is higher).

In a different work, I wrote: "A particular individual's quality of life depends on the kind of people he has around him and on the nature of his interaction with them. It is good to have access to circles in which you (a) acquire necessary contacts, (b) enjoy good standing, and (c) find common interests and a suitable field for activity. This is the area in which the New Economy operates, organizing and providing content for groups, communities, and communication clubs. The group is the key unit of consumer society, its end and its means. The entire

¹²⁸ The overall size of the pie is determined by the motivation of business; in the first instance, both the motivation and the pie are smaller.

system of signs, texts and signals is, on the one hand, a means of gaining admission to groups in which a certain kind of person is welcome and another is not; and, on the other hand, it is an information menu for consumption there. The quality of a group is related to the size and balance of its membership. The group should have neither too many nor too few members. An optimal size will emerge which can be sustained.”¹²⁹

Social groups need boundaries to protect them from outside influences (spoilers). These boundaries function like a collection of membranes, filters, and diaphragms with varying levels of permeability to ensure the autonomy of exchange within social organisms while ensuring that they can be replenished from the outside.

James M. Buchanan's club theory can help us understand the nature of social fragmentation.¹³⁰ Club theory states that certain goods are costly to produce alone, making it attractive to share the cost with partners (this is what the entire sharing economy is based on). The greater the number of club members, the lower each member's investment, but at some point the quality of the good begins to fall (swimming pools are a classic example). In addition to overcrowding, new members contribute unfamiliar habits to a community; they change the atmosphere, and they may even seize control of the agenda. In reaction, old members throw up boundaries around a “club within a club” by instituting rules, dress codes, and other barriers to entry.

Such barriers are built on a foundation of things and symbols, which are related like form and substance. The connection goes both ways and maintains cooperation in general terms (get-togethers, recreation, holidays, friendship) and in more specialized spheres (professional); furthermore, both involve a leveling of members' material and symbolic statuses.^{lx} This is important for inequality: financial and symbolic statuses have a tendency to draw together within a group and to establish distance from outsiders.

In some non-specialized relationships, the coherence between the two types of status obviously provides access to the same level of consumption. (Without this, it is difficult to maintain connections due to differing requirements for the

¹²⁹ Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012).

¹³⁰ Buchanan J., Tullock G., *The Calculus of Consent: Logical Foundations of Constitutional Democracy* (1962). This theory is underused, I believe because it justifies the possibility of circumventing the state monopoly on social welfare.
 Marciano A., “Retrospectives: James Buchanan: Clubs and Alternative Welfare Economics”, in *Journal of Economic Perspectives* 35 (3) (2021), 243–256. Today, IT eliminates the transaction costs of administration, which are the main problem with clubs.

quality of goods and services and hygiene (making it impossible to meet in restaurants, go to theaters, or travel). New connections are not formed, and old ones wither away. This, by the way, is not the final reason why corruption cannot be eradicated. When interacting with elites, civil servants do not (and should not) want to look down-at-the-heels; that would not be in society's interests.) I want to focus on the second mechanism: the drawing-together of statuses caused by a desire for self-realization and quality time. The higher a person's status, the stronger their need to make something of their own, and the harder it is for them to stand on the shoulders of those who came before. To be successful, people need support and resources: material, technical, informational, instrumental, expert, environmental, and human. All of these require money and/or power (Bourdieu¹³¹).

There is no such thing as a conductor without an orchestra. And no one scores goals without teammates (who would also like to score goals). You can't become the lead designer or product manager without climbing over the heads of others who want the same thing. In any group of three, one person is the leader and the other two follow orders. This explains why the career ladder has springboards for independence and self-realization, and why people compete for access to them.

Egalitarians would prefer it if people weren't so different, but they are. Luck aside, there's no denying that achievements are built through effort, and competition inevitably results in hierarchy. This is the fundamental condition that egalitarians are trying to rebut. I got into this in more detail in Appendix 4, but for now I want to emphasize material stratification is not only caused by the need for structure in society or by hedonism. The foundation of stratification is the desire for self-realization. In any sphere, certain conditions must be met for self-actualization to be possible. The physicist needs a hadron collider. The ice skater needs a rink. The film director needs a studio. The spelunker needs ropes. The engineer needs a development shop. The plumber needs a pipe wrench. Each stratum has its own needs and budgets.

Material and symbolic resources work as a team, drawing each other along on the path to self-realization. Their distribution among individuals, groups, and society as a whole is governed by the (post)marginalist principle of utility: resources are directed to the quarter expected to deliver the greatest return in

¹³¹ Mechanisms for the reproduction of social hierarchies are a central theme for Pierre Bourdieu, who examined hierarchies by a variety of means, including through the optics of power. Bourdieu P., *Homo academicus* (1984).
Swartz D., *Culture & Power: The Sociology of Pierre Bourdieu*, (1998).

the form of quality time. This distribution is not ideal,¹³² but the marginalist principle functions relentlessly. If self-regulation is in effect and inequality is baked in, then is there nothing we can do to change things? Answer 1: the problem was not stated correctly, but yes, in the existing institutional framework there is nothing we can do about inequality. Answer 2: the solution, if one is needed, can be found if we begin to understand how the symbolic economy behaves; but first, we need to know how to measure it.

For now, we will assume that material stratification is not a deviation in need of fixing, and that a so-called fair distribution of goods is an illusory goal. High-income strata have the same rights to self-realization as all the others, and there is no reason to infringe on those rights just because they objectively need more resources to do so.^{lxi} Anything else is irrational, and fighting it is strategically pointless. Before denying the wealthy their rights to self-realization, we need to recode human nature and rescind economic theory, but first we have to put a stop to the populist conversation around happiness.

The last thing we have to do before we commence with measuring the symbolic realm is become familiar with the monetary values of human capital and the value of life. When I write about the measurement function of money, I single it out as a problem requiring a solution, but if it is capable of measuring such fine material as human capital and the value of life, perhaps the problem is not as serious as I imagined. Is my entire message off target? Let's take a closer look at this type of measurement and see what works and what doesn't.

¹³² It exists under the weight of ideology and politics, experiences hedonistic displacements, is influenced by the forces of friction, inertia, and who knows what else — in short, it is affected by all the same things that shift a physical body from its ideal trajectory when it moves through a real environment instead of a vacuum.

CHAPTER IV.

MEASURING HUMAN CAPITAL AND THE VALUE OF HUMAN LIFE

4.1. MEASURING HUMAN CAPITAL

Wealth is connected with labor resources. In the mid-17th century, William Petty, one of the classics of political economy, ranked labor as important as land. Petty calculated the labor supply of England and Wales and in many ways anticipated valuations of human capital.¹³³ He stated that a sailor was equivalent to three peasants, and that an adult was worth twice as much as a child. Human capital interested him as a production factor; today, we understand the term to mean the knowledge, skills, motivation, competencies, and abilities embodied in people that allow them to create individual, social, and economic welfare.¹³³

The 20th century is the era of human capital.¹³⁴ Labor sociologists studying the moral climate in factories were the first to grope toward this understanding.¹³⁴

¹³³ OECD (Organisation for Economic Co-operation and Development) experts reached this conclusion. *OECD, The Well-being of Nations: The Role of Human and Social Capital (2001)*.

¹³⁴ The pioneering work was the Hawthorne Experiment, conducted by Elton Mayo at the Western Electric plant in the United States. His goal was to trace the connection between working conditions and labor productivity, and he found that productivity largely depends on psychological climate.

Following their lead, scholars in the humanities elaborated a whole range of capitals: cultural, social, political, symbolic, and knowledge capital. Business consultants justified the existence of corporate culture capital and brand capital. Joining in the project of the century, economists strove to claim the position of kings of the hill by calculating total human capital.

No other disciplines could do this. Suppose we know that a certain person possesses cultural capital, but how much? If we knew, we could study how that capital is created, use it as a measuring stick to compare countries, industries, political, and educational systems, and we could invest in it. This would be a win for the utilitarians, who always proceed from a calculation of good. It would also bring order to the question of high and low that occupied Mill and the Frankfurt School. The meritocrats would have something with which to oppose accusations that they are useless.¹³⁵ Bureaucrats would acquire the instruction manual for delivering happiness to the people.

The value of all things appears in market exchange, and this also applies to human capital. If we traded freely in human beings so that each person could buy any other person, then we would know our own price and the prices of those around us. The law allows for minor forms of “slavery” (highly paid athletes, military personnel, bloggers, and brand ambassadors are on the job 24 hours a day), but this is not enough for comprehensive calculations. What else do economists have at their disposal? We could attempt to pull the numbers for separate shares of human capital from markets that express its components and then use those fragments to reconstruct the whole picture. For example, we could extract the cultural component from the non-utilitarian economy, the social component from social networks, and so on. But we wouldn’t be able to combine it all and then compare the indicators.

How did economists solve this problem? The first serious achievements came in the 1960s, when economists began studying the economics of education,¹³⁴ although at the time no one had an integral estimate as the goal. Today, there are three approaches:¹³⁶

- based on natural indicators;
- based on the cost of creating human capital;
- based on financial returns on human capital.

¹³⁵ Sandel M., *The Tyranny of Merit: What’s Become of the Common Good?* (2020).

¹³⁶ The World Bank’s approach is to narrow human capital to people’s ability to participate in production; accordingly, it accounts for the cost of healthcare, education, training, etc.

The first method, based on indicators, only looks at formal education.¹³⁷ We can't expect to find the answer to our question here.

The opportunities offered by the second method are defined by what it takes into account. Theodor Schultz, one of the founders of this school of thought, focused on how much governments and students spend on education; he also — and this is the icing on the cake — considered wages lost during higher education.¹³⁵ He ignored informal education, an omission that was largely remedied by John Kendrick.¹³⁶ Government policy for managing the educational component of human capital is based on this approach,¹³⁸ but it makes no claim of offering the integral estimate we are looking for.

The third approach, grounded in the returns on human capital, was accomplished in the 19th century by William Farr, who established the method that would become the standard. Focusing on returns takes one of the key ideas in economics about the connection between reserves and cash flow — we use the latter to estimate the former, arriving at valuations for companies and brands — and applies it to human capital. According to Farr, the value of an individual at the moment of their birth can be expressed in a formula that accounts for their annual earnings at a certain age and the likelihood that the individual will survive to that age and be employed, as well as living expenses and an annual interest rate.

Because these are difficult calculations, the formula only came into general use after Dale Jorgenson and Barbara Fraumeni proposed a simplified version that assumes that growth in human capital results in greater returns regardless of whether people are engaged in market or non-market activity.¹³⁷ It was an extravagant move to apply hourly wage rates to leisure in order to quantify that part of human capital that is unobserved, but a majority of economists accepted the assumption for lack of an alternative and it became the canon.¹³⁹

¹³⁷ This approach relies on “natural” indicators, such as: literacy levels, average number of years of education, enrollment rates in various levels of educational institutions, shares of workers with different levels of education, scores of the quality of students’ knowledge, etc; however, such estimates cannot be aggregated and compared with physical capital stocks or, for example, with GDP.

¹³⁸ And the United States’ policy of importing brains, to which we owe the existence of the internet. In the 1960s, Schultz and Becker substantiated the effectiveness of investing in people through education, healthcare, culture, and the like as a factor of economic growth. There have been many studies of the returns on investments in education. In mature market economies it ranges from 6 to 10%. In developing countries, it is over 10%. Kapelyshnikov R., “Inequality: How not to primitivize the problem”, in *Voprosy Ekonomiki* 4 (2017).

¹³⁹ For criticism of this, see Folloni G., Vittadini G., “Human Capital Measurement: A Survey”, in *Journal of Economic Surveys* 24(2) (2010).

Let's take a closer look at that simplification. Human capital delivers bang for the buck both in and out of the market. We are interested in both sides because we want to measure complete human capital. Economists calculate the market portion using wage data and the non-market portion based on the assumption that maintaining a household and engaging in leisure deliver the same hourly returns as work. Caution: this does not mean that they are compensated at the same rate — that is the concept used to calculate lost profit — but that they generate returns at the same rate! Does this mean that high earners are more successful when engaged in tourism, fitness, playing poker, making love, or even flow state? This is exactly what the formula says about housework: the more a person earns, the more effectively they iron shirts. The same can be said about hedonistic consumption and high culture.

Rostislav Kapelyushnikov, the leading expert on the topic, has this to say about this methodological hat trick: "The assumptions applied in this approach are shaky and can lead to an overvaluation of human capital." Kapelyushnikov is perfectly serious when he asks, "Are we prepared to agree that education increases a person's productivity when washing clothes or cleaning house to the same extent that it increases their market productivity, providing them with increased monetary rewards? Are we prepared to assume that the differences in productivity during leisure activities between people with different educational backgrounds are as large as the differences in their productivity at work in the market?"¹⁴⁰

I would put it plainly: it's a methodological screwup. Economists are only able to dodge the rotten tomatoes because outsiders don't look closely at methods that involve formulas like this:¹⁴¹

$$V_0 = \sum_{x=0}^{\infty} P_{0,x} (y_x E_x - c_x) / (1+i)^x,$$

where i is the annual interest rate; $P_{0,x}$ is the likelihood at birth of surviving to age x ; y_x is an individual's annual earnings at age x ; E_x is the likelihood of being employed at age x ; c_x is living expenses for the period from age x to age $x + 1$.

If we didn't know about the assumptions baked into the results, we could draw some far-reaching conclusions. But look at this: "the utility that an educated person [emphasis added] derives from listening to a classical symphony exceeds the utility that an uneducated person [emphasis added] derives from watching ultimate fighting on television by the same factor that the salary of the former exceeds the salary of the latter."^{lxviii}

¹⁴⁰ Kapelyushnikov R., "Inequality: How not to primitivize the problem", in *Voprosy Ekonomiki* 4 (2017).

¹⁴¹ Dublin L., Lotka A., *The Money Value of Man* (1930).

The loud promise to estimate the value of personal potential came down to wages. Kapelyushnikov noted the paradoxical results of this message, namely: human capital becomes unresponsive to unemployment.¹⁴² In his own estimate of human capital in Russia, he excluded non-market activities, as did OECD economists.¹⁴³ And they were absolutely right, because we could follow this path all the way to the capital of dogs and cats and other pets who earn their own food, veterinary care, clothing, and other services at a cost to humanity of \$150 billion annually.¹⁴⁴ If we assume that a pet's career lasts, say, seven years, then we arrive at animal capital worth something like a trillion dollars.

The same calculation could be carried out for insects (based on how much people spend on insecticides) and for any other non-human agents in society.¹⁴⁴ At the very least, instead of using wage data, it would make more sense to estimate the value of non-working time using non-utilitarian spending broken down by the levels of Maslow's hierarchy (Section 2.1) after deciding what to do with chips, donuts, and everything else that harms people and reduces human capital. We can stop here. It's clear that money has little to tell us about human capital. Even if we don't aim at maximum human capital and instead set our sights on a narrow subset, we still have to contend with two assumptions.

First of all, the formulas use gross instead of net earnings: they do not reduce an individual's lifetime earnings by the amount spent on living expenses.¹⁴⁵ In other words, unlike physical capital, human capital has no operating costs. Everything a person drinks, eats, and smokes, everything they spend on medical care and the like, is considered a credit instead of reducing their human capital.¹⁴⁶ How much the person has read makes no difference at all (because it can't be measured). Further on in [this chapter] we will learn about the motivations behind not including living expenses in the formulas, an omission that leads to excessive, seven-figure estimates and inflicts "arithmetical discomfort" on ev-

¹⁴² Kapelyushnikov R., "Inequality: How not to primitivize the problem", in *Voprosy Ekonomiki* 4 (2017).

¹⁴³ In 2009, the OECD launched a project to develop a unified methodology for measuring human capital that could be used to compare countries.
OECD, *The Well-being of Nations: The Role of Human and Social Capital* (2001).

¹⁴⁴ This would have pleased Bruno Latour, the founder of actor-network theory.

¹⁴⁵ This approach is based on the following works: Bowman M., "Economics of Education", in *Review of Educational Research* 39(5) (1969), and Machlup F., *The Production and Distribution of Knowledge in the United States* (1962).
I would point out that Petty looked at it differently.

¹⁴⁶ When valuing a brand, running costs have to be deducted when we are also talking about the value of an intangible sum of properties.

everyone who possesses a sense of economic reality.¹⁴⁷ A million dollars in capital: that makes a person feel proud. Not many people know what hides behind that figure or that it is an average, not specific to an individual.

Here's the second bottleneck: like physical capital, human capital is calculated based on future returns that have to be forecast, while incomes must be adjusted to present-day values. This requires predicting the rate of wage growth and establishing a discount rate (foretelling inflation) for decades (!) into the future. Such predictions are made by experts, who assign the indicators values like 1.32% and 4.58% respectively, even though there is disagreement about these inputs.^{lxx} The result is so sensitive to the inputs that if we substituted 4.58% inflation with 10% instead, which is typical of the United States,¹⁴⁸ then it would drop like a rock.

Omitting "operating costs" drastically inflates the value of human capital, and the elasticity of the adjustment factors creates free play two or three times the size of the capital being measured. Without these two methodological approaches, the results would be 30 times lower. What practical goals can this "exact" method of measurement serve?

An OECD pilot project designed to test comparisons of different countries returned estimates from \$79,000 for Romania to \$641,000 for the United States (these are per capita numbers), all without accounting for living expenses.^{lxxi} If we include those expenses, then human capital outside first world countries is worthless. Economists understand that nobody likes that kind of science, so they add a zero or two.

What's the takeaway? Using money to measure human capital fails in three ways, all of them related to arbitrariness in the treatment of 1) leisure; 2) "operating expenses," and 3) salary predictions that are given in today's dollars. That first item alone forces us to forget about measuring complete human capital. Until a better method appears, we have to make do with the human development index.^{lxxii} The second and third vulnerabilities challenge the validity of estimates of human capital defined narrowly.¹⁴⁹ I am not attempting by this discussion to undermine people's faith in economics as a discipline. The inferiority of monetary measurements of the symbolic is not the fault of economics, but a general omission. Economists like Mincer, Schultz, Becker, Heckman, and others made enormous progress. It was largely due to the work of James Heckman that economists started

¹⁴⁷ Abraham K., "Accounting for Investment in Formal Education", in *Survey of Current Business* 87(6) (2010), 42–53.

¹⁴⁸ Abraham K., *Ibid.*

¹⁴⁹ I haven't even revealed all the problems; there are a dozen more different kinds of tricks. Folloni G., Vittadini G., "Human Capital Measurement: A Survey", in *Journal of Economic Surveys* 24(2) (2010)..

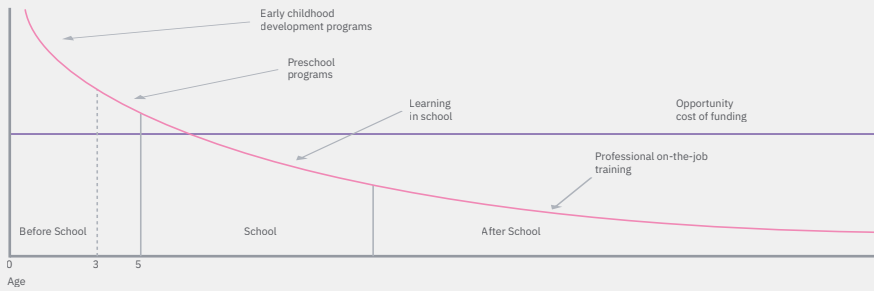


Fig 4.1 | MODEL OF RETURNS ON HUMAN CAPITAL INVESTMENTS: RETURNS ON INVESTMENTS IN EDUCATION ARE INVERSELY PROPORTIONAL TO AGE

looking at cultural capital (Pierre Bourdieu), social capital (James Coleman),¹⁵⁰ and resources derived from the social environment and family.¹⁵¹

As a result, it became clear that the most effective investments are made in the early years, especially in the first three years of life (Fig 4.1). Psychologists already knew that. Parents did, too (or at least they guessed as much),^{lxxiii} but Heckman and his colleagues exposed the interconnections using econometric methods. Among other things, they discovered that career advancement is more dependent on conscientiousness, diligence, tenacity, and self-discipline than on intellectual abilities.¹⁵² There is a synergy here, and Heckman explains that “skill begets skills” and “early investment promotes later investment,” while improving non-cognitive skills at an early age is more important than improving cognitive skills later in life.¹⁵³

Model of Returns on Human Capital Investments: returns on investments in education are inversely proportional to age.

¹⁵⁰ Coleman J., “Social Capital in the Creation of Human Capital”, in *American Journal of Sociology* 91 (1988).

¹⁵¹ Heckman J., “Policies to Foster Human Capital”, in *Research in Economics* 54 (1) (2000), 3–56. Heckman J., Rubinstein Y., “The Importance of Noncognitive Skills: Lessons from the Ged Testing Program”, in *The American Economic Review* 91 (2) (2001), 145–149. Heckman founded the Center for the Economics of Human Development, which attracted fresh scientific energy.

¹⁵² And yet Heckman also called claims that a high IQ increases performance by just 1–2% — not 25% or even 50% — a humanistic understatement. Borghans L., Heckman J. et al., “What grades and achievement tests measure”, in *PNAS USA* 113 (47) (2016). Flam F., “If You’re So Smart, Why Aren’t You Rich?”, in *Bloomberg* (2016).

¹⁵³ Heckman believes that there is overinvestment in school and post-secondary education and underinvestment in preschool programs. We are underinvesting in children under the age of three while overvaluing our investments in adults with low qualifications. Heckman J., “Policies to Foster Human Capital”, in *NBER Working Paper w7288* (1999).

Human capital is the modern brand that inspired the education system, which happens to be experiencing a midlife crisis. It's a brand that inspires conversation. A Google search returns over a billion sources and citations! So why do we not hear about the state of human capital on the news? How can we advance toward prosperity and happiness without that data? We don't hear about the data because it is worthless, given the methods by which it is obtained, and the methods are uninformative. Estimates of complete human capital do play a role — and not necessarily a positive one — but not directly. Instead, they appear indirectly in estimates of the value of a human life.

4.2. THE VALUE OF HUMAN LIFE

Life is sacred. De jure it is priceless, but de facto there exists an assessment that is necessary for the military (when paying compensation to servicepeople and their families) and insurers, as well as in workplace safety, decisions about the expedience of medical treatment, and many other situations. In politics, every action comes at a price that is expressed in the number and quality of lives. We need to know that price, but where can we find it?

The best source is the market (competitive exchange is the only way to establish the value of anything), but unfortunately, there is much we can't find there: some data we can take from insurance rates, other data we can gather from premiums paid to people working hazardous jobs,^{1xxiv} but that is not enough. The trade in human organs does not add much to our understanding.¹⁵⁴ These values are absolutely vital. As we've seen, economists have numbers for human capital,¹⁵⁵ so that is what people have been using, keeping in mind that in economic terms it's all the same (to avoid diving into the methodology again). As a result of this equivalence, life is valued using those same six-and seven-digit numbers of dollars.

Just as with human capital, we are talking about the value of a statistical life, not an actual human being. The numbers are conditional, so there is no need to

¹⁵⁴ A donor heart is not up for bargaining; it is given on a first-come, first-served basis based on the doctrine that all lives are equivalent. Its segments are also considered value-identical, therefore priority goes to recipients who are statistically expected to live longer.

¹⁵⁵ It is calculated using the income method, which I would remind you is based on a person's lifetime income.

think that a billionaire's life is worth as much as the lives of all the people in a small town put together."¹⁵⁶ It's a tempting thought, of course, but no: all are equal in the eyes of economic statistics, and to avoid hurting anyone's feelings the economists put values in the millions on people's lives, just like their capital. A life in the United States is worth \$5 million; in the European Union, a life is worth €3.1 million.

Five million dollars per American: that is the average of estimates taken from a variety of government agencies. The actual estimates range from \$2 million to \$8.7 million, a fourfold difference.^{lxxv} Russian estimates vary by a factor of 50 or more: according to one set of calculations, a single Russian life is worth between \$30,000 and \$120,000^{lxxvi} (30–50 times less than in wealthy nations), while other calculations based on the market and denominated in dollars put the value at \$2 million to \$4.5 million.^{lxxvii} With three options to choose from (\$2–4.5 million (RUB 60–135 million); \$1.7 million (RUB 50 million); and \$370,000 (RUB 11 million), which is closest to the truth? When asked in a 2015 survey, Russians put the value at RUB 4.5 million (less than \$100,000 at the time).

The range of estimates is just as broad as what we see with human capital, but while we can manage without precise human capital numbers, accurate estimates of the value of a human life are essential. A single number for every citizen in a society implies that all lives are equal, and it also highlights the degree to which that society values human life: democratic societies place a value of \$5 million on a life, while authoritarian societies value life at \$100,000. But are governments prepared to pay those prices? Do they even have enough money, if worst came to worst? The United States has assets valued at \$50 trillion. If all those assets were sold and divided by the number of citizens, it comes to \$150,000 per person. That is less than \$5 million, but there is no scenario on which it would all have to be paid out at once.

This situation is comparable to bank reserves — everything is fine until there is a run on the bank — or at least it was until the pandemic. Suddenly, debates about the value of a human life, Trolley Problem 101 with its Fat Man dilemma,^{lxxviii} were no longer armchair gymnastics. Everyone was talking about them. Economists jumped right in, since utilitarian estimates are their specialty. A group of 276 Australian economists published an open letter in

¹⁵⁶ Guriev S., *Economic Myths: the Misunderstandings and Stereotypes Spread by Media and Politicians* (2021).

A satirical news item reported that David Rockefeller received six or seven heart transplants, even though a single transplant is rare. If true, this would have been the exception that proved the rule.

support of lockdowns on the grounds that lockdowns save money because they save lives.¹⁵⁷ However, they did not account for the fact that the methodology based on wages malfunctions when people are out of work; even worse, the economists miscalculated.

Paul Frijterse issued a rebuttal with “oops!” in the title^{lxxix} in which he identified three mistakes in calculation. One of them was embarrassingly simple. “The rookie mistake,” Frijterse writes, “is that they use the statistical value of life for someone who dies of corona. Yet, the statistical value of life holds for a whole life, i.e. 80 years of life. By contrast, the corona victims would have expected to live only 3–5 years more. So one should only count 5% of the 5 million as the appropriate value of those years, i.e. 4 years out of the 80 in a full life.” His conclusion: the value of lives saved was 20 times less than what society was told. Taken together with the two other mistakes,^{lxxx} this “conveniently change the cost-benefit ratio by a factor of 1,200 in the direction of making the lock downs look sensible.”

Recommendations based on calculations that deviate from reality by an order of magnitude: is this all economists can offer political leaders? We haven’t even said anything about quality of life. In the words of Giorgio Agamben, “...life has been reduced to a purely biological condition and has [lost] not only every social and political dimension, but also human and affective.” If we assume that quality of life has fallen by half, that is the equivalent of losing tens of millions of people around the world in just one pandemic year.

With these dual examples — human capital and the value of human life — I conclude the discussion of money as a measuring tool and move on to an examination of what needs to happen so that money could be used to measure symbolic goods.

¹⁵⁷ Open letter from 265 Australian economists: don’t sacrifice health for “the economy”

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Holden R., Preston B. The costs of the shutdown are overestimated – they’re outweighed by its \$1 trillion benefit.

VOLUME II

**THE
MONEY IS
THE DOUBLE
MESSAGE**

INTRODUCTION I. **INTERLUDE**

The first volume of this book presents a double meaning and a pair of goals. Empirical data on the state of the non-utilitarian economy and its behavior open the door for a formal analysis of conditions in the markets that serve higher-order needs, and this is key to understanding how the world works. But it is time to focus on the other half of the work, the teaser that introduced the objective for this volume. What is that objective?

During our work with the statistics for non-utilitarian industries, we ran into the limits of money's ability to be informative and approached the aim of this volume: measuring the value of the symbolic. This is a fundamental issue, and yet it hasn't even been stated clearly, much less resolved. Without a solution, improvements to our perceived quality of life remain out of reach no matter how many material benefits we have access to.

The existing measurement tools don't give a clear picture and often fail to provide insight into what is actually happening. We are helpless in situations where multiple social and cultural dynamics come into play at the same time, unable to calculate their resultant force. In a word, we are poorly equipped to work with "symbolic matter" and nowhere near ready for the complexity of the challenges posed by time. Lacking the proper tools, we fall for the trap of indoctrination and fail to get a handle on deceptive practices in the market for "truths," most of which are unsupported by evidence and manage to gain traction only through the power of psychological suggestion, demagoguery, doublespeak, and

brainwashing, all without any risk of exposure. Humanity might have gone through disenchantment of material realm, but magical thinking still holds us in thrall when we are dealing with more abstract, intangible matters.

The gaps and limitations in money's ability to measure the symbolic that were identified in the first volume of this book all point to the need for a special tool or set of tools for performing such measurements. No matter the issue — social inequality, new and old liberalism, openness and protectionism, inclusivity and discrimination, the future of labor, the governmentalization of life, universal basic income, ownership of personal data, the structure of social ties, and other such pressing topics, including freedom of speech — everywhere we see the desperate need for a unified “system of weights and measures” for ranking the symbolic. Without it, the institutions of the digital economy lag in development, and the new capitalism of the symbolic is weak and vulnerable.

In my research on the non-utilitarian economy, I tried to squeeze the most information possible from the monetary indicators, and that approach bore fruit. In my view, one significant result was the identification of the financial dimensions of Maslow's hierarchy of needs, which had never been recognized before (see Section 2.1). This advances our understanding of needs, but in order to make progress, both in academic and practical terms, we need two more types of data: 1) the amount of time spent to meet needs, and 2) the quality of that time (how satisfied people are with how they spend their time). Ultimately, this data is necessary so that people can better manage their time, since it's impossible to manage anything without feedback. By turning that data in to budgets of money and time, we will obtain a coherent picture of how much time and money is spent on various needs and — curiously — how much satisfaction is gained in the process. In the first volume, I already indicated that the online reciprocal economy is a source of this information.

Donations are simultaneously an evaluation of the quality of time¹⁵⁸ created by a text, an indicator of the quality of a text that generates or consumes time,^{lxxxii} and a performance review of the person who wrote the text. (Throughout this book, I use the word “text” in the broadest possible sense.) These three types of

¹⁵⁸ The author explains the concept of subjective personal time in Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012), Section 2.3.1. Subjective time (also called psychological, inner, or personal time) is the internal experience of objective time, and it differs from chronological time. A person may underestimate or overestimate the passage of time depending on their state of mind. Saint Augustine wrote about this phenomenon in *The Confessions* (Book XI), as did Kant, Husserl, Bergson, and many others. The concept was proven experimentally in Wundt's laboratory in the late 19th century.

information are exactly what consumers of culture need. If it was available, people would know what to consume and when, as well as which creators deserve to be rewarded. It is vital that the data be enumerated for the purpose of a formal analysis, without which we cannot achieve the ultimate objective of understanding change over time.

In summary, the three types of information that would elevate us to a new level of informatization of the society: 1) the value of a text, 2) the quality of the personal time created by that text, and 3) the class and quality of the author. All three can be derived from voluntary, post factum payments, hence the need to make donating a widespread practice and to understand how they can be promoted.

The information landscape is diverse and abundant, which makes it difficult to orient oneself in the content space to make personal and collective choices. We easily become lost and get bogged down in trash, sometimes spending half a lifetime looking for the answer to an important question. And all because of poor navigation. The invention of search engines was no mean feat, and web navigation is impressive. But as soon as the question is a non-standard one, the cost of the search becomes excessive. Ranking the quality of information ought to be the first item on the agenda of an information society, but it is strangely absent.

Ranking information is the key to humanity's sustainable development. Content should be differentiated by clarity, desired depth, degree of innovation, and the reader's interests and tastes. Without this type of ranking, society is unable to balance material security with freedom and the complexity of life, except by reducing the latter and sliding into the kind of dictatorship we happen to be seeing a rise in today.

The solution lies in content mapping. It doesn't matter how much content is out there or how good (or bad) it is, as long as we can learn to tell the good from the bad without spending too much time or effort. One way to save both is by creating a system where people could share their experiences consuming information. Upon finding something valuable, they would tell others who are likely to find it valuable, as well. Through collaboration, people could impart their experiences expressed as numbers for ease of manipulation.

This book explains how to accomplish that goal by modernizing the online reciprocal economy. The outlines of this economy — also called the sharing economy — were defined at the dawn of the internet. Back then, however, its scale was microscopic and the transactions (donations) seemed marginal. That is no longer the case: almost everyone has heard of donations, many are in the habit of making them, and for many others those donations are the source of

their livelihood. The number of people touched by the reciprocal economy is in the tens of millions and growing. There is a latent but strong reason for this that I will identify and examine from every angle.

Here is the reason: making donations is enjoyable and useful. When transferring funds as a gift, the donor considers the action and decides how much to send and to whom. In the process, they experience a rush of self-respect and acquire identity. Handling money implies attentiveness and awareness, and these qualities help the donor derive more benefits from all of their communications. As a result, the donor improves and grows as a person. The future of online philanthropy rests on this synthesis of pleasure and practical worth, and the key to its success will be introducing large numbers of people to a new source of pleasure.

My plan for the rest of the book is first to substantiate my method for measuring the symbolic (Chapter 5), and then I will demonstrate how and why people will be partial to donations — otherwise the practice will not grow as much as it needs to (Chapter 6). After these two chapters on theory, I will analyze current conditions in the reciprocal economy and look at what needs to happen in order to bring it to a fundamentally new level (Chapters 7–12).

CHAPTER V.

HOW CAN SYMBOLIC GOODS BE MEASURED?**5.1. WHAT CAN WE EXPECT FROM MEASUREMENTS OF THE SYMBOLIC?**

What can we expect from measurements of the symbolic? Value indicators for texts. Prices support self-regulation in the utilitarian sphere (Adam Smith described the mechanism).¹⁵⁹ The non-utilitarian economy needs a similar tool, but the pricing mechanism is of no help here. Unlike goods and services, the importance of a text, utterance, gesture, or any informational content in general cannot be conveyed by price; some content, for example, a poem, may not even have a price. The same is true for content makers: their earnings do not convey their standing in the symbolic hierarchy or their value to a specific person. Information sources are in a similar position: existing indicators only weakly correlate with the degree of trust in a particular source. The market's failure to designate the quality of texts is especially noticeably in situations where they multiply dramatically

¹⁵⁹ Adam Smith explained how free market prices can coordinate the actions of millions of people, each of them pursuing their own advantage, in such a way that everyone wins. Thus, without resort to planning, an orderly economic structure spontaneously arises out of the actions of individuals concerned with their own gain.

Friedman M., Capitalism and Freedom (1962).

while at the same time — and this is not accident — the role and reputation of media gatekeepers have suffered. This situation can and must be remedied.

Since talking about self-regulation of the symbolic using market-based user signals of value might seem overly abstract, here is the same idea in concrete terms: texts and authors that collect more donations are more valuable. Shows where the audience applauds wildly are of a higher quality. This is the initial approximation, all other things being equal. Some will object that, in questions of culture, the initial approximation is crude, often does not work, and can be misleading; it's as useless as the average temperature of the patients in a hospital.

All things are not, in fact, equal, and not all people are equally valuable as experts, but classifying, ranking, and distributing their content is no longer difficult. Modern personalization technologies deliver a second or even a third approximation; we can rank content to any desired degree of accuracy as long as we have the data. It all comes down to signals of perceived quality and how to collect enough of those signals in a useful format; the rest is a technicality. In other words, the internet is more than ready to work under conditions where not all things are equal. It already has everything it needs to measure the value of the symbolic and package that value for different communities with different tastes, interests, levels of education, and degrees of engagement.

5.2. VALUE AND SYMBOLIC CAPITAL

Let me define the entities involved in the valuation tool I have in mind. The value of a text (defined as broadly as possible) is its ability to act on minds and hearts. Symbolic capital is the ability to generate valuable texts: works of art, statements, communications. Symbolic capital and symbolic values are related concepts in terms of the production of quality time, with the former giving potency and the latter answering for implementation. All of us have symbolic capital because we produce texts (in the broadest sense of the word) which, to the extent that they are of value, generate quality time. The more valuable text a content creator generates, the greater their overall effect. This boosts the content creator's symbolic capital. (It further states that capital is proportional to the total response, but this also depends on the recipients' own capital. One text appeals to a small group of connoisseurs, while a different text receives widespread recognition. They may be equal in terms of symbolic value, or it may be that the first outweighs the second if it is singled out by influential people.)

Politicians, public figures, journalists, industry analysts, writers, artists, architects, artists, creative collectives (both as a whole and each member individually), athletes, bloggers, and teachers are all examples of people who possess symbolic capital. This list is not limited to elites and professional creators. To one degree or another, each of us possesses symbolic capital because we all have an effect on those around us, from real estate agents, car dealers, and service industry employees to social media users and people with autism.¹⁶⁰

5.3. SYMBOLIC CAPITAL AND CASH FLOW

Texts elicit a response from people. When that response is expressed, it can be used to calculate the value of those texts and the symbolic capital of the creators. The method is the same as the one companies use to calculate their capitalization using forecast earnings. When we assess symbolic capital by its returns, we are simply adapting the fundamental idea that there is a relationship between capital and the cash flow it generates: the former (which is invisible) can be calculated using the latter (which is observable). (Put into biblical terms: “By their fruits shall you know them.” This is also how economists put a value on human potential: they relate it to capital, and then value it based on returns in the form of wage earnings (I describe this in greater detail in Section 4.1).

Similarly, we can build a chain linking symbolic capital to symbolic product and symbolic effect. Starting from the end of the chain, we can arrive at the previous links: from effects to values, and from values to symbolic capital. After linking the values of texts and of their creators, we can create a map of the symbolic and use it like Google Maps to study the social landscape, choose the right locations, and blaze trails to them. All of this is harder to do in a world that is both global and dispersed, divided into multitudes of tiny niches.

All of this is fairly obvious, so why hasn’t anything been done about it? Why are not texts accompanied by an indication of their value? One reason is that

¹⁶⁰ As I mentioned in the section on human capital (Section 4.1), this capital is symbolic because it accumulates in an individual’s personality and creations (texts); it is capital because it is the source of future flows of quality time. Symbolic capital (like human capital, which we will discuss next) falls under the standard definition of capital used in economics:

- it represents a durable good with a limited service life
- it requires expenses for maintenance and repair
- it may become obsolete
- its value can rise or fall depending on demand and how it manifests

people take the lack of value markers for granted. Another has to do with the complexity of turning perceived value into objective data. The idea of using money for this purpose is not obvious. Despite the fact that some have voiced intuitions that “artistic and cultural goods... are subject to yet another, equally autonomous valuation,”¹⁶¹ no one has gone beyond speculations.

When posing the question of a separate currency for cultural goods, we must first of all find a means of endowing it with purchasing power; otherwise, it will be useless both for buying things and as a measurement tool (more on this shortly). I gave a great deal of thought to this means in the early 2000s¹⁶² until I realized that the premise is false: there is no need to search for purchasing power anywhere else because it is already accumulated in our existing money. The trick is to use them in a right way, and what matters is whether consumers pay before or after they are able to discover the quality of their purchase.

Purchasing power was not the only obstacle on the road to cultural currency; the other problem was the observability of communications. The majority of such communications used to happen privately, and the markets for social exchange existed in the shadows. But then came an amazing advance: people’s actions — both online and offline — are now reflected in the internet and convey information about subjective perception. I am talking about all the many kinds of responses (reviews, likes, etc.) that indicate perceived quality. This is our starting point for measuring value. The only thing left to do is feed the system with monetary signals, which is exactly what donations do, turning the task of measuring the symbolic from an impossible one to something that is achievable.

The purchasing power of donations is evident because it is derived from money. In the early 2000s, I saw that donations had potential for measuring the symbolic, but at that point donations were still insufficient.¹⁶³ Program-

¹⁶¹ Hutter M., *The Impact of Cultural Economics on Economic Theory* (1996).

¹⁶² Dolgin A., “The Second Universum”, in *Logos* 35 (2002).

¹⁶³ How I saw it then: “For gratitude payments, it would be useful to have a meta-currency that would circulate within the symbolic space while also being convertible to ordinary money. The two autonomous types of money would build out something like a two-coordinate system: the usually monetary axis would be in charge of the material sphere, and the “secondary money” axis would represent the symbolic sphere. But no matter how desirable it is for a culture to have a parallel monetary institution, it is practically impossible to implement unless existing money is used for voluntary donations (which is not its typical function). This is what the central social and practical idea of my book comes down to: using money in the reverse of how it is generally used.”
Dolgin A., *The Economics of Symbolic Exchange* (2009).

mers and gamers used donations,¹⁶⁴ but it was difficult to imagine the exotic practice spreading outside the world of the gaming world. Today, donations are everywhere, and thanks to cryptocurrency and various derivatives no one is shocked by the diversity of money available. People are growing accustomed to the ideas that money is a convention based on trust in the issuer and that private money is possible. As a result, money is no longer perceived as a solidified substance; it can be invented and created. This prepares people to accept my idea, which concerns — or better yet, revolutionizes — how we use money.

5.4. THE HUMAN AS THE UNIT OF MEASURE FOR THE SYMBOLIC

How can we determine the value of texts if different people perceive them differently? Think about tangible goods and services, which vary in their value for each individual consumer and still manage to have a market price. What is missing in the symbolic market? Why does the pricing mechanism not work? In my previous works, I explain in detail that transactions with symbolic goods are not repeatable and that digital products are not subject to scarcity. Here is a brief recap of that argument.

5.4.1. Value Beyond Scarcity

It is hard to create formal descriptions of symbolic products in such a way that the buyer knows exactly what to expect and makes an informed purchase.¹⁶⁵ (If a text can be described fully, it is a poor text.) By itself, this does not defeat the

¹⁶⁴ In the 1990s, many games and programs created by amateurs were distributed using the donationware model: users received programs for free, but they also had the option to express their gratitude to creators in the form of donations, thereby encouraging them to continue creating. This was sometimes called beerware.

Donations made inside games essentially purchase virtual in-game goods and services for real money (more precisely, for in-game currency that is purchased with real money). Items purchased could be anything, from a wardrobe to a weapon that confers advantages in battle.

¹⁶⁵ “Now price, if it measures any subjective quantity, measures desire, and is a measure of satisfaction only to the degree in which desire is an accurate reflection of satisfaction. Viner J., “*The utility concept in value theory and its critics*”, in *Journal of Political Economy* XXXIII(4) (1925), 369–387.

use of money as a measuring tool, but the unrepeatability of transactions creates additional difficulties. Repeat purchases are one indicator of a fair price, since they signal that a certain number of consumers are pleased with the product. Someone considering a product for the first time can trust in the fact that other consumers are more or less satisfied with the price to quality ration; all the newcomer has to do is choose a price level. (This is why in the market goods are generally arranged in six price categories, for more on this see Appendix 1.) This does not work with symbolic products such as an article, tweet, or review: with few exceptions, we have no way to judge the extent to which readers' expectations were met and what factors affected that process.¹⁶⁶ This gives rise to the cost of searching for and choosing texts. Here we have the first factor: the unrepeatability of transactions.¹⁶⁷

The second factor — the absence of scarcity in digital goods — plays an even greater role in preventing money from conveying information. The value of anything is determined by its properties and its ability to satisfy a need, but also by the relationship between the supply of the good and the demand for it.¹⁶⁸ Prices react to scarcity, which limits the quantity of a good that is available for purchase. When a good is scarce, people compete for the right to possess it, and the winners are those who pay the seller's price.^{lxxxii} In this environment, prices are informative because they are "not any set of numbers, but just those causing supply and demand to balance." (This provision is a fundamental idea in economics.¹⁶⁹)

If a good is available in excess, then there is no pressure on demand and the above mechanism for balancing scarcity and availability remains inactive. The perceived utility of a good may be high, but there is no reason for the consumer to pay for it if it is widely available. The situation when useful goods such as clean air and poetry have a low exchange value or none at all while other goods that are perhaps much less useful have a high exchange value due to their scarcity is known as the

¹⁶⁶ Prices that result from transactions in repeating conditions convey experience just like the experimental data obtained by physicists, who would not get very far if they ran each experiment with new objects and new inputs.

¹⁶⁷ Creators make efforts to ensure that cultural consumption is predictable. The institutions of movie stars and franchises serve this purpose, explaining the value of movie series, sequels and prequels, regularly updated podcasts, and the like.

¹⁶⁸ This was explained by Ferdinando Galiani, who came close to a modern understanding of value in *Della moneta*, published in 1750. See translation *Galiani F., On Money (1977)*. Also see *Schumpeter J., History of Economic Analysis (1987)*.

¹⁶⁹ See Arrow K., "The Potentials and Limits of the Market in Resource Allocation", in *Issues in Contemporary Microeconomics and Welfare (1985)*, 107–124.

We owe our understanding of how supply meets demand without exchanging other (non-price) information to Adam Smith. This is considered to be economics' greatest contribution the understanding of social processes.

paradox of value. Digital goods are affected by this paradox: due to the low (zero) cost of reproduction, the prices of digital goods are not dependent on quality and do not reflect value to the consumer.¹⁷⁰ Here, money fails as a measuring tool.

5.4.2. Capturing Value of Symbolic Goods

Prices are born out of competition for scarce goods, but what about goods that are abundant? There is no competition for the right to read a poem. You can do it for free. And yet the value of the poem, if any, is still there. The same is true of any pronouncement: separated from its physical medium it loses its scarcity and thereby its price. Half of the things people consume fall under this “paradox of value,” and most of them are vitally necessary. What monetary mechanism needs to be in place in order to capture value in these situations? If you’ve been with me all along you know the answer: built-in post factum payments, or donations.

5.4.3. Measuring Value in Exchange

The value of anything, including opinions, lifestyles, and texts, is defined by what people are willing to give for it — no more and no less. Market economists hold this truth to be inviolable, and yet it is a far-from-simple concept that was reached by much hard work.^{lxxxiii} Without getting into the justification, we can accept as a given that value is objectified in market-type social exchanges.^{lxxxiv} It is essential that an exchange be both large-scale and transparent. The observer comes away with a skewed impression if a portion of the settlement takes place under the counter. Utilitarian markets more or less meet this condition because people see how much is paid for things. That is not the case in symbolic markets. Digital products never wear out and can be reproduced at zero cost: both of these circumstances leave symbolic exchange without a leg to stand on. The consumer spends time, attention, emotional and other resources and obtains something in exchange, but information about how much was spent and the level of satisfaction received remains largely hidden. When a person buys a utilitarian item, they know what benefits they expect from it and don’t worry about the price, which is the result of consensus generated by a multitude of repeated purchases. Texts don’t work this way, because we pay for them with our time and attention and have less information about how others have benefitted from them. The pricing mechanism cannot function in such conditions.

¹⁷⁰ Exceptions to this rule, such as video games or broadcasts of sporting events using the pay-per-view model, are tied to hardware solutions.

Value is measured by what a person is prepared to pay for a good based on their prior experience of such exchanges and the accessible information about others' experiences. For texts, the side of the scale that stands opposite to value is not empty, but we do not know its weight or contents unless we are close enough to the purchaser to ask. Let's examine a typical case: one person gives another person a recommendation, say about a film. In the context of human resources, this means that the first person is justifying the time and effort they spent to watch the film; however, this evaluation depends on the context in which the film was consumed, the movie-goer's interests and tastes, and the existence of alternate choices. In other words, the recommendation represents the film's value for that individual; we still do not know how closely it tracks with the film's value for the person on the receiving end of the recommendation.

The value of utilitarian goods was not always as accurate and verified as it is today. At first, a prehistoric islander bartering clay pots for bananas with a resident of the other side of the island had no way to know the equivalence of the exchange, since the only way for such knowledge to arise is through experience of trade.¹⁷¹ The market mechanism that conveys information about the fair value of goods without direct exchange of information gradually introduced order in the utilitarian sphere.¹⁷² Our task is to apply the same principle to texts without losing sight of what makes them special.

The logic works like this: just as a word acquires meaning when surrounded by other words, so the text is value-ranked when compared with others. Such comparison is only possible when consumers report back in a public forum about whether or not spending resources on the texts in question was worthwhile. The informative value of this kind of report depends on whether it is created before or after consumption; naturally we are interested in the latter scenario. Take, for example, a person who watches a film via a subscription service: do they pay anything over and above the subscription fee as recognition of the film's creators and distributors? If so, how much? This is the whole point of the system described here. Think of it as a universal adaptation of tipping applied to absolutely everything.¹⁷³ As we will see, issues arise with the move online and with open, non-anonymous donations.

¹⁷¹ *Sahlins M., Stone Age Economics (1972).*

¹⁷² This is how a chaotic social system becomes unintentionally ordered, and this is the essence of Adam Smith's invisible hand (before Smith, this idea was carried by William Petty and John Locke).

¹⁷³ For an overview of tipping, see Azar O., "The Social Norm of Tipping: A Review", in *Journal of Applied Social Psychology* 37 (2007), 380–402, and also Lynn M. et al., "Consumer tipping: A cross-country study", in *Journal of Consumer Research* 20 (1993), 478–488. Michael Lynn maintains a bibliography of studies of tipping (there are hundreds of them) ►

5.5. POST FACTUM PAYMENTS AS A MEASUREMENT OF THE SYMBOLIC. THE INFORMATION LOGIC OF THE GIFT

Thus, on one side of the scale is the value of the text, and on the other is the subjective significance of the personal resources expended — time, attention, memory, experiences. The consumer is only able to decide after the fact if those resources could have been used better by comparing the readings from their inner quality of time indicator with their habitual level of return from personal resources invested.

The value of these investments, like any value, is determined by competition for them (available options for using them). Each person has their own sense of how profitable their efforts are in the given circumstances, and this is the basis from which they make their calculations. Those with a low starting point will accept deals that others find unattractive. The motive of avoiding boredom explains low-quality consumption: it's better than nothing. Therefore, it would be false to say that something is quality just because someone bought it. It might have just been the lesser of two evils.

People recognize shades and modes of experience, and they also evaluate their own integral condition, meaning that they judge the quality of subjective personal time (quality time, for short). This seems obvious, but it isn't.¹⁷⁴ It doesn't matter to us exactly how the process works, but there is no doubt that each of us, aware of it or not, evaluates whether we are satisfied or not and to what degree. This internal monitoring may or may not happen regularly. It may be done well or not, and with or without memorization. But the fact remains that homo sapiens has an innate and developed ability to observe the quality of time spent. Because of this ability, we have access to a source of primary data on perceived value. All we have to do is evolve from understanding "value for me" to understanding "value for others."

Economists like to talk about expected utility. It applies to predictable, utilitarian goods and services, which is not our goal here, but there is nothing stopping us from tracking the return on investments based on the outcome of communication. People correlate the satisfaction obtained from a symbolic product or process with their internal standard, adjusting it as they gain experience and

► Lynn M., "Tipping in Restaurants and Around the Globe: An Interdisciplinary Review", in *Handbook of Contemporary Behavioral Economics*, 2006

¹⁷⁴ A mere 20 years ago, a person's ability to assess the strength of experiences on their internal scale was not obvious, so I had to conduct specialized experiments in this area when I launched a recommendation service.

Dolgin A., *The Economics of Symbolic Exchange* (2009), Appendix 4: Cinema and Theatron Projects.

taste. When they receive more than expected, this creates a consumer surplus, which is the difference between what we spend and what we would agree to spend if we had accurate knowledge of what to expect. Were that surplus known to the public at large, it would convey the actual — not hypothetical — value of the product or process.

This underpins the approach I propose using to measure the symbolic, and the key factor is people's willingness to publicly share information about the surpluses they receive. With that knowledge, we could recreate the flows of quality time and use them to reconstruct symbolic value and symbolic capital. The task comes down to collecting and processing information about consumer surpluses. For this to be doable, we need people to consent to supply that information; otherwise, there is no way to obtain enough accurate data.

Consent is contingent on public buy-in and an understanding of why the information needs to be collected and what each of us stands to gain from it. Today, people click "like" and write reviews because they are well-disposed toward specific creators and want to provide feedback and attention. They also make donations that convey information about consumer surpluses; this information has public value, but it can be used even more wisely. Notification about surpluses of this type is essential to the system for measuring the symbolic, and I will describe this system in greater detail as soon as finish my theoretical preparations.

In this context, the gift is not accidental or contrived. It is simultaneously a part of the relationship, an indicator of the quality of relationship, and a feedback signal. The information component of the gift is primarily used privately, but it can work in the interests of the common good if it is "declassified." Again, in any reciprocal relationship, good deeds have a dual purpose: on the one hand, they are constructive and create incentives for building and maintaining the relationship; on the other hand, they are indicative and demonstrate the health of the relationship. This dual functionality of the gift and its ability to combine that which is pleasant with that which is useful, thereby promoting progress, lies at the foundation of my institutional plan. Without it, my plan would never work.

Symbolic exchange always occurs in two dimensions. In the first, basic dimension, the participants spend their material, monetary, and personal resources. In the second, superstructural dimension, participants exchange information about the first dimension; this is another kind of symbolic exchange. It develops through verbal and nonverbal means, but this arsenal is insufficient: they are incapable of encoding information about perceived quality in a format that could be transmitted, processed computationally, and decrypted at low cost. Donations offer an opportunity to do this, and the more widespread they

become, the tighter the connection between the basic and superstructural dimensions of exchange becomes, benefiting both.

Utilitarian goods have less need of additional signal repeaters concerning consumer experience; the very fact of their presence in the market means that they are more or less satisfactory to buyers. (It can also mean that consumers do not have a chance to express their disapproval by refusing to make repeat purchases, which is often the situation with restaurants in busy tourist areas.) This doesn't work with non-utilitarian purchases unless they are shoe-horned into a template and made predictable; this happens to be the market's response to uninformative prices, and it often has a deleterious effect on quality. When donations are added to the usual order of a transaction ("pay first, then take your purchase"), this shortcoming is eliminated.

We need to make an important distinction in our understanding of donations. The same word is used to denote both one-time payments and subscriptions (for example, to a YouTube channel). Confusion arises because both scenarios are voluntary, but they are not the same thing in terms of information content: a direct, precise, post factum statement is one thing, while a subscription is something else entirely. There are other differences, as well, that are significant for content production and distribution. We will look closer at these differences in Section 7.9, but for now we are only interested in what relates to the signaling capacity of one-time donations and the measuring capacity of money.

This is an important point. Content industries rely on a subscription business model, and one-time donations have not reached a serious level. From the point of view of industry, they are essentially orphaned, which is unfortunate. Subscriptions overshadow donations and cut off their oxygen supply. Not only do they monopolize attention and money, but it becomes harder for people to start giving sizable donations when they think they are already doing it. The subscription model is obviously good for serial products and content supermarkets, but many creators, especially the beginners, need targeted support. They won't receive it as long as one-time donations remain in the shadows. We have yet to realize the most important point, which is that at least as much money goes into one-time donations as into subscriptions.

That is enough on the theory of measurements. The signaling capacity of prices is directly connected to the information characteristics of the goods, which are experience, search, and credence. While the first can be assessed only during consumption and the second prior to consumption, the third (examples include the services of nutritionists, astrologists, and ideologists) can be assessed only much later. Or never. Texts obviously belong to the first category, and partly to the third. Descriptions do not convey their properties and the use-

fulness extracted from them, so consumers purchase them blindly to some extent. This gives rise to the idea of supplementing ex ante payments with voluntary ex post compensation, where money changes hands after the quality of the text has been experienced. The idea is to get early adopters into the habit of sharing their assessments of goods with others in order to help them avoid the problem of unpredictable quality.

5.6. DONATIONS AS AN ANTIDOTE TO ADVERSE SELECTION IN INFORMATION MARKETS

Assessment sharing is necessary in order to dilute the information asymmetry that arises when professional market participants know more than consumers about a product, giving them opportunities for various forms of dishonest behavior. Sometimes this behavior harms honest producers, even pushing them out of the market. When this happens, we see what is called adverse selection. Here's how it works: quality texts take a lot of work to produce, and demand for them falls when the path to accessing them is littered by imitations and fakes. It becomes difficult for the consumer to find them and, eventually, to evaluate their worth, so it becomes unprofitable to produce them. The weeds crowd out the valuable plants if we can't tell them apart and don't spend time weeding them.

The essence of my proposed solution is to use a certain number of consumers as an ever-changing, updating reconnaissance force and organize a way to exchange the information they bring back. Here's how I envision the solution: establish collaborative filtering¹⁷⁵ of content so that the identified preferences (assessments) of a group of users can be used to forecast the unknown preferences (assessments) of many potential customers. The immediate results will be cost savings and improved consumer choice. Overall, it will lead to a healthier institutional environment both in traditional markets and in spheres like education, non-formal education, ideology, and every branch and format of symbolic exchange.

I want to clarify an important point about adverse selection: despite the fact that the participants in information markets seriously suffer because of it, and despite the fact George Akerlof's analysis of the problem, formulated half

¹⁷⁵ Ricci F. et al., *Introduction to Recommender Systems Handbook*, in *Recommender Systems Handbook* (2011), 1–35.

a century ago, won the Nobel Prize in Economics in 2001,¹⁷⁶ understanding of the issue is not widespread or available to the general public. Neither consumers nor professional market participants are able to locate the root of evil. The disease has multiple painful symptoms, but without a diagnosis, industry players study them separately and fail to identify a systematic approach to treatment. This should be an institutional approach. As soon as people realize information asymmetry is a breeding ground for adverse selection, an antidote — an assessment of quality — will immediately be found and the asymmetry will be eliminated.

Information asymmetry grows with the increasing volume and variety of texts, and this is exactly what adverse selection needs. There was a time when institutional gatekeepers of quality served as a barrier to adverse selection, with ratings, competitions, literary criticism, and the like,¹⁷⁷ but today their capacity cannot come close to handling the immense increase in quantity of texts. Because adverse selection is so all-encompassing and powerful, it cannot be restrained by half-measures and palliatives — which is what markets excel at. By eliminating the gatekeepers, the internet has had the effect of raising the floodgates. As a result, every individual has the right to speak, which is wonderful; the downside, however, is this problem of navigation and choice.

A truly effective response to this imbalance would be a restoration the quality assessment process. The overproduction of texts should be opposed by equally high-performance experts; only then will the one balance out the other. But in order for the experts to match the generation of texts, they must be just as distributed as the creators. The way to accomplish this is by contracting consumers to do the job. Generally speaking, the internet has been moving in this direction for fifteen years: user-generated content, or UGC, is certified as user-certificated content, or UCC.¹⁷⁸ However, UCC is currently structured in such a way that it does not solve the problem — and will not solve it until a significant percentage of quality signals is presented in monetary form.

¹⁷⁶ The prize was awarded for this article: Aklerof G., “The Market for ‘Lemons’: Quality Uncertainty and the Market Mechanism”, in *The Quarterly Journal of Economics* 84 (1970), 488–500.

¹⁷⁷ Aklerof illustrated how adverse selection works in the market using used cars as his example. This is the market that normalized trade-ins.
Aklerof G., Ibid.

¹⁷⁸ Although UCC typically refers to user-created content, which is a synonym for UGC (user-generated content), note that the author introduces a notion of user-certificated content (which also happens to be UCC) and gives it a detailed description in his other books, *The Economics of Symbolic Exchange* and *Manifesto of the New Economy*.

5.7. THE USUAL SIGNALS ARE INSUFFICIENT

If the internet has no shortage of non-monetary quality markers, then why do I insist on the necessity markers tied to money? Is it really worth complicating things when we already have ratings of audio and video content, hotels, restaurants, publications, and web apps? Don't "likes," views, reviews, and so on meet the need for quality evaluations?

No, they don't. Why not? Because non-monetary signals are cheap. Relying on them is like playing poker with matchsticks: you can bluff all you want. Non-monetary signals do have value, of course, but the few seconds of effort it takes to click "like" or repost content are insufficient for weighing the value of that content. They are too small. Using them to assess content is like using feathers to weigh a watermelon.

But wait, what about labor-intensive reviews and commentary? Based on the author's reputation, a half-page review could be worth the same as a donation of a couple of dollars. In trivial situations we can rely on reviews, but only if we keep an eye on who the authors are and scroll through a certain number of them. When the game is big and there are serious interests at stake, inexpensiveness of signals becomes a problem. We realize that:

- 1) the signals are noisy and dispersed;¹⁷⁹
- 2) aggregating them from a variety of sources is difficult;
- 3) they vary in caliber, making them hard to simply summarize,¹⁸⁰ much less synthesize or, figuratively speaking, reduce them to a common denominator. It's impossible. There is no good way to merge likes, reviews, and reposts.
- 4) with a few exceptions, high-quality signals like reviews are few and far between, and the bots and half-bots drown out the human voices.

The value of content could be measured using non-monetary signals if we could be sure of the absolute honesty of all the participants, but this is unrealis-

¹⁷⁹ Non-monetary signals often point to things that do not interest us. They can express involvement, support, or protest, regardless of the content of the thing being evaluated. As I have said before, all ratings, indices, and h numbers are vulnerable to manipulation, both by fans and by special interest groups (including the bodies that organize them). For example, they are vulnerable when a certification authority merges with a trading platform. The well-known phenomena of the information cocoon and the echo chamber (when ideas and beliefs are reinforced during transmission within a closed social system, whether party, subculture, or other group) are nothing more than the result of a compromise between the quality of expertise and clickability.

¹⁸⁰ There is no non-monetary interpersonal system for quantitatively comparing people's experiences. Hektner, J. et al., *Experience Sampling Method: Measuring the Quality of Everyday Life* (2007).

tic due to the persistence of special interests.¹⁸¹ A truly workable system for evaluating content is unthinkable without built-in checks and balances. Non-monetary quality signals are as prone to falsification as they are inexpensive. In the context of crowdsourcing, the best form of protection from fraud is money: using paid signals to send fake messages isn't worth the effort. Over time, when digital reputations are built up on the basis of donations, cheap signals will become more reliable. But even then, money will retain its decisive role as the system's binding agent and guarantor of stability. It will also retain other functions in addition to measurement.

5.8. A BRIEF OVERVIEW OF THE CHAPTER V

- The measure of value is the sum of the other values exchanged for it; for texts, this is the amount of money, time, and cognitive and emotional resources that balance that value.
- How productively these resources are spent is indicated by the quality of the time acquired.
- Post factum donations are one way to publicly signal this quality.
- The totality of such donations demonstrates value and creates a feedback system.
- Capital of every type is valued according to its productive capacity; the value of symbolic capital is derived from flows of quality time.

Looking ahead, I want to note that the ranking of symbolic statuses based on post factum reactions is analogous to search results, which are nothing more than a hierarchy of the influence of web pages. Google's PageRank algorithm lifts the visibility of a page based on the number of other pages that link to it and — this is key — how influential those other pages are.^{lxxxv} This approach can be applied to any set of interrelated objects and subjects: the reputation or value of something is determined by the force of its verification; in other words, both the number and stature of reputational donors matter. My goal is to apply this universal principle to texts and their creators in order to ascertain reputations. Donations play a key role in the process as the most trustworthy reputational relays that are protected from falsification.

¹⁸¹ Anyone familiar with the inner workings of voting and ratings systems knows this. Search engine algorithms look at dozens or even hundreds of reputation signals and are still vulnerable to outside influence.

CHAPTER VI.

WHY HAND OUT MONEY?

In order for a measuring system to use donations made after purchasing something and ascertaining its quality, people have to want to make those donations. Although the tendency to reward people and give them gifts and encouragement are all part of human nature, some of us have more of those qualities than others, and in most of us they lie dormant. Social norms could help awaken the desire to reward others if not following them was more work than following them, but such norms do not exist yet.

External motivation is effective when it resonates with a person's own impulses, and social innovation is furthered by those in whom those impulses are strong.^{lxxxvi} As for followers, I don't think it will take long to persuade them. Based on my own hunches and the experience of other testers, later adopters will be pleased by the first meaningful tests with donations. The future of donations is assured by the fact that making them feels good. Let's look at the justification for this statement.

I want to start by saying that there is no need to get every single person involved in online giving, but we do need a lot of people involved in order for donations to become a big deal instead of a niche practice. Offhand, I'd say we need more than 10%, and this is higher than the public perception of the percentage of natural altruists. Thankfully, reports about this percentage are more hype than reality and should not be taken seriously. Is it possible that

the percentage we are interested in is independent of conditions in society or the level of culture, even though all other human qualities, such as aggression, courtesy, or trust, are at least sensitive to levels of welfare and security? No, that is impossible.

(Talking about consistency in the share of people engaged in a certain behavior seems naïve given the plasticity of the human mind, how responsive we are to incentives, circumstances, and material wealth, how our values evolve (let's listen to Maslow on this), and how humanity's center of gravity is shifting upward to the top of the hierarchy of values where creative altruism is located.)

Does altruism really have anything to do with it? Surely not in the form to which evolutionists reduce the behavior of an individual sacrificing itself for the sake of the reproductive success of its kin. (Unsurprisingly, early evolutionists stumbled in their attempts to explain human altruism.) It is unlikely that this is a matter of sacrificial altruism. But what type of altruism could it be? Or is it nothing like altruism the way it is normally explained and more like something else? I will focus on these questions here so that later on I can explain the use of online microdonations without getting sidetracked by theory.

6.1. ALTRUISM AS A FACTOR IN INTERPERSONAL AND INTRAPERSONAL EXCHANGE

Altruism is motivated by two norms. One of them concerns helping those who are weaker than ourselves and in need, while the other applies in relations between equals when we give to those we want to be able to rely on in the future. But there is also a third and less prosaic type of relationship in which the relationship is not oriented top-down or horizontally, but on the level and upward; this is reciprocal giving. (i.e., giving a gift to the original gift-giver).¹⁸² The first two types of altruism — motivated by pity or acting through the prism of morality and solidarity — have been studied more often; the type that interests us — having nothing to do with rescuing the poor, religion, the environment, or the prevention of cruelty to animals — is much less understood.

¹⁸² Altruism can be value-rational (the desire to help someone in need), goal-oriented (expectation of reciprocal benefits), and emotional (internal satisfaction). Post S., "Six sources of altruism: Springs of morality and solidarity", in *The Palgrave handbook of altruism* (2014), 179–193.

The type of altruism that interests us includes all three components.

It is intuitively clear that this third type of altruism is characterized by selflessness, which is intrinsic to the highest form of interpersonal exchange. Among other differences, I would point out that it extends beyond the boundaries of the system of social and utilitarian coordinates and flows in a different, special dimension; it is hidden from view and therefore more flexible; it has more degrees of freedom while at the same time seeming to be more equal, fair, and balanced. This is all I can say about altruism for now, because at this stage of the analysis it is only possible to roughly sketch the hierarchical levels of altruism.

Looking at the task before us, we first have to understand how giving relates to reciprocity, the term that anthropologists use to explain the second type of altruism, reducing it more or less to a system of mutual gifts.¹⁸³ Reading Colin Turnbull, we find that our ancestors labored under no “foolish belief that altruism is both possible and desirable; they are weapons, sharp and aggressive, which can be put to divers uses. [...] The object, of course, is to build up a whole series of obligations so that in times of crisis you have a number of debts you can recall, and with luck one of them may be repaid. [...] and so you have the odd phenomenon of these otherwise singularly self-interested people going out of their way to “help” each other. In point of fact they are helping themselves, and their help may very well be resented in the extreme, but it is done in such a way that it cannot be refused, for it has already been given.”¹⁸⁴

This sober, analytical, and cynical view forces us to put “selflessness” in quotation marks. Whether or not we need to put quotation marks around online patronage depends on the philanthropic benefits involved. Every system configures these benefits differently at different stages of development. We are primarily interested in the motives that drive a person before they know what behavior is expected of them, what will bring approval and what will be condemned.

¹⁸³ The term reciprocity was introduced to the field of anthropology by Bronislaw Malinowski and is used to refer to the circulation of material goods and services between people as a sign of mutual obligations. The term encompasses several types of relationships: 1) one form of equalizing distribution, 2) gift exchanges, and 3) mutual aid.

¹⁸⁴ Turnbull C., *The mountain people* (1972), 146.

The quote continues: “Someone, quite unasked, may hoe another’s field in his absence, or rebuild his stockade, or join in the building of a house that could easily be done by the man and his wife alone. At one time I have seen so many men thatching a roof that the whole roof was in serious danger of collapsing, and the protests of the owner were of no avail. The work done was a debt incurred.”

6.1.1. Altruism and Homans' Social Exchange Theory

Social exchange theory sheds light on these motives. George Homans, who proposed the theory, saw interpersonal relations as essentially economic at their heart.¹⁸⁵ According to his approach, which I wholeheartedly endorse, all behavior, including the whole range of interactions and relationships, is an exchange, and people do not engage in exchange unless both parties benefit from it. People's conduct shows that they seem to understand this, Homans wrote. Consider statements like "It was rewarding," "I got a lot out of it," "I got a lot from him," or "Talking to them wears me out."

But, as Homans states, the economic approach to understanding social behavior is often ignored. "[T]he open secret of human exchange is to give the other man behavior that is more valuable to him than it is costly to you and to get from him behavior that is more valuable to you than it is costly to him."^{lxxxvii} Today, this is what we would call a win-win. On this foundational economic principle, Homans built a series of propositions about behavior. There are five or six of them, depending on the reviewer. None of them is original in its own right; this might explain why they were completely forgotten and Homans' theory of exchange never became widely accepted. Three of the propositions were taken from B. F. Skinner's operant conditioning, and one of them (deprivation-satiation: if a person is rewarded for their actions with a certain frequency, then subsequent rewards for the same actions become less valuable) was borrowed from the basic economic law of diminishing marginal utility and Gossen's First Law, which underpins it.^{lxxxviii}

And yet there was something new in Homans' work; not in the propositions, but in how he applied them to human relationships and how he selected model situations — something researchers before Homans had avoided because of their inborn prejudice against economic thought.^{lxxxix} Any kind of theory was present, states Homans, while the economic explanation was mostly omitted. In his turn, Homans insisted that difficult-to-explain behavior is always economic, even if it looks wasteful or thoughtless to an observer, and has the psychological gains in its core.

In order to discern them, we have to be able to look deeply into interpersonal relationships while keeping in mind the axiom that inside any long-term relationship there is something that keeps it in balance. It may not be visible from the outside, and the participants may not be aware of it, but that "something" is what helps peo-

¹⁸⁵ Homans' theory is called "social," but at its heart it is psychological and economic. Homans G., *Social Behavior: Its Elementary Forms* (1974).

The theory's co-founder is Peter Blau: *The theory's co-founder is Peter Blau: Blau P., Exchange and Power in Social* (2017)..

ple get enough out of a relationship that they want to maintain it instead of walking away. As Gary Becker pointed out, the economic approach to the analysis of human behavior is akin to the way physicists use the law of conservation of energy (Section 3.5): in both cases the system is closed in a tautological way, encouraging us to look for an invisible something that can promote equilibrium or interfere with it.¹⁸⁶

Homans identified the “invisible” as the specific psychological rewards and punishments people exchange in relationships, which serve as a sort of relational currency. This, in his opinion, is the key to explaining many situations in life. Without going too deep into this theory — which is still waiting on the sidelines and will eventually receive the recognition it deserves — I want to cite his fifth proposition: the more often an individual experiences injustice, the easier it is for that individual to become provoked. The good being exchanged is fairness.

When we fail to take this into account, we run the risk of raising the bar of our partners’ expectations during the “courtship” phase, only to face grumbling — out of nowhere — when we are not able to maintain the given level. The courtship level becomes the starting point from which our partners calculate fairness, and the undelivered reward is perceived as a punishment, Homans writes, adding that self-respect and other values can, like fairness, be a source of satisfaction. This fully applies to altruism, which, like dignity and happiness, belongs to the category of intrinsic values that are worthy in and of themselves, unlike instrumental values, which are a means to an end.

Homans saw that people benefit from altruism if that is something they value, adding that this kind of self-reward makes it difficult to predict behavior. In truth, many decisions that seem unproductive from the outside are motivated by a person’s desire to maintain an internal balance that is invisible to others. This is a problem for economists. Frank Knight, the founder of the Chicago School, worked on the problem more than anyone else and insisted on taking into account the values on which human behavior is based, but this is outside the scope of economic analysis.^{xc} From this point, I want to use rational categories to illuminate philanthropic altruism by tracing how it relates to optimism about life, self-reputation, and self-improvement.

Homans once said he hoped that people were becoming wealthy enough to demonstrate their humanity. His words make an excellent slogan for this part of my study. The internet and social networks have enriched social exchange with empirical data that did not exist when Homans laid the foundations of his theory. As soon as we have the quantitative measurements discussed here, symbol-

¹⁸⁶ Becker G., *The Economic Approach to Human Behavior* (2013).

ic exchange will come to the forefront of the social sciences. After that, I will focus on altruism because I see it as the prerequisite for the measurements, which, in turn, will open up new facets of reciprocity for people.

Let's start with the deep explanation for altruism offered by Marcel Mauss in his classic essay "The Gift."¹⁸⁷

6.1.2. The Metaphysics of the Gift and its Demystification by Sociologists

From ethnographers' observations of exchanges in archaic societies, Mauss concluded that the natives attribute mystical power to the gifted item. This power is embodied by the giver's hau, or life force, which is transmitted to the recipient by means of the gift.¹⁸⁸ The act of reciprocal giving frees one from the bonds of this substance, associated with charisma and aura today but seen as sorcery or the evil eye in parapsychology. This, according to Mauss, is the origin of the exchange of offerings among natives of the Trobriand Islands, known as the Kula ring.^{xci}

A number of leading anthropologists, Turnbull among them, looked at the same ethnographic material and found nothing mystical in it, attributing everything to the secular logic of reciprocity we follow on holidays and other occasions (gift culture).¹⁸⁹ They interpreted the Kula ring as a means of deepening relationships and forming alliances. In a system with mobile statuses, there was nothing supernatural in the fact that a gift imposed a reciprocal obligation on the one who accepted it.¹⁹⁰ Therefore, Mauss' explanation is redundant; even worse, he wrongfully attributes to the subjects a belief in the connection between souls because he was confused about the different types of hau.^{xcii}

And yet it was not a mistake — not for the most part. Mauss pays tribute to the social motives of the gift; he also writes about relationships, prestige and

¹⁸⁷ Mauss M., *The Gift* (2000).

¹⁸⁸ This is the name given to the life force by the Maori people. One definition of hau: an object associated with a person that one wishes to put a spell on; it could be a piece of hair, a drop of saliva, or anything that the person has touched — anything that, in the hands of a tohunga (ritual practitioner) can serve to establish a connection between the spell and the object of the spell.

¹⁸⁹ Clark M. et al., "Keeping track of needs in communal and exchange relationships", in *Journal of Personality and Social Psychology* 51(2) (1986), 333–338.
Park L. et al., "Egoistic versus altruistic concerns in communal relationships", in *Journal of Social and Personal Relationships* 28(3) (2011), 315–335.

¹⁹⁰ Belshaw C., *Traditional Exchange and Modern Markets* (1965).

dominance, establishing the basis of the theory of reciprocity.¹⁹¹ And, although hypothetical interpretations of vague beliefs — as Mauss was accused of — seem unnecessary, he was not satisfied with this explanation. He sensed the presence of something else, something primordial or pre-social that could not be reduced to everyday rationality.

Like Mauss, I see that there is “something else” that is critically important for the first stage of the reciprocal economy. Before a norm is clearly established, there are always those who initiate it based on an internal impulse — not an external one, as they don’t exist yet. At this stage of its inception, Mauss’ message makes perfect sense; and as for mysticism, anthropologists are correct that we can do without it given our modern repertoire of explanations for the supra-utilitarian basis of the gift. Many discoveries have been made in the fields of personality psychology and empathy, and there is much we can learn from economics and game theory.

Mauss is intuitively precise on the most important thing: loans and gifts weave the fabric of social relationships, but they also leave their mark in the recipient’s soul. If a gift is chosen so that it is not put on a closet shelf or regifted and is instead put into regular use, then the giver acquires a small corner of the recipient’s soul; a time-share, if you will. Therefore, the exchange of gifts does, in fact, involve a transfer of *hau*. This broadening happens above the utilitarian; it is responsible for our connectedness to something greater than ourselves, inner freedom, salvation from the slavery of money, and the expansion of our inner selves. To make this happen, we need to push beyond the borders of the ordinary.

6.1.3. Online Empathy

The ability to empathize is undoubtedly a prerequisite before one can be responsive and demonstrate prosocial behavior,^{xciii} so let’s pause to look at what that means. Empathy is an important and popular topic that has been widely studied since the discovery of mirror neurons¹⁹² in the 1990s, and yet we still know very little about how it works.^{xciv} It is reasonable to assume that empathy functions differently during online communication because the activity of mirror neurons is reduced, decreasing in turn the production of the hormone oxytocin,

¹⁹¹ Forms of reciprocity in non-market interactions range from plain barter to the exchange of gifts that must be returned, as opposed to what is considered a true gift, and yet this (the return) is not expected.

¹⁹² Mirror neurons generate brain activity that reflects the states and actions of others: the same parts of the brain are excited as we would expect to see if the person in question was performing the action or in the same state. Mirror neurons are what make us able to empathize.

which is believed to support social interactions and attachment. While this must impact the degree of responsiveness, a lack of face-to-face contact does not make it impossible for people to understand each other and empathize with all sorts of causes; there are plenty of examples of this online. Empathy direct at content creators is somewhat different, however, and it is difficult to draw definite conclusions beyond the fact that creators can expect some of the empathy viewers have for their characters be transferred¹⁹³ to themselves.

6.1.4. Intra-Personal Exchange

Everything that happens between people is an exchange. This is also true of what happens inside a person; in any case, thinking this way is productive. When Homans laid the economic foundations of this approach, he also touched on the idea of altruism, saying that people benefit from it. He did not specify exactly how, though, saying only that it is a complex issue. I want to take on this issue while also looking at two concepts from psychology: the looking-glass self (how we think we appear to others¹⁹⁴) and the inner self (how we think of ourselves^{xcv}). The significance of the inner self mushroomed during the individualistic 20th century, especially during its second half, spurred on by the democratization of consumption, trends in art and culture, increasing mobility, the sexual revolution, and a general mood of liberation. New opportunities to choose social roles and careers drove demand among the public — not just among elites and unique individuals — for greater self-knowledge.

In response to this demand, a psychology education machine quickly emerged that drew from existing developments in the study of personality and theoretical sociology. This ushered in the era of psychological awareness that gave people a language to describe their inner world and subpersonalities (Roberto Assagioli), their core selves, their hierarchy of needs, and their coping strategies; sociology enriched the vocabulary of the educated classes with concepts like social roles (George Herbert Mead), role conflict, and front stage and back stage theory (Erving Goffman¹⁹⁵). People enthusiastically absorbed and digested this new informa-

¹⁹³ Psychoanalytic transference is described by Freud as the shifting of feelings, emotions, attitudes, and drives from an inaccessible, emotionally significant object to an accessible one. The objects of transference can be psychotherapists, but they can also be any actors in a variety of situations.

¹⁹⁴ The looking-glass self is the core concept in Charles Cooley's theory of personality. As part of the self-concept, it is formed through the assimilation of others' attitudes, opinions, and assessments.

¹⁹⁵ Goffman E., *The Presentation of Self in Everyday Life* (1956).

tion and learned how to make peace with themselves; without this skill, it would have been difficult to adapt to the increased freedom and complexity of life and to the moral relativity that devalued the traditional system of value coordinates.

When a person responds to social context by changing their behavior pattern as often as they change their clothes, when they combine dissimilar, sometimes conflicting roles — for example a loving father and a hard-working executive, who doesn't have much time for the family — their internal dialogue intensifies. We can look at this process as a series of negotiations between subpersonalities, which, as everyone knows, can be hard to handle. The negotiations are led by the person's core self (what Freud called the super-ego¹⁹⁶), which tries to stay alert and remain impartial. This isn't always successful, as the core self's preferences are neither binding nor set in stone, and the core self is capable of sympathizing with the wishes of the subpersonalities (sometimes as a coping mechanism, sometimes as self-justification). Such adjustments save willpower resources.

Bruce Hood denies the existence of a core self, calling it an illusion, a myth, a whole lot of nothing.¹⁹⁷ He manages to build a discussion of personality by simultaneously using and avoiding that same "nothing," which — just imagine! — has no location in the brain. What naivety to believe in the core self! People searching for primordial meaning in the existence of nothingness engage in this type of activity only when they fail to accept the disappearance of God and to appreciate the insight and tact of a God who, after having lived out in the open for millennia, moved back inside the consciousness from which he sprang and from which he now guides us. The creator is a social construct. He is our creation, not the other way around. Nurtured by culture, this collective creation presents humanity with a system of mirrors that allow us to form our core selves.

Is the core self an illusion? To a certain extent, but what else do you think could be guiding us? We build the core self with our own hands, then alienate it, and then use it to figure out our relationships with ourselves and others. This authority, glued together from pieces of collective and individual memory, is guided by moral standards, ideals, attitudes, and beliefs drawn from society and combined with the image of the self. That much is clear, as is the fact that all of these things are combined in the form of a compromise with our physiological needs and other needs and habits. It was clear in general, schematically, until George Ainslie saw in this intrapersonal exchange and applied economic logic to the dialogues people have with themselves.

¹⁹⁶ The superego controls internal moral standards and ideals and serves as an indicator and judge of right and wrong.

¹⁹⁷ Hood B., *The Self Illusion: How the Social Brain Creates Identity* (2013).

6.1.4.1. Ainslie's Picoeconomics

Ainslie was one of the first to study this change (he called it picoeconomics) and, among other things, the intertemporal choices that people use to resolve the conflict between current incentives and future interests. He proposed that we view it as a competition between the present self and the future self¹⁹⁸ in which they negotiate and reach agreement as if they were separate individuals. They agree, for example, to restrain whims, to define decision-making zones and spending authority (so many dollars for partying, so many for atonement for sins), or to make exceptions to the rules of behavior.¹⁹⁹ Suppose that my present self wants to eat cake, while my future self wants me to be slender and fit. In achieving its goal, the first self harms the second and produces something I call negative “inter-externalities” (external effects such as harmful emissions that occur within the individual).²⁰⁰

The two selves have a degree of autonomy without being disconnected, otherwise a person would suffer from dissociative identity disorder. They are integrated by the core self, which keeps an eye on the looking-glass self. Robert Louis Stevens' Dr. Jekyll knew this: our psyches contain multiple aspects of our personalities, and if they were not precisely coordinated, we would all be dissociated like Dr. Jekyll and Mr. Hyde.

The core self is an autobiographical memory of the different faces and manifestations of the self; it is a memory united by a central narrative. This self watches over its flock of subpersonalities. It knows their dodges and tricks and how they think. It knows from experience both the consequences of indulging them and its ability or inability to reason with them in situations where they are at risk of going outside the boundaries of self-control. Consequently, it can — if it tries — set limits for them before trouble strikes.²⁰¹

¹⁹⁸ According to one point of view, an individual has one “I” for specific moments and one “I” in the future.

¹⁹⁹ Examples: “I only smoke when my friends are smoking,” “I don’t drink alone,” “I don’t eat after midnight,” “I don’t have to stick to my diet on vacation.” Such rules are good because they control behavior while allowing us to enjoy life without feeling guilty and oppressed. Exceptions like these are part of the bargaining process and compensate today’s “I” for limiting its desires.

²⁰⁰ The study of internalities is at roughly the same stage of development as our understanding of externalities before Coase’s breakthrough paper “The Problem of Social Cost.” Coase R., “*The Problem of Social Cost*,” in *The Journal of Law & Economics* 56(4) (2013), 837–77.

²⁰¹ The above is relevant to the issue of free will and, accordingly, responsibility for actions, including those of a criminal nature, on the global agenda.
It is also worth noting that a person exists in multiple states sequentially, not simultane-

The fact that this is an exchange is most clearly manifested during an action when something valuable is acquired and something else — also valuable — is lost.²⁰² When money is at issue, a numerical equivalent of value appears. This has been modeled in experiments with names like dictator game and ultimatum game that measure the monetary value of non-egotistical behavior. Their results prove that the multifaceted self can count.²⁰³ Comparing a set of dissimilar pros and cons, it translates them into numerical form, resorting to that universal relay of experience, money.

6.1.4.2. Multiple Selves in Behavioral Economics

Ainslie's ideas about multiple selves and the theoretical developments achieved by the psychology of personality struck a chord in behavioral economics. Richard Thaler, one of the leaders of the discipline,²⁰⁴ which was founded by Daniel Kahneman and Amos Tversky in the 1970s,²⁰⁵ borrowed the idea of two selves, one short-sighted and one far-sighted. He calls them the doer and the planner. The former, as in Ainslie's version, is guided by the desires of the moment, striving to live life to its fullest in the here and now, while the latter looks out for the overall usefulness of an individual's actions.²⁰⁶ The doer is prone to make mistakes from the point of view of long-term inter-

ously, even when their thoughts spin like a kaleidoscope. But they can only deal with one thought at a time, and it can be difficult to escape from the embrace of that thought.

²⁰² Responsible choices involve weighing the options. A judgment made without this process is worth little, which is why the values identified by sociologists in surveys are often refuted by behavior.

²⁰³ Kahneman, D. et al. "Fairness and the Assumptions of Economics", *Journal of Business* 59 (1986), 285–300.

Kahneman, D. et al., "Fairness as a Constraint on Profit Seeking", in *American Economic Review* 76 (1986), 728–741.

²⁰⁴ Thaler provided empirical evidence of suboptimal decisions made by economic agents. Thaler R., "Toward a Positive Theory of Consumer Choice", at *Journal of Economic Behavior and Organization* 1(1) (1980), 39–60.

Thaler R. "Mental Accounting and Consumer Choice", in *Marketing Science* 4(1) (1985), 199–214.

²⁰⁵ Economics began turning toward behaviorism with the publication of the following articles: Kahneman D., Tversky A., "Judgment under Uncertainty: Heuristics and Biases", in *Science* 185(4157) (1974), 1124–1131.

Kahneman D., Tversky A., "Prospect Theory: An Analysis of Decision under Risk", in *Econometrica* 47(2) (1979), 263–291.

²⁰⁶ Thaler R., Shefrin H. "An Economic Theory of Self-Control", in *Journal of Political Economy* 89 (1981), 392–406.

ests, and the planner has to pay for them. Eventually someone had Enlightenment-style idea: what if one were to collect statistics on these mistakes (there are dozens of different types) and show people how to avoid them? This idea captivated the leaders of the English-speaking world and resulted in the creation of an entire branch of government care for people and a new school of thought: the new or libertarian paternalism.^{x cvi}

This subtly modified version of paternalism — instead of being subjected to obvious pressure, as with traditional paternalism, people just get a gentle nudge — deserves its own analysis (see Appendix 4) because it brings together much of what interests us in the context of measuring the symbolic: we see the frontier of pure science and practical applications of that science, the philosophy of freedom and happiness, the choice of prosperity in exchange for freedom, the governmentalization of life, and much more. At the moment, however, we are primarily interested in the fact that behavioral economists have legalized the idea of multiple selves.

Before the work of Thaler and his colleagues, talking about the existence of multiple selves was of interest only to a few sophisticated individuals. Once serious science took an interest in this plurality,^{x cvii} which also explained the inconsistency of behavior and offered remedies for it, more people began to take a closer look at the performances of the group of comedic actors staging a theater in their heads. Government recognition of this concept reached the masses in the form of judgment-day images on cigarette packs and various default options for services. (The crowning achievement of the new paternalists is the gently incentivized design of pension plans that encourage people to save more for old age. For more on this topic, see Appendix 4).²⁰⁷

Regardless of whether this approach is correct in general (and I do not particularly welcome it), economists have done society the favor of preparing it for the practice of gift-giving. What was once considered an ordinary variety in the states of the psyche is now the subject of rationalization and calculation.²⁰⁸ A person who understands the idea of competing selves bargaining with each other will be more interested in these relationships and more likely to attempt to understand what the negotiating parties want, their arguments, who is in

²⁰⁷ The governments of some progressive countries created “soft nudge” departments at some point in time, but gradually their activity waned. There are special boxes of cigarettes on a sale but their effectiveness is somewhat arguable since people learned not to look where they shouldn’t (note that in the US packages only carry text warnings in large print. No images).

²⁰⁸ Calvinism provided a similar, but immeasurably greater push to self-knowledge because its followers had to consider their own status as chosen or not chosen.

charge, who to appease and who to reason with. With such close focus on the roles within their mind, our subject is more likely to notice the appearance of a philanthropic character on the stage and how that character impacts their mood and level of optimism about life.

6.1.5. Donations as a Multiplier of Personal Resources

Economists think in terms of competition for resources. Ainslie applied this logic within the individual, where multiple selves compete for resources. Neuroscientists see the brain as a collection of systems that occasionally come into conflict.^{xcviii} Self-control, working to achieve a result, and giving up bad habits all require willpower, which is a resource with limited power. This resource approach is not unknown in psychology, but the field tends to view resources rather as potential instead of as something that is expendable, even if it can be regenerated. Nor does it see resources as something that can be discussed in terms of variable power, such as the return from a well. Researchers interested in willpower and motivation for achievement will no doubt agree it can't be viewed as such. The result of this is that the study of mental resources is not trending at the moment.

And yet all of us are well aware of our limitations, and we know that all sorts of things can wear us out: strong emotions, solving math problems, too much screen time, too much interacting with people, and even things like love and vacations. We understand ourselves in terms of “having enough energy.” We wonder if we have the energy, motivation, and patience to accomplish a plan. But what does all this have to do with donations?

One of the reasons psychologists haven't done much with this topic is the lack of clarity about individuals' inner resources.²⁰⁹ More importantly, our capabilities depend on our state. The degree to which we can mobilize our resources is a direct function of our motivation; a motivated person can move mountains.²¹⁰ As a result, it can seem that human resources are, if not dimensionless, then at least highly elastic, making them difficult to measure. We know that the most powerful tools for motivating an individual's resources are proso-

²⁰⁹ Inner resources include: 1) qualitative characteristics, such as knowledge, abilities, skills, and competences; 2) regulating mechanisms, such as personal goals and a system of motivation. Adler, Freud, Fromm, Rubinstein, and others all studied personal potential.

²¹⁰ Hence the myth about humans having limitless possibilities. The idea is flattering, of course, but it hinders work with personality resources and dooms both personality theory and self-improvement practices to stagnation.

cial actions (people will go to great lengths for those who matter to them) and conformity to others' expectation. From this I deduce the role of donations: they serve as a gas pedal that switches the mind into high-energy mode.

6.1.6. Donations, Self-Reputation, and Core Personalitiy

The motivation to make donations fits into the well-known adage that if you want to be happy you have to work for the benefit of others.²¹¹ It also aligns with the individual's concern for their self-reputation, or how they see themselves. (Like the usual concept of reputation, self-reputation is concerned with previous behavior and serves to predict subsequent behavior.) A person who wastes their self-reputation adds their own inconsistency to the uncertainty of the rest of the world. The responsibility for preventing this falls to the core self, which, as described above, is a memorized text written in actions. The memories of these actions, filtered and tinted, feed our narratives about ourselves. If that narrative is not updated, we have nothing to talk to ourselves about; for this reason, subjects suitable for such conversations are almost the most marketable product in history. Like a palimpsest, every subsequent text about the core self creates a new layer over the top of the previous one, reflecting not the entirety of the information contained therein, but only that part that is allowed through by the mind's filters.

This schema makes it possible to formulate the meaning of giving more clearly beyond what has already been outlined: the other meaning of giving is deeper self-reflection. Giving causes the autobiographical memory to grow with memories of situations and actions that make a person better in their own eyes and encourage them to continue in the same vein. This is consistent with what experts on this type of memory have found.²¹² On brain scans, neuroscientists literally see the brain's hedonistic reactions to philanthropic acts. Psychologists know it, too. Soviet psychologist Boris Dodonov, who developed the concept of the emotional orientation of personality, used the phrase "emotional melody."^{xcix} Giving spiritualizes this melody, alters the mood with which a person goes through life, and corrects the orientation of their personality.²¹³

²¹¹ We should expect the emergence of studies on the connection between donations and career growth, personal productivity, and possibly even longevity.

²¹² For more on how this is connected with happiness, see Elizabeth Loftus. For example: *Loftus E., Memory: Surprising New Insights into How We Remember and Why We Forget (1980)*.

²¹³ Lidia Bozhovich, a psychologist and follower of Lev Vygotsky, states: "The holistic structure of the personality is determined primarily by its orientation, so that it is the latter that constitutes the core of this structure."

6.1.7. Micro-Donations and Game Theory

Viewed through the lens of game theory, micro-donations are one element in a multi-step combination move to establish and deepen contact — in our case, between a creative and a fan. The future of the relationship is unclear at first, so as with any new acquaintance the parties scan each other for reciprocity. Offline, this happens through subtle but significant verbal and non-verbal cues that the parties exchange.

Anthropologists would categorize these cues as ritualized mutual sounding of the sort that has been performed by strangers upon first meeting since ancient times. The participants — whether future associates or scalp hunters — place bets, gradually increasing them and cultivating trust. One participant hazards the first gesture of invitation and assesses the other participant's degree of friendliness. A reciprocal but larger investment means that the other participant is ready for the next level of trust, while a smaller response means a retrenchment of or freeze in relations. The participants perceive and evaluate these gradations; they also carefully verify the markup for the next transaction. With each new pirouette in this dance of recognition, mutual capital accumulates in the relationship. This is a universal pattern: we see it when bribes are given, partnerships, friendships, and intimate relationships are established, and informed consent to sex is obtained.

In the course of communication-rich activities, people develop a sense of balance between investments and acquisitions, otherwise referred to as fairness. Without fairness, the exchange is not stable and the parties have to build new bridges every time, meaning that they incur transaction costs that undermine the economics of the interaction. This is the economic rationale behind rules and norms: they allow us to distribute the “getting-to-know-you” costs over multiple transactions, thereby achieving economies of scale.⁶ In this system, the gift is a dual-purpose tool: it is both a means of screening or examining the other party and a tool for maintaining balance.

6.1.8. Transaction Costs of the Internal World

After that brief overview of the possibilities that open up when we take an economic view of the processes taking place in our inner worlds, I want to point out an opportunity that is hidden within the new institutionalism (new institutional economics) and seems promising. The greatest value of this school of thought, which serves as a bridge between economics and the humanities, is its calibrated, precise language. Non-egoistic preferences, profitability (in personal investments), information (cognitive) costs, moral hazard (moral bankruptcy), reputa-

tion, relational contracts, externalities/internalities, opportunism in all its manifestations, human capital, specific assets, discrimination, screening, shirking—just look how organically the terms apply to our subject of interest! Each of the concepts — and I haven't even listed them all — is a milestone in social thought. Polished by the works of Nobel laureates,²¹⁴ they help strictly formulate ideas that otherwise sound confused and vague, like beating around the bush.

Transaction costs occupy a special place in the series; they are defined as the costs associated with any economic transaction, including the cost of finding and analyzing information, negotiating, and making decisions, as well as dispute resolution and contract fulfillment costs.²¹⁵ The desire to save on these costs underlies various organizational forms and behavior models, not only in economic relations,²¹⁶ but also in everyday interactions. Institutions (the sets of formal rules and information norms operating in a society) play a key role in determining the scale of transaction costs.²¹⁷ Useful institutions reduce costs and contribute to economic growth.

The logic of transaction costs also applies to the individual's inner world, where rules play the same role. Such components of personality structure as values, level of aspiration, and conceptual framework provide discipline for the consciousness, streamline thinking, and reduce decision-making costs. They reduce losses caused by internal friction and thereby have a positive effect on the personality's effectiveness. I can illustrate this idea with an example taken from large social organizations.

As membership in large organizations grows, their transaction costs often increase at an accelerated rate because of the exponential rise in the number of connections and the accompanying escalation of misunderstandings and friction, which eat up economies of scale. This is how economists explain the limits beyond which corporations or empires become ineffective and fall apart. Something similar happens within the individual: the transaction costs of internal exchange determine the effectiveness and scale of the individual's personality.

This explains the need for an institutional enhancement to our personalities that grows as our personalities become more complex and multifaceted. Without it, restoring order inside our heads would come with an ever-increasing burden of unproductive costs. Personal efficiency is reduced, return on effort hits

²¹⁴ Ronald Coase, Douglass North, Elinor Ostrom and Oliver Williamson.

²¹⁵ Ronald Coase's identification of their role and significance was a revolution in the social sciences. Coase R., "The Nature of the Firm", in *Economica* 4 (16) (1937), 386–405.

²¹⁶ For more on transaction costs, see: Williamson O., *The Mechanism of Governance* (1996). Also see the table of differences between transaction cost economics and neoclassical microeconomics.

²¹⁷ North D., *Transaction costs, institutions, and economic performance* (1992).

zero, and the person stagnates. The only path to self-improvement involves cultivating your internal institutional environment, and gift-giving awakens and catalyzes the mechanisms that enrich that environment. The process is somewhat like a fairytale hero pulling himself out of a swamp by the hair²¹⁸.

6.1.9. The Gift as Catalyst for Personal Growth

Viewed from different angles, the gift is both a multipurpose action and a multifunctional experience. We can see it this way from the vantage points of anthropology, sociology, Homans' social exchange theory, Ainslie's piceoeconomics, institutional and behavioral economics, personality psychology, and game theory. What the gift means for the recipient and how it encourages cultural production goes without saying. I have said before and will say again that the gift is a feedback mechanism that creates a source of data in the content sphere and improves the quality of communications. Now I want to do a roundup of everything that benefits donors personally. Gift givers experience improvements in areas like reflection, self-reputation, autobiographical memory, involvement in life, and reduced decision-making costs, as well as other positive changes.

All of these things are significant and all of them enrich the personality, but reflection is the most important. It is so important that I directed a special study on how reflection happens and what people feel when they engage in the practice of making donations. Participants were asked to make a donation whenever content or a content creator touched them, impressed them, or brought them joy. They made their own decisions about whether or not to donate and if so, how much.

For each transaction, the study recorded the recipient, the reason, and the circumstances. This and other information was compiled in content consumption profiles for each individual, and test subjects had access to all the information. (This data can be used to monitor people's inner world, and when the tracking industry discovers this opportunity — which I am convinced is the future — it will be able to rely on data from donations.) The study concluded with in-depth interviews during which the test subjects shared their observations and the results of their introspection. Although we did not ask directly, we were interested in how they felt about getting used to donating.

In general, this is what we found: people generally experience increased interest in making donations as they engage and become involved in the process. As soon as they made their first donations, they started asking themselves all

²¹⁸ Baron Munchausen was a fictional superhuman figure dreamed up in 18th century Germany. He was known for his physical strength and his boastful nature.

sorts of questions: Was it the right reason? Was it a fair amount? Who should I donate to or not, and why? We see these same reflections activated any time people handle money. One subject noticed that their donations always fit into a narrow category. Another realized they only made donations in a specific context. Still others saw that they had a hard time spending their planned donation budget (or, on the contrary, sticking to that budget). They also faced existential questions. What should a person do if they find they value content in a narrow genre more than some momentous “novel of the century?” How should they assign value to a range of emotions and impressions? Is purely hedonistic enjoyment more important than more sensitive, experiential feelings? Which of these are more valuable? Is it acceptable for our donations to be visible to others?

While the experience was uplifting for the most part, it was not without some tension. The activities were difficult because they were new, they required mental resources, and learning about yourself often comes with surprises. As the donations came together to form a self-portrait, the test subjects began to question if they knew themselves as well as they thought and if they really were the kind of people they wanted to be and wanted to seem.

Did the donors like how they saw themselves in the role of “homo donaticus?” The quick answer is yes, they did. Both the process and the accompanying self-knowledge were welcome, although, as I already noted, the practice takes some getting used to. Among the changes that occurred within the test subjects, it is worth noting that they became more interested in spending time with themselves. After all, the subject’s inner selves had already run out of fresh material for their repertoire; with the appearance of a new character come new plot threads; the inner selves build a bond with the new character, breathing life into internal relationships and relationships with others. This is the value in the practice of making donations.

6.1.10. On the Distribution of Donations

Earlier in this chapter we considered the internal motivations that play a leading role in the early stage of growth in donations. Everett Rogers, the creator of the theory of diffusion of innovations, estimates that an innovation needs to reach a critical mass of 2.5% (Fig 6.1); donations are reaching that level.^{ci} By now, one-third of podcast listeners have transferred money to a creator at least once, which means that we are approaching a milestone. If we believe Rogers, the innovators are about to be joined by early adopters (who make up 13.5% of the total number of adopters), and when they do, we can be confident about the future of donations.

At this point, we will move beyond the individual and look at the social forces driving this process, but I want to wind up this preliminary discussion by pointing

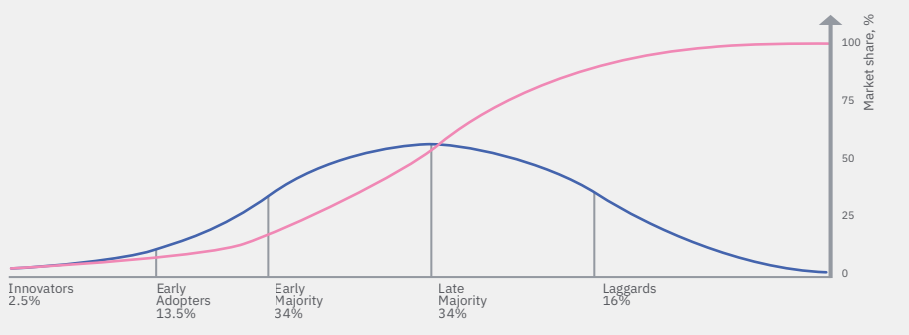


Fig 6.1| INNOVATION DIFFUSION CURVE

out something that should be obvious: internet goods, by nature of being free, invite post factum payments. Passable content and freebies abound, so when something really worthwhile turns up, frugality should, in theory, fade into the background.

Wait staff, taxi and rideshare drivers, couriers, and dozens of other professions count on tips. Wikipedia, open-source software, free-to-play video games, and OnlyFans creators have popularized tipping as an online business model, and it is the rare site or YouTube channel that doesn't have a "donate" button. Monetary incentives and the related infrastructure are popping up everywhere. Advanced users recognize donations as opportunities for both consumers and producers. In their posts, they note that donations are a natural evolution of a system where people interact, so that instead of the creator imposing a price, the buyer is invited to evaluate the product and pay according to their assessment and ability.

We can reach that 2.5% mark faster if we go beyond interpreting the gift as social glue²¹⁹ and recognize that it involves co-creative communication. Joseph Brodsky once explained that writing a poem was a way for the poet to express gratitude for the joys of life and pay it forward. It doesn't matter if the coin is the same; we can thank creators with whatever coin we happen to have. Money works best for long-distance relationships. In terms of technology, all it takes is a ubiquitous "donate" button so users can reward a text, product, or service from any creator at any time. In the next part of this chapter, we will look at how to make use of the "donate" button as widespread as clicking "like."

²¹⁹ Anthropologists report that natives adhere to this tradition when they provide unsolicited help in order to create a debt. Turnbull described the tactics of one of the recipients of this kind of support, a man named Lokelea: "[he] always made himself unpopular by accepting such help and paying for it on the spot with food (which the cunning old fox knew they could not resist), which immediately negated the debt." *Turnbull C., The mountain people (1972).*

SECOND INTRODUCTION.

ON THE CONNECTION BETWEEN VOLUMES ONE AND TWO

We like to think of ourselves as an information society, but our ideas about the value of information goods are paradoxically vague, and we ignore the degree to which this interferes with our ability to live or lives and grow as individuals. Value is measured by money — there is no other tool available — but money does a poor job of indicating the value of the symbolic, and this holds us back. This was the conclusion I arrived at in the first volume, which served to prepare the way for the discussion in this volume of how to adapt money so it can successfully weigh the symbolic, meaning the ability to appraise texts defined as broadly as possible (including oral, written and nonverbal pronouncements, all the products generated by the cultural and artistic markets, and people themselves).

The current dysfunction in measurement proceeds directly from the nature of money: prices reflect the balance of supply and demand for scarce goods, but texts — especially digitized texts — are not conducive to being valued this way because they cost little to replicate and are not scarce. (This is explained in detail in Chapter 5^{cii}) As a result, the prices for digital products are identical and therefore uninformative and unconnected to contents or quality, varying only in special cases that do not include books, articles, films, and sound recordings, and podcasts. The consumer is left to wander without a compass.

Despite all this, the lack of a universal measurement tool for symbolic values — something that would work as well as money functions for utilitarian goods — remains out of sight and unnoticed. We fail to make the connection between this measurement conundrum and the difficulty of both locating and monetizing quality content, our mediocre consumer navigation, our poor understanding of health and education, as well as a host of other complications that individuals and companies deal with using every tool at their disposal except the ones that might address the root cause.

This book proceeds from the thesis that money has failed as a measuring tool. In order to remove the slightest doubt about the correctness of this thesis, in the previous volume I first attempted to squeeze everything I could out of money's measuring capacity in the non-utilitarian sphere. The result of this exercise is that we now understand the conditions under which money conveys information about value and the limits beyond which it ceases to function.

This question has not been posed this way before, and there have been no serious attempts to understand what is captured by money and what is not. Even in the contexts where money is functional, its potential is underutilized. For example, the statistics being collected about cultural industries are far from complete. A much greater omission is the fact that these industries have no classification that would reflect the structure of the non-utilitarian and allow us to see this picture as a whole. This is what I have tried to correct. The monetary dimensions of the non-utilitarian economy were also vague, at best, and our calculations showed that existing estimates were way off.

Of the conclusions drawn in the first volume, I want to emphasize the following:

1. On the dimensions and structure of the non-utilitarian economy.

This part of the economy consists of around 100 industries and accounts for approximately half of global consumer spending, at close to \$30 trillion a year. (See Section 1.2, Section 1.3). This amount will have increased by the time this book comes out due to the amount of money pumped into the economy of the past several years and is likely to exceed \$40 trillion.

2. On Maslow's Pyramid.

Based on properly formatted revenue data from non-utilitarian industries, I was able to quantify the monetary parameters of the pyramid's layers; as far as I know, this book is the first empirical work to be done with this important tool. As it turns out, the monetary profile that emerged for the hierarchy of higher needs duplicates the familiar pyramid shape, providing Maslow's construction with empirical confirmation that has always been lacking (Fig 5.2).

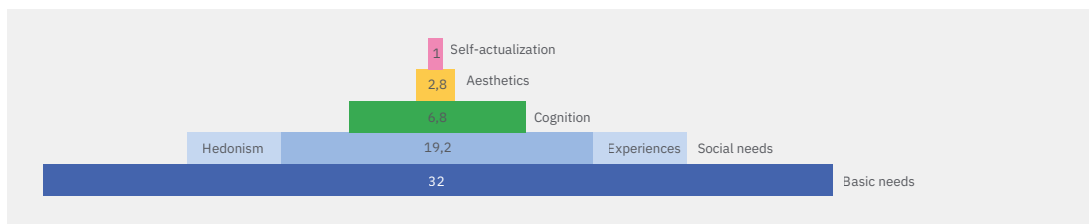


Fig 6.2 | MASLOW'S PYRAMID WITH NON-UTILITARIAN SPENDING

Note: USD trillions; the width of each section is proportional to the amount represented.

As the calculations showed (Chapter 3), just shy of half of consumers' non-utilitarian spending goes to social needs, one-third of that half is spent on prestige. But most importantly, if you arrange the needs in descending order by amounts spent on them, it becomes clear that the order of the steps is the same as in Maslow's pyramid. This seems important. Prior to this study, Maslow's pyramid had never been subjected to testing and verification.

This may be why many economists do not take it seriously, citing, among other issues, the fact that unmet lower-order needs do not always stand in the way of higher order motivations. Such exceptions only confirm Maslow's rule, however, and are confirmed by aggregated revenue data (see the figure above), showing what in what proportion the average person spends money on. This opens the door to studying those higher needs that are the focus of a materially wealthy society while largely remaining unexplored territory.

If we could get our hands on a comprehensive diagnosis of the state of the pyramid, it would open our eyes to much of what is now only intuitively guessed at when individuals, organizations, social groups, and political leaders make decisions. Specifically, tracking changes in higher needs would help clarify the correlation between economics and politics and, for example, shed light on what happens to a society when the emphasis shifts from the needs at the bottom to those at the top of the pyramid. What economists and sociologists call the middle income trap ought to be called the higher motivations trap; the trap is easier to escape when we thoroughly understand its design.

The monetary measurements presented in the first volume are the first step towards achieving this. But the pyramid is three-dimensional: in addition to the monetary projection, we still need two more. The second — time — reveals how much time is spent on various types of cultural consumption. The third projection is quality of subjective time — what is the quality of the time people receive in exchange for time and money spent.

It is difficult to derive the time slice from monetary indicators, but it can be reconstructed using big data. I believe that mastery of the methods for such

reconstructions and subsequent analysis of cultural and consumer budgets will be a breakthrough for all the branches of science that study humans and human society, and that this breakthrough will impact social practices (including cultural consumption, education, parenting, self-improvement, and so much more). The task of elucidating the third slice, which describes subjective time, lies outside money's measurement capacity when it functions as usual and nothing is changed. My goal in the previous chapters was to identify these limits and justify the use of voluntary, post factum donations as a means of overcoming them.

3. On Inequality

The economic component of inequality gives a one-sided picture of the state of affairs.²²⁰ Leading interpretations of inequality are at the very least ambiguous, if not completely irrelevant: some forms of inequality are hard to see, and there are compensatory mechanisms in place that overturn the conclusions drawn based on monetary calculations. Much of what is unaccounted for comes down to symbolic inequality/levelling and remains a hidden variable affecting quality of life. We do not yet have the tools to reveal the unseen, and without them any attempts to overcome inequality, both symbolic and material, are largely ineffective.

4. Attempts to calculate the sum total of human capital in money, as well as the value of human life, are both unconvincing and largely futile.²²¹

5. In order for evidence about the quality of texts to become publicly available, we need consumers to report that information; we need them to report publicly and concisely, without false interpretation or possibility of falsification, how much they liked the texts. Signals about the quality of texts must be carried by money functioning in donation mode. This is the theoretical solution I propose to the problem of measuring the symbolic. Next, I will put this theoretical solution into practice.

The results presented in the first volume may be of independent interest, but here they are outranked by the task of extending money's measuring capacity to the symbolic. The approach we take to solving this problem is dictated by the need to adapt to how the price mechanism works: prices are born from the rela-

²²⁰ See Chapter 3. Wealth and maslow's pyramid

²²¹ See Chapter 4. Measuring human capital and the value of human life

tionship between the supply of resource-intensive goods and services and the demand for them. But content is not rare — its supply is limitless — so the usual pricing mechanism fails.²²² For it to work, we have to modify the exchange so that it compares limited resources.

Limited resources do participate, albeit not explicitly, hence the opportunity to build on top of the supply-demand pricing mechanism. Personal time, cognition (the ability to perceive and process information), emotions, motivation — all of these are finite power resources that are spent during any type of communication. A single act of weighing the symbolic consists of determining the volume of resources that is equal in value to what the person received for those resources invested. The comparison happens automatically; after the communication is complete, the consumer knows if they are satisfied or not and to what degree. (See Chapter 6²²³). After the transaction, the consumer is able to assign a monetary equivalent to whatever they received and, if they wish, can signal that by paying a small fee to the supplier. This is the basic premise.

It may seem like it will be an uphill battle to convince people to report truthfully on their subjective assessments, especially when it requires parting with money, even that money comes out of a consumer surplus.²²⁴ However, there are ways to encourage the behavior. I went over the individual motivations and benefits in Chapter 6, but there are also social benefits that can be used so that online patronage turns into an accepted social practice.

This second volume is all about those social benefits. I intend to show how and by what means online patronage can become a tool for measuring the symbolic that organizes all other types of signals about perceived quality (likes, follows, reviews, etc.). Judging by the spread of donations in the gaming and music industries, the rise in content subscriptions, the boom among content creators, and other signs that I will point out later, things are moving in the right direction. But the conditions in which a new practice grows matter, and I'm afraid that without some kind of assistance this particular practice will grow up weak

²²² It costs almost nothing to reproduce digital content, and prices are set in batches so that for each individual unit of a product the buyer only pays some weighted average, usually an insignificant price.

²²³ Every viewer knows if they liked a film or not and can express that as an assessment. This seems obvious now, but 20 years ago that was not the case. To verify this ability to review films, I conducted experiments in cinemas and theaters in Moscow. See Dolgin A., *The Economics of Symbolic Exchange* (2009).

²²⁴ Consumer surplus is amount by which the utility a consumer receives from buying a product exceeds the price paid for the product.

and distorted. The institutional innovation I am about to describe will act as a growth hormone for the practice of donations.

This chapter and the previous one are concerned with the theory behind how to measure non-utilitarian goods (Chapter 5) and the theory of gifts (Chapter 6). Donations belong to both: they are the elementary transactions underlying such measurements, and at the same time they are acts of symbolic exchange that are organic to human nature. At this point, we have, first of all, an understanding of the goals of measurement and, second, a tool that could be used to set up those measurements. This is in theory. Now it's a matter of practice: how to make donating become the norm.

While the number of people who make donations is growing, the total is still no more than a few percent of the population. Based on statistical evidence from the gaming industry, Patreon, and other crowdfunding platforms, some believe that this is the upper limit; the idea that we have reached a ceiling aligns with the idea that nature produces a limited number of altruists, which naturally limits the potential of donation practices.²²⁵

These assumptions, however, are false. Nature does not prescribe higher forms of behavior; they can arise and unfold in response to institutional incentives, both economic and cultural, formal and informal. Today, the people who make donations are those who are open to their own internal impulses to do so. Tomorrow, when additional motives are identified, others will follow their example. The day after tomorrow, even more considerations will become evident and we will see another wave of joiners. The reactions will match the incentives. Behavior that is stimulated strongly enough and for long enough becomes the norm. Once it becomes fashionable, accepted, and practically useful to make donations, large numbers of people will start donating.^{ciii} They will wonder how they went for so long without seeing the obvious and thinking that a perfectly natural practice was marginal.

History is full of sacrifices, gifts, reciprocal acts, and Veblenian conspicuous consumption. This much we know. But we ignore this in our private lives and fail to realize that almost every communication act in everyday life is flavored with altruism, whether it is directed at our loved ones, forced by considerations of common decency, intended to further intrapersonal exchange, or a mishmash of all of these elements. People are altruistic when they buy luxury goods and when they buy Teslas. In essence, they are making donations when they chip in for a rare copy of the US Constitution or for Dmitry Muratov's

²²⁵ Sociobiologists have made well-known statements that, sketchily understood, could lead to this conclusion.

Nobel Peace Prize. They are altruistic when they race to buy NFTs and when they make merch for a favorite artist. All these are acts of conspicuous consumption or personal investment. They are unnecessary and excessive when viewed primitively, but in reality they are functional.

Veblen discovered the mechanism behind such behavior,²²⁶ and with the growth of prosperity it has become the domain of more than just the wealthy. The exchange of gifts and personal investments lies at the core of human relationships. Like the rudder of a boat, gifting is a small thing that keeps us heading in the right direction. How much people give each other in exchanges — whether they give equally or give more or less than what is accepted — sets the vector of their relationship: trending up, trending down, or neutral.

To one degree or another, we all possess and use this signaling technology without considering ourselves to be among the unknown percentage of altruists. We do, however, follow the altruists when we are guided by the laws of symbolic exchange. Otherwise, we would not succeed as social animals and there would be no society. It would crumble without the connections, mutual understanding, and trust that are born in games of exchange. These rules are implanted on us from early childhood and can be followed without rationalizing, but adapting them to the online world requires thought.

The rest of this book concerns how we can put in place a functioning system of incentives. I can say up front that doing so will require that public status and reputation become institutions. Competition for status is the key to the internet of the future, including three varieties that will be discussed: the cryptographic web (blockchains), the metaverse, and the semantic web.

CHAPTER VII.

THE RISE OF DONATIONS

7.1. FORMALIZATION OF THE TASK

The target state is for people to give reciprocal gifts to others through post factum online payments for non-utilitarian goods, whatever those goods may be. Each person can be both a sender and a recipient of donations, and the key condition is for these transactions to be convenient: anyone ought to be able to make a donation at any time, for any reason, and to anyone or anything. This is already technically feasible; the desire to donate is all we are waiting for, and the catalyst for that desire is what happens with the information about donations sent and received: how is it processed and used?

A necessary condition for the market to be able to measure the value of information products is that there be sufficiently high-density signals in the form of payments and donations made after purchase. Let's estimate the required density. Worldwide, digital content generates revenue of \$1.5 trillion per year; if we add a margin, that is \$2 trillion (see Section 1.5). A relatively small percentage of this content is worth assigning values to. Practice will show the exact percentage, but my upper-bound estimate is no more than 10% and likely closer to 3–5%. In other words, we are talking about valuations for products worth \$200 billion (10% of 2 trillion). Certification usually costs around 10% of a product's cost, or \$20 billion per year, which gives us an idea of the necessary scale of the donation practice.

This is not an exorbitant amount; calculated per capita for the working-age population of the planet, it comes to \$5 per year. Let's look at this from the other side as is customary when performing an assessment. Non-utilitarian spending falls in the \$30–40 trillion range each year; if we assume that 1% of that amount could go to donations, then the potential for signal-providing gift payments is in the hundreds of billions.

We can't expect every last person to allocate a percentage or so of their non-utilitarian spending to donations, but for our purposes even tens of billions would be sufficient. (For comparison, brick-and-mortar charities supporting culture and the arts are estimated to bring in \$120 billion per year,^{civ} and this is only the lawfully reported donations — including informal donations would push that number even higher).

There are about 300 million wealthy people in the world (of those, more than 60 million are millionaires, and by 2025 their numbers will reach 90 million (Fig 7.1); if each of them donates \$100 a year, that already provides the amount we need; the wealthy are not the only ones able and likely to donate, however, and their total contribution might not even be the most significant.

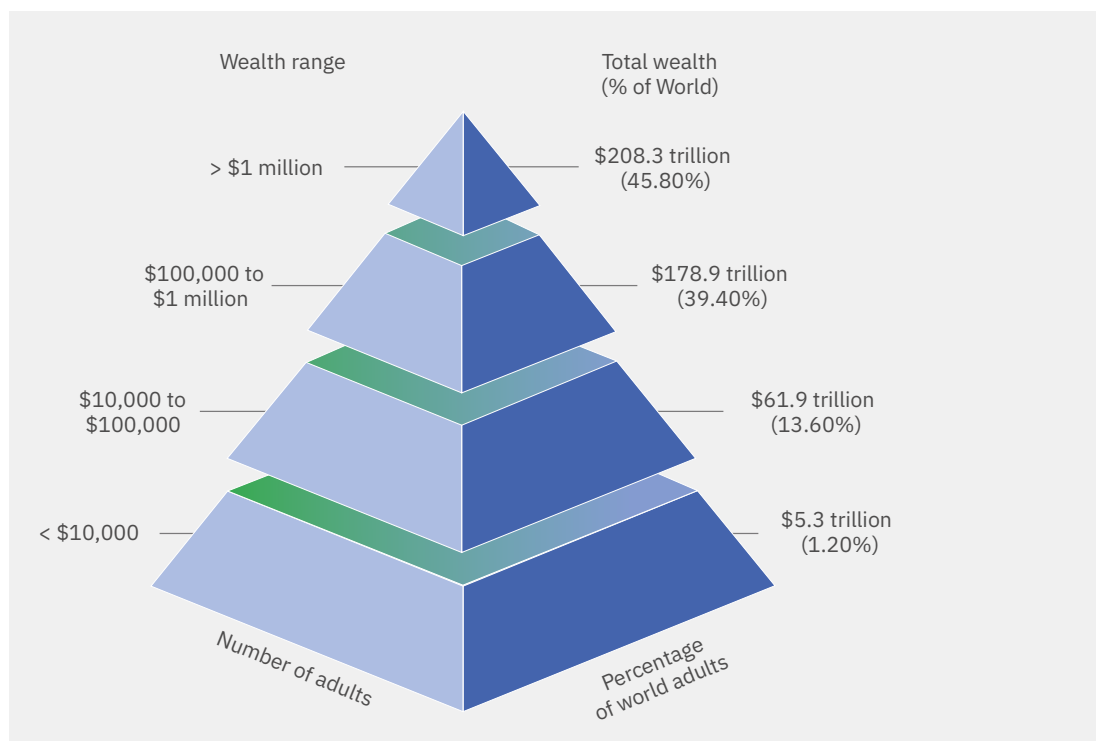


Fig 7.1 | THE GLOBAL WEALTH DIVIDE,
2023 ACCORDING TO THE GLOBAL WEALTH REPORT, CREDIT SWISSE

These estimates give us an indicator: the goal will have been met when donations reach this amount worldwide. And remember, we are not starting at zero: in early 2021, people donated several billion dollars in response to content. The task is to grow this by an order of magnitude.^{cv} Donations have been gaining momentum, slowly but surely growing every year. The pandemic sped things up, and at the current rate it wouldn't be surprising to see tenfold growth. Unless the process stalls out — and there is no evidence that will happen — the transition to donation-based value signals for content will be complete within five years.

In the next sections, I will outline the possible scenarios and demonstrate that competition in the internet will be the engine driving this process.

7.2. A LOOK BACK AT THE HISTORY OF DONATIONS

Where did donations come from, and how did they reach their current scale? The ancestor of donations is tipping, an accepted practice across a range of over 30 professions (in the United States, restaurant wait staff alone earn tens of billions a year in tips²²⁷) that eventually bled over onto the internet. In the early years, there was no legal certainty about property rights on the internet, copyleft was not considered a utopian ideal,²²⁸ and the gaming and software industries were still in nascent form. Enthusiasm drove content creators to make their work available for free use. Earnings were not the primary consideration. Software engineers were driven by game-like motivations, including the desire to learn and work with interesting people.²²⁹ Communities were emerging everywhere — such as the one around Linux — and it was not clear what all these assemblies of geeks and nerds would lead to.^{cvi}

²²⁷ \$27 billion in the early 2000s. For an overview of tipping, see: Azar O., *The social norm of tipping: A Review, 2002*, and Lynn M. et al., *Consumer Tipping: A Cross-Country Study (1993)*.

Tipping has been explored in hundreds of papers. Michael Lynn, a onetime bartender and later a Ph.D. in social psychology and world expert on tipping, maintains a bibliography of such studies. Lynn M., “*Tipping in restaurants and around the globe: An inter-disciplinary review*”, in *Handbook of contemporary behavioral (2006)*, 626–643.

²²⁸ Lessig Lawrence Free Culture: The Nature and Future of Creativity, 2004.

²²⁹ Raymond E., *Homesteading the Noosphere (2000)*.

Raymond, a hacker and the visionary behind Open Source Initiative, published a manifesto. Raymond E., *The Cathedral and the Bazaar (1997)*.

Suehle R., *An anthropologist's view of an open source community (2011)*.

Instead of taking off right away, the process smoldered like a peat bog while quietly gaining strength. Then the legendary Napster burst on the scene, bringing music into free circulation,²³⁰ followed by peer-to-peer networks for sharing movies. Crowdfunding platforms and free video games were both milestones on this path. The internet slowly began to master the moral economy. In those same years, we began seeing scholarly articles about gifting behavior,²³¹ and an online version of the street musician business model (Street Performer Protocol)^{cvii} arose and was adopted by crowdfunding. Perhaps the decisive contribution was made by gamers.

The first games in the 1990s were fairly basic.²³² It was easy enough for a single person to build one and distribute it as donationware/beerware or Free-to-Play with the understanding that users might choose to thank the developer by donating a couple of bucks to their beer fund. Companies noticed that these types of games were popular (they did not require powerful computers, so anyone could play them) and turned appreciation into a business by selling ammunition to gamers so they wouldn't get stomped while learning the games. This was shrouded in a veil of reciprocity, because ammo and the like were supposedly a way for developers to thank their gamers for donations.

This reciprocal norm that donors would receive something “tangible” in return for their support then migrated into business models based on online donations. The recipient essentially returns part of the donation, while the donor receives a partial refund in the form of attention, traces of the creator's aura, and other things reserved for the select few. In this context, the altruism is less pure, but the rules of social exchange dictate that one gift deserves another. (See Section 6.1.2 for more on the metaphysics of the gift.)

The \$0 price tag triggered the giving instinct and became a gold mine. Many players felt that their unearned game status was partially offset by their donations to game developers. Over time, there was less altruism in games. The idea was mercilessly exploited and reached the point of gameplay barriers, or paywalls²³³,

²³⁰ Founded by Shawn Fanning and Sean Parker, Napster revolutionized the music industry and in many ways predetermined the future of the consumer internet.

²³¹ Azar O., *The social norm of tipping: A Review*, 2002.
 Park L., Troisi J., Maner J., “Egoistic versus altruistic concerns in communal relationships”, in *Journal of social and personal relationships* 28(3) (2011), 315–335.
 Robinson J., *Green Egoism Anarchy* (2005).

²³² Examples of this genre: Earth 2025 (1996), Hattrick (1997), Terra Est Quaestousa (1998), Planetarion (2000).

²³³ In the gaming industry, paywalls do not prevent all play; instead, they create a barrier that players must pay to cross. Paying is not required, but users stay on the same level until they pay to pass through the paywall barrier.

that could only be removed by pulling out a credit card. There is nothing voluntary about it. That said, the gaming industry did popularize donations, and — in reborn form — they served as a transition to the types of donations that we see people making now.

And then Asian developers made a breakthrough.^{cvi} Their sales were being held back by piracy and poverty, so they took the donation business model — handed to them on a silver platter and already tested in F2P games — and transferred it to massively multiplayer games.²³⁴ While focusing on this type of monetization, Asian developers supplemented it with elements of roulette. Their innovation was loot boxes, or virtual treasure chests that operated like the slot machines in a traditional casino.²³⁵ A player can pay to open the box and take the item inside (frequently of low value; valuable items are rare). This approach tapped into players' dopamine responses just as science instructs, further enhanced by the seemingly random nature of luck. The excitement of the game was heightened by the excitement of a casino, and free games began bringing in more revenue than the paid ones.^{cix}

In the late 2000s, the game developer Zynga Inc. adopted the loot box approach and was soon earning \$50 million or more a year on in-game purchases. Other developers followed their lead, and in the 2010s this kind of game monetization became permanent.^{cx} Players were ever more skillfully drawn into addiction,^{cx} giving rise to heated discussions about business ethics. In the end, however, one thing is true: the video game industry operates like a traditional casino, only there's more money in it.

In-game donations have historical significance because they are the means by which people got used to paying for virtual goods. The gaming industry was able to grow the programmers' first, tiny seedlings of altruism into an original business model that ricocheted into the online reciprocal economy and is now taking over music, journalism, podcasts, and all the other content industries. In turn, the crowdfunding platforms Kickstarter, GoFundMe and Indiegogo provided an institutional response to the needs of the non-utilitarian economy and further encouraged the practice of online support. Patreon arose on the wave of crowdfunding, building the world's first donations-based business. Their initiative is worth a closer look.

²³⁴ Dixon C., *"Lessons from the PC Video Game Industry"*, Medium (2015).

²³⁵ Lootboxes are virtual containers that gamers can open to discover loot, a random assortment of objects with a range of values and functions. Loot can be used or sold, and whoever created the loot — often other users — receive a percentage of the profit. According to PC Gamer, the first lootboxes were used in the Chinese online game Zhengtu Online in 2006.

7.3. PATREON. ENFANT TERRIBLE OF THE RECIPROCAL ECONOMY

More than one platform vied for the title of pioneer in crowdfunding for creatives. There was Jamendo, a donation collection service for musicians that never reached scale.²³⁶ Kickstarter could have become Patreon, but it didn't. Launched in 2013, Patreon was described as "Kickstarter for people who release stuff on a regular basis."²³⁷ The company's mission was to directly connect content creators with fans, saving them from "having to survive on digital advertising — an all but impossible task for most — or resort to one-time campaigns on sites like Kickstarter and Indiegogo."

The company grew this way for several years, drawing musicians, bloggers, artists, podcasters, and other content creators into its orbit and posting double-digit growth (which was not all that impressive considering the low starting point), but when its number of registered creators doubled to almost 100,000 in 2017 and vaulted by another third in 2018,²³⁸ everyone realized that they were seeing a new phenomenon. Around the same time, an offshoot of the donation model called News Revenue Hub was founded to clean up the field of journalism.²³⁹

Prior to these events, analysts had been skeptical about the donation-based business model, but they soon began to warm up to it. Ben Thompson, a top IT analyst and subscription news and analysis pioneer (he founded Stratechery.com), was pessimistic at first about monetization that pulled at the heartstrings. His initial reaction is to be skeptical of donations because of transaction costs and the difficulty of constantly finding new buyers for individual items such as news articles, but he is optimistic about the size of the paying market for content and Patreon's ability to match those people with content creators.

Thompson raises a number of points that deserve attention: 1) he asks how economically feasible it is to attract demand to isolated, non-serial content; 2) he states that each niche will be dominated by a few content creators, but that there are a vast number of niches available. 3) he expresses his doubts about the

²³⁶ In January 2007, Jamendo offered musicians 50% of revenue and advertising and almost 100% of listener donations. In 2016, Jamendo had 3 million users and paid \$1 million to independent artists.

²³⁷ These are the words of Patreon founder Jack Conte, who founded the company in partnership with Sam Yam.

²³⁸ According to data from Graphtrreon, the number of creators increased 105% (to 92,500) and another 39% in 2018 (to 129,000).

²³⁹ The News Revenue launched in the fall of 2016. It used a subscription model at first but later switched to donations.

business models' viability due to the free-rider problem (at the heart of the free rider problem is the tendency among some consumers of a social good to avoid paying for that good because they know it is subject to public access).

All three points (and several others that are no less important) will be the subject of careful analysis here. But in general, analysts' attitudes toward Patreon changed after it paid its creators a billion dollars. That took six years of work, but the company paid out the second billion five times faster (15 months later). By that point, the platform had 6 million patrons and 200,000 creators,²⁴⁰ but it was still too early to trumpet the arrival of a new reality. After all, Patreon had fewer than 100 employees and net revenue of about \$15 million per year.

But then the pandemic lockdowns hit, online services exploded, and Patreon grew right along with them. The platform was a good fit for performers, editors, and other content producers who were ready to take the leap with a new form of monetization. Furthermore, all the consumers who were stuck at home began redirecting a portion of their empathy online, which boosted non-advertising monetization by dozens or even hundreds of percentage points for many types of content (OnlyFans, Roblox, Cameo²⁴¹). In the first pandemic year, Patreon processed over \$1 billion and its own revenue exceeded \$100 million.²⁴²

The idea behind the service is altruism stimulated by privileges that are available in exchange for monthly pledges. There is nothing new here, neither in the idea of monthly pledges nor in the idea of directly connecting fans and creators. Nevertheless, Conte's achievement is impressive: Patreon, in gathering a critical mass of participants, pulled off a trick that no other company had accomplished before.²⁴³

²⁴⁰ See in Patreon's blog *Millions and Billions. Celebrating Patrons, Creators, and Major Milestones*.

²⁴¹ Cameo, a site where celebrities sell personalized messages to fans, announced that its clients spent \$100 million on personalized videos (4.5 times more than the year before that). Roblox lets users create games and earn money from them. With over 2 million active developers, the company paid out over \$320 million in 2020, causing its valuation to skyrocket to over \$62 billion at the end of 2021.

²⁴² Patreon is available worldwide, has market cap of at least \$4 billion, and is preparing to launch an IPO. Patreon was previously valued at \$1.3 billion, and based on that valuation the company was able to raise \$90 million in investments.

²⁴³ My own personal experience shows how difficult this is. Around the same time, I created an online donation service that did not take off. There could be many reasons for this, but the main reason was that the right conditions did not exist in Russia. They still did not exist in 2020 during the writing of this book. As far as I can tell, the situation has changed for the better as of early 2023.

Conte saw Patreon as a harbinger of the economy of the future and himself as its architect. In 2018, he predicted on Twitter that “there will be dozens of public companies that recognize ‘creators’ as their primary addressable market,” which will fulfill the dream of a web that showcases quality over clickability and empowers artists over dishonest attention seekers.^{cxii} Conte also foresaw that internet companies would fight over access to content creators’ compensation. Things are heading that way: one-time donations alone have reached a total of \$3 billion, and other companies looking for development drivers have noticed.

Donations are interesting not so much for the revenue currently being derived from them — which is still relatively small — but as a channel for monetizing the kind of content that does not fit neatly inside the advertising paradigm and which we see more and more of as it approaches the saturation threshold (and for other reasons) (Section 8.2). There are inspiring and contagious examples in the gaming industry and Chinese social platforms, which excel at utilizing tips (below I will consider the example of Tencent Music, Section 7.8).

Competition for donations is one of the levers of the reciprocal economy. Below we examine what forms that competition can take and what makes it realistic that we will reach the \$30 billion threshold for launching a system of value indicators for the symbolic, after which the internet will begin to highlight quality over clickability.

7.4. COMPETITION FOR SUBSCRIPTION AND PATRONAGE BUSINESS

Patreon has several groups of competitors that stand out (for us they are allies): 1) Facebook, Google, and other IT giants, 2) social networks both large and small, 3) players in the same or adjacent segments to Patreon and other donation services; Roblox, OnlyFans;^{cxiii} 4) content aggregators; and 5) payment systems, personal data aggregators, and blockchain developers.

Facebook/Instagram and Google/YouTube pose a credible threat to Patreon because creators’ audiences already have accounts with them. They also have the “one-click” advantage, which is decisive in the economics of attention, as well as other advantages generated by the size of their audiences.^{cxiv} Facebook followed in Patreon’s footsteps when Mark Zuckerberg announced that “[c]reators are right at the intersection of everything we think is pretty unique about

Facebook.”²⁴⁴ The Creator app (2017) and Facebook for Creators were conceived of as tools for developing fan bases around videos from top creators and could attempt to woo fans away from Patreon. At launch, Creator Studio did not have enough monetization options. Those tools appeared a year later, and Facebook was one step away from having an infrastructure comparable to the one Patreon had been polishing for years. (As of early 2023, however, Facebook has yet to reach its goals.)

Snapchat is another platform interested in accommodating celebrities. YouTube is working on the same thing with a relative degree of success.^{cxv} In parallel with Facebook and YouTube, other content streamers with non-advertising models for paying their creators are arriving on the scene. For example, Twitch has subscribers like YouTube,^{cxvi} and the blog platform Medium offers authors a share of revenue based on the amount of engagement (number of claps) their articles generate (and also encourages patrons to support creators). Streaming services for music (Spotify, Apple Music) and movies (Netflix, Amazon) may take up the model soon.

Patreon’s competitors may bite a chunk out of its business. Or they may, sensing a conflict of interest, cut off its oxygen by restricting creators’ ability to list Patreon links on their platforms.²⁴⁵ TikTok and OnlyFans are already doing this. Moves like this could cause an exodus of creators from Patreon, especially since many of its competitors already have access to the creators’ credit cards and bank accounts, and the cost of leaving Patreon may not be too high. Eric Peckham, writing at TechCrunch, believes that even if Facebook, YouTube, and other platforms release a weak set of features, Patreon could face “death by a thousand cuts.”²⁴⁶ What could the donation service’s counter move be?

²⁴⁴ Fidji Simo, Facebook’s former Vice President of Video, Games, and Monetization, explained that the goal was to offer a single location where users could manage their online presence on the go.

²⁴⁵ Patreon creators publish content on other platforms and bring those fans to Patreon using the Patreon API — this is a critical channel for attracting patrons. If partner platforms back out of their partnerships, Patreon’s creators will be hurt.

²⁴⁶ Cohen-Peckham E., “*The competitors of Patreon*”, *TechCrunch* (2019).

7.5. COMPETITIVE STRATEGY FOR PATREON

Let's recall why Patreon's fate matters. Patreon launched patronage in exactly the direction we want it to go. And, unlike its competitors, Patreon sees the monetization of gratitude not as one option out of many, not as the seasoning, but as the main dish. Promoting donations is a matter of survival for a donation service,²⁴⁷ and this has its advantages: Patreon is not trying to do too many things at once; it isn't burdened by unnecessary functionality; it isn't torn between various earnings channels; and it is less constrained by its users' habits — in short, it can be more agile than its competitors.

Here I want to build a model of what could happen next and share my thoughts on how Patreon can maintain its leading position. After all, what is good for Patreon is good for donations, and this case helps make my plan that much clearer. It is helpful to consider what strategy a donation service could adopt when facing competitors that are several orders of magnitude larger and already encroaching on its territory; it is also helpful to think about what steps the service should be taking and isn't.

7.5.1. Promising Functionality for a Donation Service. Patron's Dashboard

Let's start with what Patreon is already doing fairly well. It acts as a wallet and storefront for creators while also doing what it can to help them maintain their revenue-generating fan bases. Positioning itself as an automated talent agent (somewhat like software as a service (SaaS) platforms for business), it provides 1) crowdfunding (unlike the model used by Kickstarter, patrons pay to keep authors creating instead of funding specific projects); 2) payment processing; 3) community management. Further plans include developing "the world's best SaaS product for authors," moving into new areas,²⁴⁸ virtual reality concerts, ticket sales, and merchandising.²⁴⁹

Now let's look at where Patreon is failing and what could be done about it. While the company's current numbers paint a rosy picture, not everything is going according to plan and certain things need to change to ensure growth. Con-

²⁴⁷ Cohen-Peckham E., "The business of Patreon", *TechCrunch* (2019).

²⁴⁸ Patreon provides business infrastructure for podcasters, musicians, video content creators, artists, communities and associations, writers, journalists, game and software developers, non-profits, educators, comic book creators, cosplayers, and — of course — artists working in adult genres. Adult content makes up approximately one-third of the total.

²⁴⁹ Cohen-Peckham E., "The competitors of Patreon", *TechCrunch* (2019).

te's dream was to do away with the starving artist trope, but relatively few creatives earn a lot on the platform. Just three percent of the creatives who use Patreon make two-thirds of the money; the rest earn an average of \$180 per month, including donations from their own mothers.²⁵⁰

Essentially, the platform is streamlining the financial relationships between creatives and donors. Donor involvement is limited to picking a subscription plan and peeking backstage every now and then (this is a standard privilege for donors). In essence, it all comes down to providing a showroom; the range of actual options is meager. In theory, a donation service should allow donors to pay any creatives that want, whether or not they are subscribed to them; this, however, is not an option. Patreon does nothing to expose patrons to other creatives and their work, thereby confining them to whatever it was they came for. From the point of view of the platform, it has an interest in limiting patrons to the creators who brought them there. I'll explain why this is a little later; in any event, it is an unpleasant limitation.

7.5.1.1. On the Functionality of One-Time Donations

Likewise, there is no way on Patreon to donate to a specific work; the platform is focused on recurring subscriptions, so donations can only be made based on the totality of a creative's content and as an incentive for the future. This eliminates the present from the communication. But our attitude toward a creator's body of work and our assessment of a specific work are independent of each other. While it makes sense to provide ongoing support for an industry analyst or news reporter, that logic does not apply to a novice author. Subscriptions force content into a serial format that is valuable for its stability and the fact that it gives creators a predictable income. Businesses dream about subscriptions, that ideal cash cow, but subscriptions hinder development and reinforce the Matthew effect. (The Matthew effect is an important cultural phenomenon that we will be referring to later. In brief, it states that those who start with an advantage maintain that advantage, while those who start out behind end up ever further behind.^{cxvii})

Everyone says that subscriptions bring in more revenue than one-time donations. This opinion is the result of inert thinking; it reflects the reality of a point in time when industries and services were still moving online. That point in time is on its way out, however, and we are on the verge of changes that will be dictated by content industries' need for new sources of income, changes in labor

²⁵⁰ According to data from Graphtreon. Another source is Second Measure, which follows billions of transactions in the US: <https://secondmeasure.com>. Eric Peckham at Techcrunch provides similar data.

markets, and other circumstances. I will provide justification for this prediction below. For now, I want to point out that there simply isn't enough money in the content industries — much less than those who want and are able to create content for their own and our benefit will need in order to do so. And there's no rule that says a one-time payment has to be less than the cost of a subscription.

Let's look at a hit song, for example: *Only Love Can Hurt Like This* (2014) by Paloma Faith. I could be wrong, but something tells me that plenty of people would have made one-time donations in response to the song if that option was available. I don't know if the number would have been closer to one percent or five percent of fans, but the sheer fact that one-time donations are not possible deprives the reciprocal economy of millions — if not billions — of dollars. Given the fact that people experience strong impressions much more often than they experience attachments, how many of these situations are there?

Not everyone is inclined towards long-term relationships and commitments. The subscription model has a high barrier to entry for the growing creator class as well: it is hard for them to jump on the media conveyor because first they need a supply of products “in stock.” And remember that creators have dry spells; they run out of ideas; they get canceled. Should we subscribe based on their past achievements? There's also the issue of needing to “work off” the subscriptions: in exchange for patronage, patrons are given attention and extras, including responses to the questions they post. What happens to the lucky creator who rockets to fame and stable subscription earnings only to be faced with a mile-long list of questions from paying customers?²⁵¹

The subscription model can be hacked to approximate a one-time donation: for example, if you want to donate \$60, you can set a recurring donation of \$5 per month for a year. This blurs the quality of the signal, though, and you still have to remember to cancel the subscription later. Wouldn't that time be better spent considering who you donate to and why? In the end, much of the benefit of one-time donations comes from noticing the good things around you, realizing that you notice them, and remembering the feelings they inspire.

Let's turn back to the patron's dashboard, the place where they monitor their donations. This dashboard doesn't have to exist on Patreon. It could be hosted on another platform or — best of all — it could run on the user's device independently of any platform.

²⁵¹ A survey conducted by NeoReach in collaboration with Influencer Marketing Hub showed that the majority (91.7%) of creators communicate with fans multiple times a day. The responses of creators with up to 2 million subscribers are reminiscent of Alexander the Great and Napoleon Bonaparte, both of whom knew their soldiers by name.

The first item on my wish list for a donation dashboard is a search function for finding counterparts and people to donate to, as I mentioned above. I just want to add that the search function or QR-code should allow people to donate beyond the bounds of traditional content creators. Think dentists, baristas, carpenters, taxi drivers, bus drivers, companies, brands, social movements, political parties — anyone with a wallet in the system.

The next item on my wish list is a way to save transactions and view them in a wide variety of analytical cross-sections and visualization formats. We have already considered what this would give us and how it would encourage self-reflection (Section 6.1); it would also create a financial line in the sand. Philanthropists, especially inexperienced ones, are at risk of unwise spending. Even people who are normally cool-headed risk getting burned in the exciting process of giving away money. A good dashboard needs a budget function so people can limit donations to what they can afford: for example, \$2, \$10, \$100 or \$1,000 per month. (Once you set your budget, you would be able to give feedback as usual, using points or stars, and a calculator would translate them into money.)

I'll stop my list here, but if I kept going I could think of enough useful functions for ten donations dashboards. (Take, for example, the option to see how much and to whom others donate.) Of the many things that could be added to gift transactions, I will limit myself to a discussion of the topic I started with — a recommendation function.

7.5.1.2. About Recommendations on Patreon

Why don't donors see other content when they arrive at a favorite creator's Patreon page? Back in 2014, Patreon did just that, increasing engagement by making it possible to reward individual products. Exposure to similar content helped donors find new creators, which, in turn, made it possible for creators to break through and reach Patreon's mission of freedom from the need to survive. It was a wise strategy. Ben Thompson and Bill Bishop discussed this topic in an interview concerning Substack: "[The way to grow is by] helping existing authors build the network effect where you start seeing some crossover from one newsletter to the other. They [Substack] need to do more around discovery [of new content and creators], they need to do more around building that virtuous interaction where once you're on Substack, it's easier to then subscribe to other Substacks."²⁵²

²⁵² See an Interview With Bill Bishop about China (2022).

But Patreon got tangled up in a conflict of interests: creators are the ones who bring their fans to the platform, so naturally they would prefer that the platform not direct those fans to other content whose creators will reap the fruits of their efforts. Finding patrons is no simple matter. Creators have to buckle down on social media to spread the word about their Patreons, doing the online equivalent of posting signs on telephone poles; in short, self-promotion is hard work. But donors are unreliable and prone to spreading their donations around. Fans with cash are like firewood in the prairie: if you have enough to build a fire, it's risky to let strangers near it. So when successful creators complained, Patreon retreated and made the subscription option with a fixed monthly payment the default setting.²⁵³ By giving up on one-time donations, the platform lost out on the positive cascade effect that could have grown its client base.

The Matthew Effect was not far behind. Patreon followed the lead of the top percentile of elite creators. These are the people who bring the platform money and fame, but are also less dependent on the platform for survival. This allows them to veto any plans by Patreon that would threaten their status quo. This is what happens when an established client base and its revenue is protected from competitors.

Of course, the platform could just continue being a landing page for hot leads (collecting the contact information of interest parties) and a place to host wallets, while promotion is the responsibility of the wallets' owners. There was logic in this position back when Patreon was still weak on its feet, but it has grown too much to continue to depend on the mood of its upper echelon of creators. And top creators are no longer as likely to rebel because they understand that popularizing the practice of online donations will give them a share of an ever larger pie. They also realize that they are competing not so much with each other as with all the other things that attract people's attention.

It is time for Patreon to return to its original mission of elevating all creators. If it doesn't, it will have to give up its claims to leadership; after all, there are plenty of places to keep a wallet. To connect participants on both sides of the donation transaction, Patreon needs to master new forms of interaction and involvement; they can only rely on content. Explaining the company's strategy in 2014, Conte said, "Think about why people love and share something online. It's because of the content. We wanted to showcase what the artists were doing in-

²⁵³ By 2015, approximately 80% of content creators were using the monthly pledge model that now defines Patreon's business model. (From an interview with Patreon CTO Sam Yam.)
 Cohen-Peckham E., "The product of Patreon", *TechCrunch* (2019).

stead.”²⁵⁴ Yet the platform’s most recent step in this direction was the release in 2017 of the Patreon Lens app (a copy of Snapchat Stories and Instagram Stories) that let creators share behind-the-scenes videos with the patrons.

Competition is doing its job, and other players are adopting Patreon’s best practices. YouTube offers a subscription option, as does Facebook. Twitter, which has rested on its laurels for the past fifteen years, finally started engaging with communities, mastering the subscription business, and offering authors Patreon-like functions through its acquisitions of Revue and Scroll.²⁵⁵ Non-advertising monetization is now part of the strategy for many players in the entertainment and media industries.

If it doesn’t want to fall behind, Patreon needs to recharge its content and community efforts, and there’s no better way to do that than with recommendations. True, recommendations are everywhere today; true, Patreon is in many ways objectively inferior to other players. But this is where it can shine. This is where it holds the trump cards. While we believe that the algorithms know everything about us and offer up good suggestions, this is not the case. To some extent this is dictated by the compromise between recommendations and clickability,^{cxviii} but by definition this problem cannot affect a donation service.

Patreon’s most important asset is an active audience that is readily interested in useful recommendations. At the same time, we have to remember that there is no such thing as “the best” recommendation. Content needs to fit in the context of perception, mood, and level of interest; this is not a problem that can be solved through mathematics, which is already being utilized to the maximum.^{cxix} It’s a matter of getting people to use settings. Most people are not ready for that,²⁵⁶ but donors are. Patreon could use this engagement to its benefit by introducing conditional recommendations.²⁵⁷ While its users would have to put in effort to set their filters just right, Patreon’s users are more advanced than the average so the process would be a joy rather than a burden.

²⁵⁴ Buhr S., “Patreon Raises \$15 Million Series A, Revamps Site To Focus More On Content”, *TechCrunch* (2019).

²⁵⁵ Twitter acquired Scroll, a service that offered a way to “...read articles without the ads...giving people what they want: just the content. Meanwhile, publishers who work with Scroll can bring in more revenue than they would from traditional ads on a page. It’s a better Internet for readers and writers,” Mike Park, Twitter VP for Product explained in his introduction to the service.

²⁵⁶ Algorithm developers are focused on one-click service, since the vast majority of consumers never even bother to give a “like,” much less a rating.

²⁵⁷ It is worth noting that the ability to filter content using multiple criteria simultaneously — an obvious and easily implemented function — is offered by relatively few websites. When looking for TV series, for example, you can sort them by genre, year of release, country, and rating, but not all at the same time.

A dashboard and recommendations would both deepen and widen the stream of the reciprocal economy. Patreon may have dug the bed of the stream, but it's going with the flow instead of pursuing its life's work, its mission. So far we have been talking about the individual motivations that play a role in patronage, but now it's time to take a look at the social element and how it relates to trends in internet media.

7.6. SOCIALTAINMENT. HIGHLY COMPETITIVE SOCIAL TOURNAMENTS

7.6.1. Vectors of Development for Social Media and Entertainment

There are many ways of explaining how the internet got to where it is today and how it will change in the future.²⁵⁸ I base my understanding of this topic on dynamics in higher-level needs: businesses work their way through consumer demand as they move from the bottom to the top of Maslow's levels of needs. Why is this the case, and what does it mean?

In the first volume of this book we saw that the lower levels of Maslow's pyramid represent significantly more money than the higher levels. For internet businesses, this means that the lower levels represent more purchases and more advertising, hence the sequential development of advertising layers, starting with those where the most attention is concentrated. Attention can be either general or specific; put simply, it can also be expensive or cheap, as the views and clicks of people at different status levels have different conversion rates.

The link between content and return on advertising is complex, and the process of converting views into money is mediated by consumers' cognitive characteristics, tastes, and other qualities, as well as their solvency and suggestibility. Advertisers glean these details using a mix of automation and intuition. Other things being equal, the online locations where people discuss food, clothing, and travel are the best locations to advertise food, clothing,

²⁵⁸ Li R., *Network 2030 A Blueprint of Technology, Applications and Market Drivers Towards the Year 2030 and Beyond*, ITU Telecommunication Standardization Sector (2019)

and travel. These locations get developed first. Gathering places for fans of Walter Benjamin and Macintyre are last in line for functional and other improvements.

Just as different levels of needs get developed from bottom to top, the layers within those levels are developed from the simple to the difficult, from mass market to niche and complex. The lower a user's financial and symbolic status, the lower, on average, both the alternative value of their time²⁵⁹ and their aversion to advertising will be. While such consumers are not demanding with regards to content, at some point they get bored with the same old thing and become open to trying something new. Businesses that aren't hungry can get stuck^{cxx} and miss this change; for hungry businesses, however, it's a window of opportunity.

The "new thing" could be almost anything, but activity is key. Social networks, content platforms, video games, sports betting, and porn all show a tendency to increase users' repertoire. Internet entertainment and media have always pursued interactivity, participation, involvement, complexity, and variety of activity in real life, and this is the vector they will continue to follow.

The lens we used in Section 1.6 to differentiate between modes of user activity will come in handy here. As we noted in that chapter, the distinction is arbitrary and the border is blurred and yet perceptible. In the first case, consumption comes down to perception and experience, and the entertainment and media industries are fully exploiting this mode. The creative element is limited to written reactions, but only 1–2% of users engage; the rest are content with interjections. In the second, active mode, users actually make something "by hand:" selfies on Instagram, videos on TikTok, and programs on Roblox; they make game props, costumes (cosplay), and more. This is where the future lies: creative consumption and the competition to satisfy creative desires are what drives the entertainment and media industries.

7.6.2. Involvement in Other People's Lives: from Vertical to Horizontal Activity

How should Patreon follow this vector? It set up communication between creators and donors based on an understanding that donors are almost more willing to pay for communication than content; it also created varying levels of access to creators

²⁵⁹ By analogy with the opportunity cost of money in economics, the opportunity cost of time is the cost of goods that a person could have received but did not receive because they chose to spend time on something else.

based on donation size.²⁶⁰ The next step in this direction is first-person commentary at the location where content is being created. In the world of online chess, grand masters accept challenges from users of the chess24 platform and comment on games. The same is true in other sports, as well as in cooking, education, and training. While this is a breakthrough in the transmission of tacit knowledge and similar master classes — of which our education system has an acute shortage — donation services have only limited capabilities in this area.

And finally, the highest level is not just watching and listening, but interacting side by side. Amateurs can compete in the ring with legendary fighters,²⁶¹ saunter down the catwalk, act in a skit, blast off into space, or spend time in prison. At Tencent Music you can sing a karaoke duet with your idol.

Collaboration between amateurs and professionals is a vertical activity. Horizontal activities are also on the rise. Web 2.0, for all its interactivity, doesn't offer much in the way of collaboration: there is plenty of written communication and content, but relatively little creative activity. And then we have TikTok.

TikTok did with videos what Instagram did with stories copied from Snapchat and OnlyFans did with porn studios: these and other platforms gave users relatively simple tools for creating products, thereby opening up an outlet for the creative energy of the masses.^{cxxi} Some say that Uberisation isn't turning TikTok into a social network, but I would say it already is one. The video platform gives users access to every studio at once. A user may be far from star level, but they still have access to an entire library of roles and plots; TikTok is the perfect place to pick up tricks from other creators and use them to raise your status in your own group. It's like taking someone who always dreamed of owning a motorcycle and showing them a workshop where they can build their own.

Until recently, entertainment and media only passively facilitated group activities. Today, however, everyone has their microscopes focused on Tencent Music because it sets the bar for socialization in an entertaining format.^{cxxii} The magnitude of the need for horizontal collaboration can also be seen in Clubhouse (2021). It didn't do much beyond establishing a format and branding itself as a location for clubs, but that was enough to attract millions of members and get a \$1 billion valuation. Analysts immediately declared Clubhouse a unicorn and predicted that it would be as successful as Twitch, the streaming plat-

²⁶⁰ This model has been built out, and it is unlikely that anyone will surpass OnlyFans, which occupies the "most penetrated" segment of the Internet.

Poleg D., "OnlyFans and the Future of Work", blog (2022).

Markus E., "The 'E-Pimps' of OnlyFans", The New York Times Magazine (2022).

²⁶¹ Floyd Mayweather vs Logan Paul.

form for gamers, but I think they spoke too soon.²⁶² For a voice communications platform to be successful, users have to be able to find conversations they want to join without wasting time on the search. Clubhouse doesn't offer that. If it doesn't build a search system like the one used by its competitor Stereo,^{cxxiii} then the public will move on to any of the other options that are cropping up.²⁶³

Today, the most interesting developments in online information and entertainment are happening at the intersection of collaboration and non-advertising monetization. User activity growing in two main directions (with creators and with fellow users), and there are two forms of monetization that don't involve advertising (subscriptions and one-time donations). What is Patreon doing? In both cases, it is only doing half the work (in the first case, by neglecting communities, and in the second case by neglecting one-time payments). It also has problems with monetization by subscription. Industry sites are biting chunks out of its donation business. Let's look at this issue using the example of written texts.

7.7. COMPETITION IN JOURNALISM

There have always been users who preferred to pay and read without advertising. Social networks directly linked the demand for content with its supply, but in the early years advertising was the only form of monetization, and the platforms retained a significant portion of the revenue it generated. Founded in 2017, Substack started to change that paradigm by giving authors the infrastructure they needed to publish on subscription terms.^{cxxiv} The idea is that if millions of people read an author in popular media outlets such as The New York Times, then some of those readers, perhaps 10,000–20,000 of them, will follow the author wherever they go, and if each of them pays \$5 or \$10 a month, then the author will earn a significant income. Moreover, Substack offered a much more attractive revenue-sharing model than traditional media outlets (it keeps 10%

²⁶² Sadly, what was a presentiment in March 2021 soon became reality: soon after its splashy launch, Clubhouse's popularity took a nosedive. Since May 2021, articles have appeared in global media to the effect that social media is dying and that we've passed the point of no return.

²⁶³ I wrote this right after Clubhouse launched. At that point, Telegram, Twitter, Facebook, Spotify, Reddit, and Discord, all had an eye on its niche due to the simplicity of the app. A year later, it was obvious that Clubhouse hadn't taken off.

of revenue, while payment processor Stripe takes another 3%).^{cxxv} It was soon followed by Twitter, which acquired Substack's competitor Revue.^{cxxvi}

These innovations have created a new competitive landscape in journalism and blogging that operates in favor of the reciprocal economy. The ethical landscape is also interesting. By collaborating with Substack, well-known authors can expect to earn many times more than what traditional editors can offer them. Ben Thompson interprets this approvingly as a fair move by the market to upgrade its valuation of authorial potential. It's a tricky moment: the valuation looks not only at the author, but also at a brand nurtured over decades, professional knowledge, and other factors. And there is no such thing as a fair price for a new product.²⁶⁴ But, in all honesty, would authors be able to pick up 10,000 subscribers if it weren't for the millions of people who read them when they worked in traditional media?

Columbia Journalism Review and The New Yorker are less than enthusiastic about Substack, now that they "have [begun] to appreciate how destructive this new reality will be." Their feelings are understandable. Traditional media have only just figured out online, they have only just managed to put together a subscriber base that allows them to make ends meet, and now that audience is being taken away by none other than their own trainees.²⁶⁵ Anna Wiener wrote in The New Yorker that "...a cultural turn toward journalistic individualism might not be in the collective interest."²⁶⁶ Her primary concern is for the accuracy of information. She worries that a solo journalist is a poor fact checker, as opposed to editorial boards — and their vigilant lawyers. This may be true in theory, but not in practice. This may be true in theory, but in practice it's more about selecting and presenting facts than fact checking.

After a while, perhaps a year or a year-and-a-half after leaving the editorial office, an author's reputation capital is amortized (depreciates). Cast off from familiar shores, the author has to stay afloat without that same editorial support that was taken for granted and often underestimated. They now have to recreate their own editorial office in miniature and, perhaps, get into arguments in it; eventually they realize how much things cost in business. Some author — the ones who develop a talent for management — will succeed in this role. Floation, the process of the best rising to the top, won't take long. The result of all these ups and downs will be a disaggregation of the media. It will look something like recrystallization in heated metals, when new, more desirable grains

²⁶⁴ An auction would be the only way to find the fair price. And since journalistic skill is not covered by patent law, its ownership is difficult to determine.

²⁶⁵ According to this survey conducted by Richard Fletcher, more than one-third of people cite a particular journalist as the reason they subscribe to a publication.

²⁶⁶ Wiener A. "Is Substack the Media Future We Want?", *The New Yorker* (2020).

appear and grow at the expense of large, flabby, less agile grains, eating them up and replacing them to form a finer cell structure. Then the new cells become larger, and after a while the process can repeat itself.

Will the new media reality be illusory and destructive for editorial publications, for the entire information space, and for all of us? Or will it be constructive? This is, among other things, the question of post-truth, selected as word of the year in 2016 by the compilers of the Oxford English Dictionary when it became a weapon of social and political warfare.^{cxvii} In the conflict between Substack and other services on the one side and traditional media on the other side, we are primarily interested in non-advertising monetization as part of the reciprocal economy, but it is worth recalling that post-truth is the product of adverse selection²⁶⁷ and that the antidote to it are institutions of reputation (Section 5.10). Since traditional filters can't cope with the flow of information, all our hope is in subscriptions and donations. Authors who switch to these models care about their reputations above all else (for more about this, see Section 8.2.2).²⁶⁸

Be that as it may, competition will tally up the pros and cons of the new configuration in journalism. In any case, the fight between traditional media and platforms like Substack pales in comparison to the passion economy (as venture capital firm Andreessen Horowitz called Substack, which it helped fund²⁶⁹), which is red-hot where everything else is slowly but surely dying out. And it is nothing in comparison with the tectonic-scale institutional shift it marks — a shift that changes the landscape not only of business, but also of society and culture. Direct payments to creators lead to fundamentally larger pools of money and, more importantly, indicate that money's measuring function is being applied to the symbolic, which will result in the building of hierarchies and everything that follows from them.

I used journalism and blogging as an example because, with rare exceptions, advertising-based monetization never generated enough money in these segments, and it is not surprising that the dam broke where it was thinnest. Written texts are being created just as they always were, but the factors of production are constrained by the limitations of the business model. Substack, whose founders are against journalistic content being given away for free, is betting that the “factors” — other-

²⁶⁷ If you recall, adverse selection kicks in whenever the consumer has significantly less information about quality than the supplier (what we call information asymmetry).

²⁶⁸ Substack is not the only site to rely on subscribers; both *The New Yorker* and *The New York Times* — which leads the field by number of subscribers — use the subscription model.

²⁶⁹ Li Jin, a former partner at Andreessen Horowitz, called this the “monetization of individuality.”

Li J., “*The Passion Economy and the Future of Work*”, Andreessen Horowitz (2019).

wise known as authors — desire self-realization. Thanks to Substack and others like it, authors can earn more than they ever would from advertising and more than they would in traditional media: 1,000 subscribers bring in about \$100,000 a year.

As we shall soon see, what I said about blogging applies to podcasts, as well. The same goes for online courses and webinars, one-time digital downloads of books and audio (a service offered by Podia), and anything else there is demand for.

7.8. MONETIZING MUSIC

All of this holds true for music. Tencent Music Entertainment Group, which controls three-quarters of China's music market, reports that just 4% of users bring in 70% of revenue when they pay to give each other virtual gifts, listen to live concerts, and access premium karaoke instruments (the remaining 30% comes from subscriptions and music and advertising downloads). Tencent is a leader in the direct payment economy: it doesn't just sell music — it sells engagement with music.^{cxxviii}

Piracy doesn't significantly affect the ability of western companies (Spotify, Apple Music, Amazon Music, YouTube Music, Pandora, iHeartRadio, Deezer, and others) to make money on subscriptions. But unlike video streaming services like Netflix, Hulu, and Amazon Prime Video, music streamers don't have exclusive content to offer; they have to monetize the same library of tracks that they license from the major labels. It makes no sense for a user to pay for more than one music subscription (except to compare their recommendations and music creation tools), and almost the only way to compete is for services to include social actions in their subscriptions.

Spotify, however, chose not to do that.^{cxxix} Tencent Music is able to base its business on Asian cultural traditions, of course, but it was Tencent, not Spotify, that invested in the California-based karaoke app Smule, which now boasts 50 million subscribers. Eric Pekham, who used to write at Techcrunch.com, believes, and I agree with him, that "...building out more social interaction around music will be critical to it in escaping the race with Apple Music and the rest."²⁷⁰ But this is about more than the race. Music is an important part of life, but there is a lot of music out there and not much money in the music industry: streaming brings in less than \$20 billion per year.

7.9. CREATORS GAINING AUTONOMY

Creators, more than anyone else, value their independence. Outsourcing of management and support functions has become so sophisticated that a creative or creative team can hire third parties to handle the non-core parts of their business, retaining the production, creative know-how, and publicity. A blogger, commentator, or analyst no longer needs to cooperate with companies like Substack, Revue, or Ghost that have a light touch with their commissions. Instead, our author can purchase the services they need from third parties and add them to their own website; the first person to do this was Ben Thompson, the IT commentator whose blog *Stratechery.com* was a prototype for Substack. Dan Frommer did the same thing with his newsletter *The New Consumer* on e-commerce, consumer brands, and marketing. In time, business will further simplify the “business-building kit,” just as the DIY movement, IKEA, and 3D printing have done for offline projects.

Creators have gained autonomy in stages. During the first stage, social networks solved the problem of creators’ (in)significance and their resulting dependence on producers who dictated what content to create and for whom. The result of the second stage was the monetization of audiences: influencers converted attention and trust into money, which they received from brands in return for promoting products and services (called influencer marketing). The third stage, which has just begun, is the emancipation of creators from platforms as they transfer the fans they have accumulated on those platforms to their own websites. By doing so, they reduce platform risks (dependence on functionality, price hikes, and the like) and move toward becoming companies with multiple income streams in addition to advertising.^{CXXX}

- Direct sales of content
- Paid subscriptions
- Tips
- Product placement
- Merchandising
- Personalized services
(personal messages and public mentions)
- Live and virtual events
- VIP meet-ups
- Fan clubs

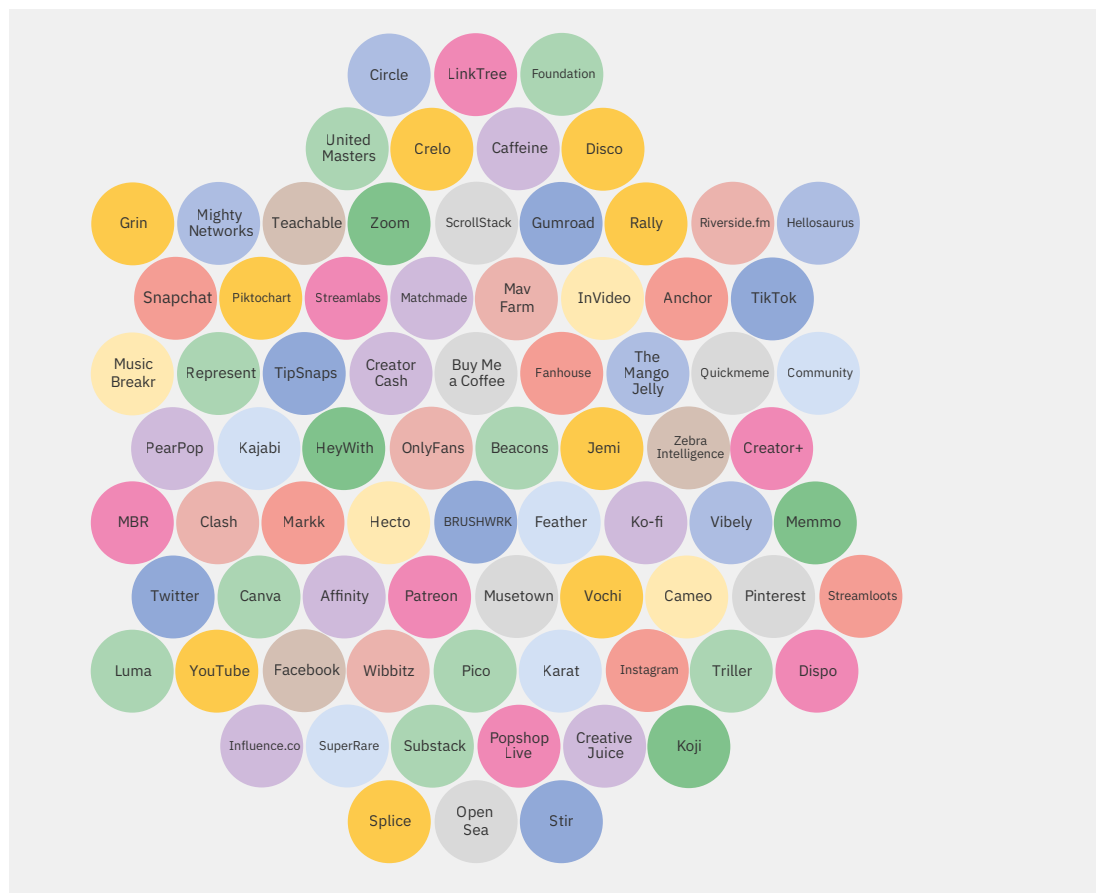


Fig. 7.2 | COMPANIES POWERING THE CREATOR ECONOMY MARKETMAP
Data from Influencermarketinghub

Hundreds of companies already offer tools for independent business management, including donation services, financial services, companies that serve specific sales channels, sponsorship sites, CRM platforms, and community building services (Fig 7.2).

Events point to a turn toward direct (non-advertising) monetization, and we can be fairly calm about its future prospects. Let's now consider the prospects for subscriptions within the context of higher-level needs from the point of view of economic and symbolic efficiency. Until now I have been considering the process and its kinetics, but I want to turn to the driving forces that are of an economic nature. The objective is to evaluate the economic potential of donations. If it turns out to be significant, then we will know there is something worth uncorking (and that means a rosy outlook for donations).

CHAPTER VIII.

MONETIZATION MODELS AND ECONOMY OF TIME

8.1. THE EVOLUTION OF BUSINESS MODELS IN THE B2C INTERNET

My thesis is that markets are moving to direct payments that don't use advertising because the economics of human resources demand it. Let's look at two aspects:

1. Business efficiency. What is the financial potential of non-advertising strategies of monetization? The answer to this will determine the number of participants markets are able to maintain and support.
2. Personal economy. The economics of leisure time, both quantity and quality.

These issues concern consumers and businesses, the demand for leisure time, and the supply of that leisure. Producers and suppliers act in their own interests, and the size of their profits depends on their monetization models. The model determines the final price to the consumer, which has both a monetary and a non-monetary component (the latter is the costs incurred by choosing what to consume and any negative consequences of consumption). Demand is elastic in response to price, but this connection gets obscured in online commerce by how

the consumer understands the price and whether or not they take into account non-monetary costs, including — primarily — time costs.

People value their time differently: given a single monetary price, the full price will be different for different people. Time costs are acceptable for some consumers, while for others they are prohibitive. Some people are ready to watch movies and listen to podcasts with commercial breaks, others are not. In essence, an equal monetary price (zero) and equal advertising burden create time discrimination, making products more expensive for people who value their time.

If suppliers had access to statistics on the distribution of individual leisure time costs, they could differentiate their price offerings within the framework of this time (attention)/money alternative. This kind of price discrimination would allow for a more complete monetization of demand.

This type of differentiation has not been used until recently — products or services were supplied “free,” with advertising as an add-on burden — not least because it is objectively difficult to monetize goods that are publicly available, especially if the consumers themselves are involved in the creation of those goods. (The standard solution to this problem has been to offer additional options and services. For example: For example, public libraries are free to use but may charge for additional services.) The assumption was always that there aren’t enough people willing to pay to access content with money instead of time to make it worth catering to them. Egalitarian justice considerations also played a role, since sensitivity to money is stronger than sensitivity to time.

The spread of subscriptions and donations has dispatched with this attitude. Here is the key to understanding the changes we are seeing: a uniform approach was being applied to different people, making it less than optimal; that approach is now being replaced by a differentiated approach. Charging fees for content stratifies society by perceived value of leisure time. This type of stratification is a good thing, since egalitarianism is as ineffective in the symbolic sphere as it is in the utilitarian.

If there is only one narrow road between points A and B, a fast car essentially becomes a tram; once there are many such cars, a toll road appears. The same happens with cable television and subscriptions: this is how business responds institutionally to growth in human capital and an increase in the value of time.

Advertising is a cleverly designed — but the most wasteful and barbaric — way to convert time into money. It was borrowed from television and delivers equality of outcome.²⁷¹ Subscriptions are a step toward the market identifica-

²⁷¹ Differentiation of the “cost” of watching ads could not be ruled out: different ads were shown at different times and during different programs.

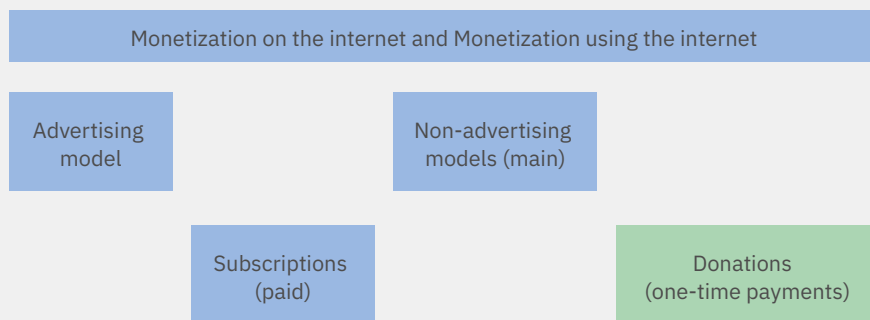


Fig. 8.1 | MONETIZATION MODELS IN THE INTERNET

tion of the value of time. One-time donations are the next and final step. As we move from advertising to subscriptions to donations, the efficiency with which human resources are utilized increases. Simultaneously, the nature of the relationship between consumer and producer is changing from faceless to something more personal. The nature of exchange is also changing from the “optional-yet-compulsory” fee to gift-giving.

How do these three stages relate to monetization through donations and the informatization of the symbolic sphere in terms of content quality?

Advertising has nothing to do with it.

Subscriptions indicate the perceived quality of the content and goodwill towards its creators, but the utilitarian motive prevails. There are two types of subscription. When it comes to a wide range of products (music, movies), the utilitarian component approaches 100%. When a subscription is purchased for privileged access to an author’s unique content, the gift component grows — as does the information component — but we can only guess which of the author’s activities the subscriber wants to encourage.

The gift and the signal of value that it sends are most evident in one-time donations. They are the way of the future because they make the exchange accurate, balanced, and effective. In order for this to happen, though, we need more than just a good reason. Donations have to do more than elevate the market and offer satisfaction; they also have to function in the interests of business. Let’s take a closer look at this issue to make sure that there is no conflict with those interests and that, on the contrary, donations will bring in a lot of money — comparable to or even more than subscriptions. And more than advertising.

Fig 8.1 explain a diagram of how I will cover the material.

I'll start with a discussion of why direct (non-advertising) monetization is crowding out advertising and how that opens markets to new sources and new revenue streams (Chapter 8). In addition to the monetary potential revealed by paid subscriptions and one-time donations, the key ideas here will be producers' needs and the economics of leisure time.

Then I will move on to the two main monetization strategies not based on advertising, and I'll show how they relate to each other (Chapter 9). I'll also identify what ought to function as a catalyst for donations (Section 9.7). From here on, we have to strictly distinguish between these two strategies, subscriptions and one-time payments. It's an important distinction that market participants tend to overlook, referring to both as "donations."

After that, I will analyze how donations are integrated in the three main versions of the future internet (Chapter 10).

And finally, I will outline my vision of how to institutionally encourage the increasing spread of donations (Chapter 11) and how to direct it so that it leads to the goal of signaling the value of texts (Chapter 12).

But first, let's examine the institutional role of advertising in the information economy and the forces driving non-advertising business models.

8.2. ADVERTISING AS A TRANSITIONAL PRICING MODEL

In the beginning was advertising. But why did it arise first, before all other models?

Chris Dixon once lamented that "[social] platforms used [their] power to become the new intermediaries...while keeping most of the revenue for themselves." This raises a question: how else could the interaction between platforms and users have been built from the ground up? How could the newly created platforms have made money in a context where the internet was free? Could they have set a price for their services instead of following the bad example of television? And how were they supposed to know what price to set when it was far from clear who would pay whom, how much, and for what? From an evolutionary standpoint, the monetization of content through advertising served as a necessary stage in the development of the internet; it could not have been avoided.

It's easy enough today to talk about the power of social media platforms, but in the beginning they had none. Online search, for example, was created with-

out a clear understanding of how it would pay off, even though it was obviously a benefit and saved both time and attention. There are three parties involved in search: the search engine, the people looking for information, and websites that need to be found. All three must benefit some way from participating in the process. It is impossible (or at least unprofitable) to provide this type of good — information about information — in such a way that people have to pay to use it. After all, they create it by using it. Thus, people have started paying for search using a currency that is, to a certain extent, a public good: their attention. An understanding of the true value of attention only comes with practice, and only recently have a sufficient number of people arrived at that realization.

Markets conquer new areas using whatever means they have available to bring in money. For the internet, advertising became such a means. By working practically with advertising, online markets gradually sorted attention into categories, weighed its value — albeit indirectly — and, at the same time, cultivated the idea that attention is a resource that comes with a price tag. People knew this during the age of television, of course; advertising has been around for a long time. But the world of televised ads was ruled by egalitarianism and coercion. With the development of the internet, however, it became possible to differentiate whether advertising is benefit or burden, and those who object to advertising can buy their way out of it.

Don't think I am defending advertising. I am simply pointing out that it was a necessary step in the monetization of digital content. We haven't progressed past this stage yet. In fact, we will never pass it in the sense that advertising will not go away; in parallel, creators are already using a second model — monetizing their content through subscriptions — that will see exponential growth. The third stage is one-time donations.

8.2.1. Advertising Capacity as a Limiter of Development

As human activity moves to the internet, businesses increasingly crowd online spaces. The \$1.5–2 trillion brought in by “digital B2C” (see Section 1.4 for the calculations), including \$400–500 billion from advertising, provide a livelihood for at most a few tens of millions of people — less than 1% of the planet's working-age population. That \$2 trillion in revenue accounts for 1/20 of the non-utilitarian economy, which reflects neither the labor potential of this sphere, nor the time it supplies and absorbs, nor its significance in people's lives. Therefore, the transition to paid content (by subscription and by donation) is inevitable, and the trends we see in blogging, music, and other segments are what await the B2C internet as a whole.

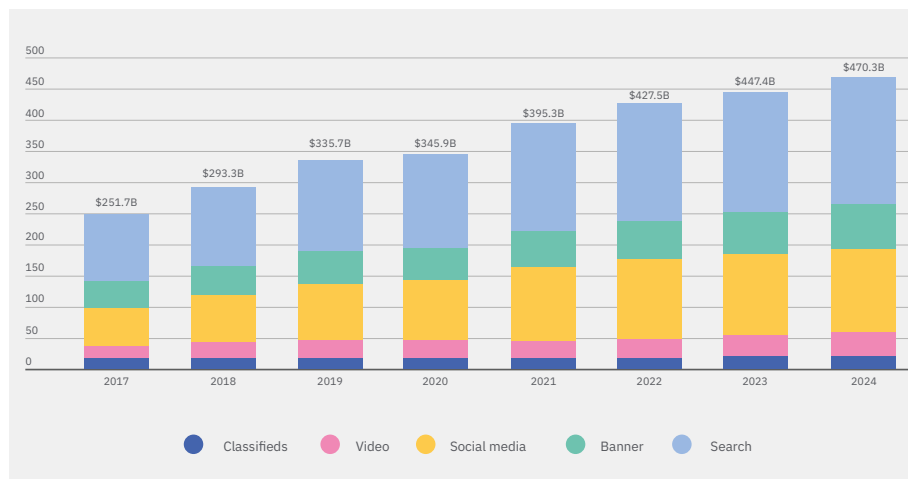


Fig 8.2 | DIGITAL ADVERTISING SPENDINGS WORLDWIDE FROM 2017 TO 2024, BY FORMAT (IN MILLION U.S. DOLLARS)

Source: Statista Digital Market Outlook

If we compare the volume and monetary value of online media consumption, we reach the same conclusion. It is estimated that humanity spends 4–8 trillion hours per year and \$1.4 trillion consuming online media, which gives us an average hourly rate of approximately \$0.15–0.30. This is many times lower than the unit cost of most other forms of consumption, so the B2C internet has plenty of room to grow. It can't grow by means of advertising, however, because the quantity and quality of attention is not unlimited.

While advertising revenue is on the rise, this is just extensive growth driven by an increase in the “digital” population: 4.5 billion people use the internet today, and the other 3.2 billion or so are waiting for a connection. There may be jumps in advertising revenue, of course, as was the case in the first half of 2021,^{cxix} but the \$1.3 trillion in revenue some people claim advertising will generate in the future seems overestimated, and numbers like \$3 trillion are pure fantasy (Fig. 8.2).

A radical increase in advertising runs the risk of mass rejection and blocking. A gradual increase, on the other hand, causes returns to fade away just as gradually, both for individual channels of promotion and in general. The monetization of attention is limited by human resources, and the development of new storefronts divides the pie into ever smaller pieces, becoming a zero-sum game for the advertising industry. Advertising's limited productivity keeps new producers from entering the market. Existing producers may still harvest enough revenue through advertising, but new arrivals will need fresh income streams, and direct payments seem to be the best option.

8.2.2. Advertising as Work

The balance of supply and demand, both for advertising and for subscriptions, is determined by the perceived value of time. This can be estimated based on wage rates. Let's assume that advertisers pay \$5 per 1,000 views lasting 5 seconds; let's also assume that the user's job is to watch ads. The key

question becomes: what rate is paid for that job? Is the rate higher or lower than what people make at work?

If we imagine a person watching ads 8 hours a day as their job, they would make something like \$0.001 per second, which equals \$3.60 per hour or \$600 per month. If this is more than they would make at their job, then it makes rational sense for them to watch advertising; if it is less, then they would be better off purchasing a subscription and finding a side hustle to earn extra money in all the time they save.²⁷²

Let's try the same exercise for YouTube. Imagine a person who earns \$40 per hour (or \$85,000 per year) and watches shows on YouTube for one hour a day. During that hour, they see a total of 3 minutes of ads.²⁷³ That means they watch an hour and a half of ads every month; if they were paid for this time at the same rate as they make at work, they would get around \$60. Therefore, the value of their working time is 10 times higher than the cost of a subscription to YouTube Premium.²⁷⁴ If we do the math, we see that a person earning \$40 per hour at work would be better off subscribing to Premium if they watch more than 6 minutes per day.²⁷⁵ For those who earn half as much, the viewing limit after which it makes sense to subscribe is double.

I make no claim regarding the accuracy of these estimates.²⁷⁶ But they show that YouTube struck the target when it set the subscription price so that it makes sense for a person who earns \$600 per month and watches one hour a day. As incomes grow, it becomes profitable for an ever larger number of people to switch from advertising to paid subscriptions. There are relatively

²⁷² This is a rough estimate. Obviously, not all leisure time can be converted into earnings, but that is not essential for understanding.

²⁷³ It could be 12 minutes on television, but people at this income level watch little television.

²⁷⁴ The price varies by region, and up to five users can be linked to one account; I use \$6/month for this example, although in reality the cost could be two or three times lower.

²⁷⁵ Calculation: 6 minutes x 30 days = 3 hours/month. Of those 3 hours, advertising takes up 9 minutes. At a rate of \$40/hour, 9 minutes translates to \$6.

²⁷⁶ They can be modified, though. For example, the beneficial use of advertising breaks is not taken into account, nor are the frustration caused by interruptions during the most interest part of a show or a host of other effects that act in various directions.

few such users in developing nations, but in the US and other wealthy countries one in five users subscribe.

These estimates show that attacks on social media for supposedly wasting people's lives with advertising and forcing the world's best minds to focus on optimizing click-through rates are just so much mudslinging. The supply of advertising is balanced by the demand for it, and demand is determined by the degree to which people are aware that their time has value, which, in turn, depends on the availability of alternative options for spending time.

Institutionally, we have to compare how effective advertising and direct payments by users are in terms of consumer navigation. Advertising does not come off well in the comparison: using it to navigate content is like warming yourself by burning the whole forest down. A heated jacket would obviously work better, but that technology didn't always exist; and until relatively recently, advertising — like a campfire — was our best bet. Advertising is not evil, of course, despite the fact that economists frowned on it until they learned to view it from the standpoint of an information economy.

The fact that the subscription model, which eliminates advertising, took off as soon as it was introduced reflects the condition of people's wallets and their minds, not some malicious plot hatched by internet "attention hogs." Mark Zuckerberg may claim that there are no alternatives to advertising ("I personally don't believe that very many people would like to pay to not have ads."²⁷⁷), but Facebook is introducing paid subscriptions. Advertising is only irreplaceable to the extent that there are still plenty of people who think they are saving money by not paying for subscriptions. Now that a second communicating vessel has appeared, however, human resources are starting to flow in that direction.

It is easy to forecast differentiation in subscription costs. The cost of a Spotify subscription, for example, is five times higher in the most expensive regions than in the least expensive ones. Economists call this third-degree price discrimination, when a supplier sets its prices based on knowledge of the socio-demographic distribution of preferences. (YouTube is also expanding its range of options by price in order to attract groups with lower incomes.)

Ideally, streaming services would tie the cost of a subscription to users' incomes. This would be first-degree price discrimination (perfect discrimination), where a service is offered to all comers at the highest reasonable price that it makes sense for each of them to pay, thereby eliminating any arbitrary consumer surplus. (And remember, the information and economic essence of donations

is precisely their ability to notify the market of a consumer surplus as soon as its existence is established — post factum.) Does that sound like a fantasy? It isn't. Nothing impossible would be demanded of producers,²⁷⁸ and — with one proviso detailed below — users will willingly reveal the size of their consumer surpluses because doing so will be both pleasurable and profitable.

That outlines the approach for measuring the effectiveness of advertising using average wage rates. Let's move on to integral indicators. People spend 4–8 trillion hours consuming media each year, of those 200–400 billion hours are taken up by advertising worth \$400 billion. From this, we can say that 1 hour of watching advertising brings one group of people \$1–2 and saves another group the same amount. This is an order of magnitude less than the added value that a person watching ads could create through work if their time were applied elsewhere and indicates that we could squeeze much better efficiency out of the distribution system.

Paid subscriptions and donations are the ways to increase this efficiency. Consumers pay for content with their attention or their money. In the first scenario, advertising acts as the intermediary and bites off a share of the cost; no intermediary is needed in the second scenario, so efficiency increases. Donations also adopt some of the informational aspects of advertising, and they are obviously more efficient at it. They also save human energy, which is partially wasted during advertising, no matter how targeted.

If we look at content like blogs, music, videos, and games — things that have always been digital — then direct monetization is the only way for the vast majority of independent non-brand producers to make money. Ten to twenty thousand fans aren't enough to pay a creator through advertising, but that same fan base can generate decent income. This may not be the path for everyone, but everyone doesn't have to take it.

Let's analyze the podcast industry from this angle.

²⁷⁸ Providers know what device is used for viewing, and they also know the user's approximate income. From here, it's just a short step to assigning a personalized subscription price equal — as explained above — to the value of alternate ways the user could spend that time.

CHAPTER IX.

MONETIZATION WITHOUT ADVERTISING: THE SECOND HALF OF THE STORY

9.1. THE PODCAST INDUSTRY AS THE TUGBOAT BEHIND NON-ADVERTISING CONTENT MONETIZATION

The paid subscription model works well for products that can be digitized without losing much of their essence (“pure” texts such as written, audio, and video content, sports, and educational content) and are consumed on an ongoing basis. Some of this content is sold as regular goods (think books, apps, or games), some is monetized offline (through live performances or sales of personalized goods), and a portion is monetized through online advertising (\$400 billion in 2021). This portion is where we see subscriptions encroaching.

We have already looked at journalism, video games, and music. How is podcasting faring? The segment began to grow in 2015, but until recently podcast creators existed on the crumbs that fell from the table as billions were spent on advertising. Analysts began to talk about a podcast boom in 2018 and 2019, but

it was all thunder and no rain. The subscription companies in the Subscription Economy Index compiled by Zuora grew six times faster than the S&P 500, but there still was too little money in podcasting.

In early 2018, Medium published “a manifesto for growth” written by Edison Research senior vice president Tom Webster, who asked: “Where does podcasting go next?”²⁷⁹ The market has grown since then, but podcast income still leaves much to be desired. According to data from Interactive Advertising Bureau and Statista, in 2020 podcasts brought in \$842 million through advertising; various analysts expect podcast revenue to reach \$2 billion by 2023. That’s impressive growth expressed as a percent, but the starting point is low. What lies ahead for the industry? Will the growth slow down? For example, after biting off a share of the advertising pie from existing players, will podcasting slow to the growth rate of advertising at around 4–5% per year? At what point and what level will this happen? (Fig 9.1)

Market researchers say it won’t happen at any level. At least for the next seven to eight years, the podcast market is predicted to grow by an average of a third annually (Fig 9.2). Those were the findings of a study published by QualiKet Research in March 2021.²⁸⁰

Likewise, a report by Grand View Research forecasts seven years of growth averaging 31.1% annually. Grand View reports that podcasts earned \$11.46 billion in 2020; if we use the forecast rate of growth, that means the podcasting market will approach \$100 billion in 2028. At present, market researchers do not distinguish between subscriptions and one-time donations.

How should we view this prediction? After all, it promises nothing less than a revolution, not only in audio and video podcasts, but in the content market as a whole and beyond its borders, given the impact of video materials on education, sports, medicine, and more. A market will emerge that will exceed the combined revenue of the recording and film industries and be on par with computer games. Is this possible?

It most certainly is. The forecast inspires confidence once you take into account the volume of daily routine in people’s lives where there is room for background activities. Air travel, traffic jams, sitting in waiting rooms, walking, fitness, and cleaning: thanks to podcasts, all of these have become entirely tolerable pastimes. Digital content was available before, but consuming it while doing something else was inconvenient or impossible. This significantly limited the number of consumers.

²⁷⁹ Webster T., “Where Does Podcasting Go Next? A manifesto for growth”, Medium (2018).

²⁸⁰ Qualiket Research, *Global Podcasting Market Size, Trends & Growth Opportunity forecast through 2027* (2021).

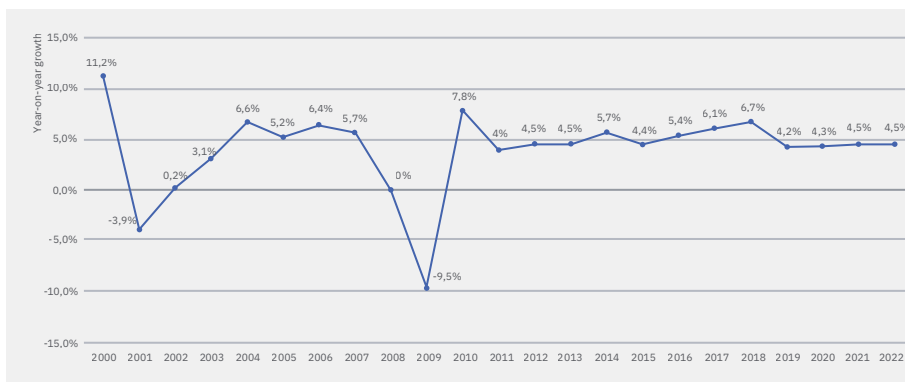


Fig 9.1 | GROWTH OF ADVERTISING SPENDING WORLDWIDE 2000–2022
Data from Statista

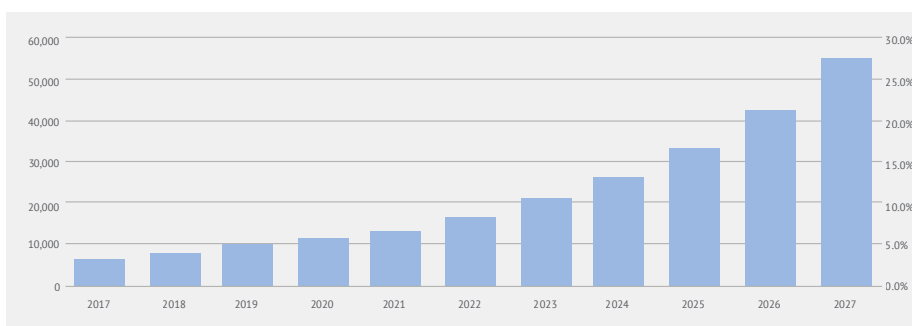


Fig 9.2 | GLOBAL PODCASTING MARKET SIZE (US \$ MN)

Smartphones unlocked the possibilities, and the pandemic gave people time to fill, fueling the demand for podcasts (and for online products in general). By this time, the technology for producing and distributing podcasts had progressed and the audience was tired of advertising. Everyone was on board from day one. Other trends that had an impact were the move toward self-education, work-from-home policies, and the fashion for subscribing to services instead of making one-time purchases of products.²⁸¹ Podcasts have also become an amazing window to the world.

Thus, a \$100-billion podcast industry is not a fantasy. When podcasts come to make up about an hour of people’s daily diet, they will account for anywhere from a fifth to a fourth of media consumption (in total estimated at 4–8 trillion hours, see Section 5.8.3) and will bring in a corresponding share of revenue

²⁸¹ This trend is said to include such things as razor blades, skin care products, ingredients and instructions for preparing dinner, and — most implausibly — cars.

(some number followed by ten or even eleven zeros). Analysts point to the difficulty of creating interesting content and low internet speeds as factors that limit this market. This is both understandable and surmountable.

The question is where the money will come from. “Everybody Makes Podcasts. Can Anyone Make Them Profitable?” is how Gerry Smith framed the question in an article in Bloomberg²⁸² in which he pointed out the discrepancy between the industry’s importance and the amount of money circulating within it and listed ways that the gap between enthusiasm and income could be bridged. (His recipes include improved recommendations, targeted advertising, and paid subscriptions.) I say the same thing about all the content industries: their monetary potential is constrained by existing monetization channels. Sooner or later, however, this potential will be unleashed.

Since Smith’s article came out in Bloomberg, podcasting revenue has more than tripled according to Grand View Research, rocketing from \$2.9 billion in 2019 to \$11.5 billion in 2020. In 2018, one-third of podcasting revenue came from advertising, while subscriptions already accounted for the other two-thirds. By 2020, advertising only brought in one-tenth of the industry’s revenue; the rest was all subscriptions. (Podcasts delivering news and politics generated about one-third of that money.) If we compare data from the Interactive Advertising Bureau and Statista²⁸³ with data from Qualiketresearch and Grand View Research (see above), the inescapable conclusion is that advertising will make up an ever-diminishing portion of podcasting revenue.

The reasons are clear. While advertising revenue is growing at a rate of 4–5% per year (\$20–40 billion),^{cxxxii} this growth is not evenly distributed across content segments and, even if we imagine that podcasts can somehow hog the majority of that revenue, it is unlikely that they will leave nothing behind for the traditional players that earn their living through advertising. The ceiling for advertising revenue from podcasts is limited — a high estimate would be \$10–20 billion — but analysts forecast that podcasts will cross the \$100 billion mark within the next 7 years. Traditional monetization strategies can’t do it; the only options remaining are subscriptions and donations, and they are therefore destined to drive growth.

Aside from the fact that the total attention paid to advertising is finite and the fact that investments in advertising are delivering diminishing returns, subscriptions have the advantage that as podcast consumers become more demanding,

²⁸² Smith G., “Everybody makes podcasts can Spotify make them profitable”, Bloomberg (2019).

²⁸³ Data from IAB, FY 2020 Podcast Advertising Revenue Report (2021).

advertising falls increasingly out of alignment with the genre. Smartphones have solved the problem of time saturation, but many people have been put off of podcasts by commercial breaks, which are especially annoying to drivers. Meanwhile, streaming platforms have taught people to pay for content, and about five years ago a critical mass of people willing to do the same with podcasts emerged. The trend started in wealthy countries²⁸⁴ and spread to the rest of the world; when the pandemic hit, growth went exponential.

This forced content industries to get out of their bubbles and do something about the bottlenecks in podcasting, as Tom Webster advocated in his manifesto mentioned above. While \$100 billion is not much when you stand it next to the global economy (about one-thousandth), each one of those dollars is especially valuable. Representing user payments for recognized quality, they radically transform the system for conveying reputations. The practical consequence of this is that people will be better able to navigate the space of texts. It will bridge the despair-inducing, immobilizing gap between people's time-limited ability to choose the content they need and the colossal supply of content with which they are barraged, bombarded, lured, and ultimately sucked in, sucked dry, and disoriented.

Crowdsourcing the selection of texts — roles, sample identities, truths, works, subjects for communication — all texts from the narrowest sense to the broadest, will release people from the bondage that comes with the no-barrier production of texts. Filtration will reach parity with generation. The inability to silence others will be compensated by the ability to not notice them. Using UCC (user-certificated content) as the antidote to UGC (user-generated content) is the recipe for human progress “in the age of mechanical reproduction” when absolutely everything is available.²⁸⁵

My goal has been to highlight the transition from a business model in which advertising acts as an intermediary to a non-mediated business model in which money changes hands directly as part of a trend that is driven by the internet. In this sense, the significance of what is happening in the locality of podcasts extends to the podcasting world and even beyond to the entire entertainment and media world. Niche content has always been overshadowed by more popular content; when it gains in reputation and findability due to donations and subscriptions, this is one example of the breakthrough. Here's another example: \$100 billion will provide direct employment to over 5 million people and indi-

²⁸⁴ North America accounted for 40% in 2020, of which 9/10 was generated in the US.

²⁸⁵ See Walter Benjamin's essay “*The Work of Art in the Age of Mechanical Reproduction*” (1936).

rectly create jobs for many more millions. Small businesses have few opportunities under the advertising model; subscriptions and donations may have merely opened the door to a different future, but this is just the start. Once the elites peek through the open door, hundreds of millions will flow through it. (For comparison, people spend half a trillion dollars per year to purchase 1.5 billion smartphones.) The forecast from Grand View Research is no overestimate; if anything, it is conservative.

We can expect to see growth in jobs and related growth in content that would not exist without those jobs. Effective monetization will draw new types of people into creating cultural content. Niche podcasters will tear away the veil that has always covered certain professions. People ought to raise monuments to YouTubers and other podcasting pioneers²⁸⁶ to commemorate their contributions to the transformation of time markets.

9.2. SUBSCRIPTIONS AND DONATIONS

In demonstrating that the future of content industries and the non-utilitarian economy in general depend on donations and subscriptions, I have focused less on the fact that paid subscriptions are located farther from altruism than one-time donations, which lie as close to it as is possible. And the sanguine outlook on the future of non-advertising-based monetization strategies only applies to paid subscriptions.

The future of one-time donations is less clear. A start has been made and the situation is maturing, but slowly. It is vitally important that they follow the same upward trajectory as subscriptions, and this will be my focus as I reveal the economic background for what is happening. Here I want to turn to those factors that will support a rise in one-time donations, because without them the symbolic sphere will fail to cope with even a fraction of the technological shocks caused by the superconductivity of the internet where texts are concerned.

Building up monetization channels for donations and supporting informatization of this field requires more ingenuity than achieving the same things for subscriptions. For the latter solution was straightforward: people simply were fed up with advertising and were happy with an opportunity to pay not to watch or listen to it. Additionally, subscriptions are not as well suited for leveraging

²⁸⁶ Apple, Amazon, iHeartMedia, Pandora Media, Soundcloud, Spotify AB, Megaphone, Stitcher, TuneIn etc.

the benefits of the network effect (when the value users gain from a service increases as the number of users grows). The opposite is true of donations, which can only become widespread thanks to network effects when a critical mass of donors is reached. This critical mass will take longer to develop if donors' internal attitudes and urges are not reinforced externally.

We are approaching a discussion of what this reinforcement ought to look like, but first I want to offer up a few more arguments in favor of one-time donations.

9.3. IS IT JUST THE FANS?

In 2008, Kevin Kelly published an essay entitled *Thousand True Fans*. In that essay, which is still frequently quoted, he proposed his vision for the future of the creator economy: "To be a successful creator you don't need millions. You don't need millions of dollars or millions of customers, millions of clients or millions of fans. To make a living as a craftsperson, photographer, musician, designer, author, animator, app maker, entrepreneur, or inventor you need only thousands of true fans." At that time, few people doubted that the internet would connect everyone with everyone else, sooner or later. But Kelly saw in this an opportunity for creators, no matter how niche their work, and identified philanthropy as a source of funds they could tap into.

This idea opened the floodgates of understanding. Creators grew confident in their desire for autonomy, and Patreon, Substack, Revue, and other services sprang up to serve them. However, Kelly said nothing about how niche creators and patrons would find each other. I am, however, concerned with the mechanism for matching supply and demand. As we have seen with the example of Patreon, donation sites follow Kelly's prediction to the letter by betting on "true fans." But how do you get started when you don't have any yet? And how does his theory apply, for example, to a blogger revealing the nuances of freezing breast milk, as Emily Oster has succeeded in doing? What will fuel fans' enthusiasm when the milk dries up?

I am not disparaging the role of fans; they are the standard bearers of the passion economy. But without one-time donations, creators who cannot or do not want to put out regular content — or whose content is not such that it can be consumed on a regular basis — will be left out. If you spend a day with an excellent tour guide while on vacation, you may wish to leave him a tip but you will not become a long-term patron. The subscription business model requires something

like cultural monogamy, but human nature suggests the opposite. How is a person with 10–20 areas of interest supposed to afford the number of subscriptions required to keep up with it all? That would get spendy. And considering the fact that the top three to five subscriptions usually cover music, audio, and cinema — as well as the existence of YouTube and other useful applications — what can creators really hope for?

No one would object to having thousands of patrons at \$5 — or better yet \$10 — per month. “They will buy the hardback and paperback and audible versions of your book,” Kelly promises. Excellent! “They will come to your chef’s table once a month,” he assures us. My goodness. Will they really? The subscription model locks potentially interesting creators in a cycle of obscurity and penury which only a few manage to break free from. An unpleasant feature of the model is that you have to find those subscribers somewhere.

Superstars already have their audiences, but what about all the non-celebrities: the skillful interior designer, expert on succulents, creator of custom wigs, or anyone else in whom the seeds of great mastery have sprouted? All the main product categories have their top creators already, and it is difficult for newcomers to get attention. This is exactly why it is so vital that a significant portion of the reciprocal economy flow through one-time transfers made post factum. Donations will uncork human potential at the initial, angel investor stage, when support is especially important. Without vertical mobility and an influx of new creators, we will end up with the equivalent of plastic tomatoes everywhere and will forget the flavor of real tomatoes, just as the priests of the Frankfurt School warned (see Appendix 2).

This type of support is just as significant as subscriptions, and it has the potential to bring in just as much money, or even more. Ko-fi and Buy Me a Coffee are using this type of monetization,^{cxxxiii} but even though Ko-fi has half a million registered users (Buy Me a Coffee has 400,000), they handle a total of \$2 million per month in donations, or less than 2% of what Patreon brings in. Subscriptions were the first to get big because they are easier to understand. And there is still room to grow with subscriptions: there are thousands of topics, niches, and veins for industry reporting,²⁸⁷ each with its own top-10 or top-30 content makers. I estimate the subscription model’s labor potential at hundreds of thousands of jobs and its financial potential at tens of billions of dollars. And still, this model leaves behind the millions of producers whose content might work well with one-time donations but doesn’t fit with subscriptions.

²⁸⁷ There are 100 industries in the non-utilitarian economy (Section 1.1), and we can assume that on average each has 10–20 segments, all of them differentiated by format (interviews, panels, solos), specialization, and genre.

9.4. TWO MONETIZATION MODELS, TWO TYPES OF ALTRUISM

The subscription model is popular, and it is stable, predictable, and convenient for seasoned professionals — analysts, commentators, bloggers, and the like — to use, but there is yet another reason why it is much bigger than one-time donations. The inner motivational logic of reciprocity differs between the subscription and donation models. The difference may be subtle and often escapes attention, but it is critically significant, and therefore, even though I covered this topic in Chapter 6, it bears discussion in more detail.

Subscribers receive something exclusive in return for their regular payments; that's why software packages for managing customer or patron relationships (CRM/PRM) all offer ways to rank them. No matter the value of what is received, the relationship between subscriber and creator shows signs of both ritual giving (see Section 6.1) and *quid pro quo*. This regularizes the relationship and makes it possible to rationalize it by analogy with a normal transaction in which one pays for access to content. Sometimes the motives can be sacrificial: people understand that content streams are poorly monetized by means of advertising. As a result, even though there is an altruistic component to subscriptions, the leading motive is socio-utilitarian.²⁸⁸

One-time donations exist outside this logic. They have nothing in common with buying and selling, and expressing admiration and gratitude instead of sympathy. Because of this, they require a different format. The standard pitch to donors is always ingratiating and flattering, a trait it inherited from traditional charity, where people give more when targeted by a personal appeal. (It is amusing to see how podcasters have adopted the pitch and how fast they have reached the point where it no longer works. It is also interesting to see people who are already paying not to watch ads forced to consume self-promotion.)

Pitches don't work with one-time donations; on the contrary, they get in the way. The donor does not see the creator as a suffering artist (after all, the creator may be many times wealthier than the donor), and the communication between them has no role in top-down charity (see Section 6.1). When a person is obviously being pushed to do something that comes from the heart, the external motivation displaces their internal motivation, "empathic dissonance" arises,

²⁸⁸ According to a survey conducted for Zuora's Subscribed Institute (13,626 respondents in 12 countries), the reasons to subscribe are convenience (42%), cost savings (35%), and variety (35%). Almost one-third of those surveyed said they want to pay for their usage, no more and no less.

and they end up doing nothing at all. The motivation to donate has to ferment and grow inside a person; it can be supported externally, but only if the external hints become internalized and are accepted as the person's own.

Many creators stumble over this seemingly minor point. Like a person who says one thing while their facial expression says something else, websites often try to tell a story from the wrong libretto. Their visual elements alone contain pleading intentions, but it's a false pitch. Presenting a performer with a bouquet is no less valuable or exciting than receiving it. There are no supplicants here and no obligations.

The wrong pitch holds back donations. This, I repeat, is no minor issue, and it's a mistake to think that people are not capable of such sophisticated thought. Of course they do! It lies at the level of the subcortex. That's why people usually try to avoid taking money for something that came from the heart. After all, taking it means being put in your place. It's easy to feel the difference: as soon as you have the opportunity, make a donation and compare the sensation to the feeling you get from subscribing. If you don't see any opportunities to donate, you should ask yourself if you're consuming the right content.

A seemingly trivial miscalculation with the reciprocity formula has a negative effect on people's willingness to donate. The problem is not the supposedly limited number of altruists but the immaturity, unfitness for purpose, and misalignment of the motivational structure. Online charity is built on the assumption that people know why it is necessary and what they will gain. But like empathy, people possess this knowledge to varying degrees: there are those who already understand and those who are slower on the uptake. Until recently, online giving faced two limitations. The first is economic: it took a fair amount of money to give the "right way." Now, however, online donations and that variant thereof, the NFT, can be divided into quanta as small as anyone might want. The second barrier remains: why donate? Until the answer to this is explained, tested, and provides social returns, donation platforms will be limited to inner-circle audiences. If they want to engage the next larger circles, they will need effective incentives.

Let's look at the informational and financial differences between the two monetization models and the consequences of those differences. Each strategy works for a specific type of content and creator. Advance "bulk" payments for content (subscriptions) work best for recurring, serial content, while one-time donations made after a purchase work best for irregular, experimental content that is consumed on occasion. Without this second monetization strategy, many capable people will never get a chance to fulfil their potential.

9.5. PROMOTING NEW CREATORS

A significant portion of the content that is innovative, narrowly niche, or experimental, content that, if it ever sees the light of day, will end up at the end of the long tail gathering dust out of sight of those who would appreciate it, happens to exist outside the coverage zone of the subscription model. The subscription model also fails to meet the needs of offline creators, such as piano tuners, massage therapists, and tattoo artists. Subscribers — however many of them you have — are valuable not for the dribs and drabs of income they bring in, which is rarely enough to live on, but as spreaders of a creator's reputation whose good word of mouth attracts new clients. There are countless fiefdoms where one-time donations could take root.

Only a fraction of a percent of creators are destined to cling to the tugboat of influencer marketing on social networks and convert popularity into cash. The majority will never see any serious money that way, even though their content is good quality. Without one-time donations to function as a beacon that highlights good content, for the majority of creators promotion is a matter of luck. A digital showroom may seem infinite, but in reality it is limited by people's attention and — even more harshly — by the mechanisms by which that attention is focused as algorithms deposit content on our screens. Top-ranked content claims the lion's share of attention, while everyone else remains in the shadows.

“Success breeds success, creating path dependencies that make it hard for runners-up to catch up.... [R]ewards are power-law distributed. This means [...] that launching a successful product is both harder and more lucrative than ever.” Thus Dror Poleg explains the Matthew effect.²⁸⁹ A creator without pedigree or patronage can hardly rely on subscriptions. This clips a creator's wings, and one of the purposes of donations is to help people launch careers.

Subscriptions and donations touch different levels of information and navigations. The former highlight suppliers of serial goods, their names, companies, and content platforms.²⁹⁰ The latter help us choose from among an assortment or range of content — individual works or episodes — and they allow us to single out specific individuals in a creative team. How does this work and what does it mean in real life? The creators who receive donations are singled out from those who

²⁸⁹ Poleg D., “*Unpacking the Web3 Sausage*”, blog (2022).

²⁹⁰ For example, Substack publishes lists of the top newsletters on topics like culture, health, faith and religion, and food. The lists are easier to navigate than simply seeing how much a newsletter earns from subscription fees. It's good to know which media outlets have expertise in which fields and which of their authors are worth reading.

don't. All other things being equal, the higher the donation amounts, the higher the visibility. On their own, donations are not entirely informative; you have to know who and what is behind them. But over time, the system will improve and self-structure in terms of "who" (reputations) and "what" (recommendations).

Each of these monetization models has its own valuable signaling function, and both make the symbolic world visible while transforming it. But there are no signals without money. Subscriptions are expected to generate \$100 billion or more per year over the next 6–7 years. What about donations? What is their financial potential?

9.6. FINANCIAL POTENTIAL OF DONATIONS

I see more money in donations than in advertising or subscriptions. Advertising money is like the red blood cells flowing through an artery that irrigates large, broadly significant swaths of culture, while smaller cultural segments are fed by an increasingly powerful flow of subscriptions. It's up the capillary system to feed niche genres and interests. The advertising and subscription models are not appropriate here, and society's metabolism will grow sluggish without last mile channels that can carry money all the way to the terminal devices.

Let's make some estimates. Ten views of a video with two commercial breaks bring someone a few cents. Subscription revenue of, say, \$5–20 per subscriber is divided between the platform and the content producers. A targeted donation can be \$5, \$50, or any other amount. My offhand estimate for the "budget" required to indicate the value of texts was \$30 billion. I made these estimates before subscriptions and donations showed impressive growth and removed all doubts that they could reach this level. Moreover, it seems that we may be talking about hundreds of billions or even trillions of dollars.

Traditional philanthropy was founded by the ultra-wealthy.²⁹¹ Easy-to-use, fraction-of-a-penny donations fling open the doors of philanthropy to everyone, so that now all can afford to demonstrate their humanity.²⁹²

²⁹¹ See Helen Horowitz's book on philanthropy in Chicago: *Lefkowitz Horowitz H., Culture and the City: Cultural Philanthropy in Chicago from the 1880s to 1917* (1976).

²⁹² *Homans G., Social Behavior: Its Elementary Forms* (1961).

9.7. TRIGGERING MICRO-PATRONAGE: AN OPEN TOURNAMENT OF STATUS AND REPUTATION

Subscriptions serve as a springboard for a more complex pattern of behavior that is required for donations, so how can donations pick up speed?

Every segment in the media and entertainment industry is built around a core need on which everything else is layered. For some of them it is socialization, for others it is impressions and content, and for yet others it is libido or the thrill of gaming. Altruism is a fundamental motive (see Chapter 5 and Chapter 6). When business exploits altruism, it is never the main motivator. For institutional charity, however, it plays the leading role. Altruism can reach its full potential only in conjunction with status, reputation, and social connections. This is true in social networks, Wikipedia, computer games, science, and everywhere else.

Status is a currency like money. It is just as freely convertible — or perhaps even more convertible — when applied to the highest goods. The desire for these highest goods and all that goes with them is what drives online philanthropy. Appeals and persuasion give us what we already have: the unimpressive results of platforms like Ko-fi and Buy Me a Coffee; in fact, the performance of online charity as a whole is unexciting (\$40 billion in 2020).²⁹³ Bringing donations into the public field is a necessary and sufficient condition; without that one step, we can't even dream of online philanthropy becoming a widespread practice.

9.7.1. Electronic Marketplace for Status

Charity is the reverse of the marketplace of vanity, and that same marketplace forms the underlying infrastructure for online philanthropy. The extent to which this is true was shown by the Reader's Prize (2010), a 2010 event held by Russian website in which users paid to vote for their favorite authors.^{cxxxiv} This framed online patronage in a competitive environment — the author who collected the most donations won — while the research task was to understand how conditions affect people's willingness to donate. (The contest was a continuation of a series of social experiments mentioned in Section 5.8)

Boris Strugatsky conveyed the atmosphere of the contest: "It was devilishly interesting... the handicap turned me into a real tifosi fan. It was like being at the World Cup!" I was a fan, too, and I kept an eye on the voting dynamics. How would the fan pools stack up? What about cascade effects and markups?

²⁹³ See Blackbaud Institute, Charitable giving report: Using data to transform your strategy (2022) and also: *NPSource, Online Fundraising Statistics For Nonprofits* (2018).

I was also interested in signs of the Matthew Effect. My attention was focused on all of this and more. What I learned was that a social-status tournament acts as high-octane fuel for online patronage.²⁹⁴ As the poet Lev Rubinstein summed it up, “gratitude payments will become fashionable because they [the organizers] got it right.”^{cxxxv}

“Getting it right” means incorporating donations into social relationships. The time has come for that to happen — nothing indicates this more clearly than the rise of NFTs certifying ownership of digital works.^{cxxxvi} This phenomenon has origins and driving forces of its own, but today, one year after NFTs began to circulate widely, their meaning has yet to be recognized and their significance is underestimated and downplayed. I, however, see them as an ally of the reciprocal economy, and I also see how important the practice of gifting is for the strengthening of NFTs and the technological development of the internet.

9.7.2. NFTs: the Driver and Know-how Behind the Reciprocal Economy

For the crypto community, NFTs are a long-awaited, widely applicable, extensive use of the blockchain, second only to cryptocurrencies. They are hyped because of the opportunities they present to earn money: artists, performers, athletes, and other famous and enterprising individuals can monetize their popularity, while others can speculate with this “who knows what” like they did with cryptocurrencies. As usual, there was a lot of buzz at first that is now subsiding. In order to not disappear along with it, NFTs must discover their true — philanthropic — purpose. For the time being, that purpose is hidden from most people. I will try to explain it in clear, vivid terms because the future of NFTs and possibly the trajectory of the B2C internet depend on it.

Right now the picture looks like this: in the third quarter of 2021, transactions with NFTs passed the \$10 billion mark, taking off at the beginning of the year with the sale by the artist Beeple of the tokenized rights to his digital work *Everydays: the First 5000 Days* for \$69.3 million.²⁹⁵ This was followed by others: the music producer 3LAU earned over \$11 million, and singer-songwriter Grimes

²⁹⁴ The provision in the theory on the diffusion of innovations on critical mass was confirmed: innovations are brought to light by the 2% of the population who are innovators. This mirrors the 20,000 people who participated in the Reader’s Prize voting out of the 1 million who were aware of its existence.

²⁹⁵ For more details, see Gerard D., “*Metakovan, the mystery Beeple art buyer, and his NFT/DeFi scheme*”, blog (2021).



Fig 9.3 | EXAMPLES OF MARKET SUCCESSFUL NFTS

made around \$6 million.²⁹⁶ The Hermitage partnered with Binance (a cryptocurrency exchange and blockchain ecosystem) to sell several “paintings,” including a digital copy of Leonardo da Vinci’s *Madonna Litta* that went for \$150,000.²⁹⁷ NFT marketplace NBA Top Shot generates hundreds of millions.²⁹⁸ In six months, \$7.2 billion passed through OpenSea alone, which is the largest platform for trading NFTs. (Fig. 9.3)

Why did NFTs become a hot item? Why are they more attractive than plots on the Moon, which has an embassy on Earth, or in other promising locations for settlement such as Mars? On the other hand, why not stake a claim to a

²⁹⁶ Most of the sales were generated by two video works, called *Earth* and *Mars*, which sold thousands of copies for \$7,500 each.

NFTs can certify the ownership of anything — sketches, music, or even brain scans — as long as the product is digital. The hype around them, however, is driven by sales of digital art. For example, a digital flower was sold for \$20,000:

This image of a pair of Socks went for \$60,000.

²⁹⁷ Five paintings from the Hermitage collection were sold in 2021 for a total of \$444,500. That same year, the museum accused Till Lindemann, lead singer of the band Rammstein, of illegally selling tokens featuring images of the museum taken from footage shot for of the “*Beloved City*” video.

²⁹⁸ NBA Top Shot is a vault of spectacular NBA action shots packaged into collectible sets with varying starting prices.

For more on other collections, see Lu M., “*A Visual Guide to Profile Picture NFTs*,” *Visual Capitalist* (2021).

piece of the Metaverse, which is being developed by Decentraland, VRChat and other companies, while it is still relatively cheap? Future generations will flock to settle there, and you will already be a resident. And there's this: NFTs certify ownership of digital objects that are available to anyone for free. In the absence of rarity, where does the value come from?

The boom in these tokens is akin to the jump in the price of GameStop shares, which also seemed to come out of thin air.²⁹⁹ In reality, thin air had nothing to do with it: a similar quasi-rarity market exists for photographs, stamps, and other items where the smallest differences in printing have a significant effect on pricing.³⁰⁰ Will NFTs generate billions of dollars out of the digital ether? Some say no — digital rarity is a sham.³⁰¹ Others expect the opening of a new chapter in art history, provided that the NFT bubble doesn't burst first.³⁰² Industry analysts predict that the NFT market will be worth \$250 billion by 2030. This impressive forecast can only become a reality if NFTs acquire a philanthropic purpose based on two essential conditions (I mentioned these earlier, but they both bear repeating).

The first condition is targeted support for creators and transparency about the productive forces of the non-utilitarian economy. As I mentioned, donors are entitled to reciprocal attention. This can take the form of answers to their questions, souvenirs, invitations backstage and to parties. The ladder of "sacrifices" is mirrored by the ladder of privileges described in Mauss' formula on the spirit of *hau* (Section 6.1.2) The ownership or co-ownership of a work through NFT sits at the top of this ladder, representing an advanced form of involvement. The only higher level would be creative union. Christie's auction house paved the way when it sold "Hello, World!" — the first message posted to Wikipedia by its founder, Jimmy Wales on January 15, 2001. (The lot sold for \$750,000.) Jack Dorsey turned his first tweet into \$2.9 million when the buyer voluntarily paid \$400,000 over his winning bid of \$2.5 million.³⁰³

²⁹⁹ *Sujata R., "Losses on short positions in U.S. firms top \$70 billion – Ortex data", Reuters (2021).*

³⁰⁰ Geoffrey Batchen, author of *Negative/Positive: A History of Photography*, writes that the market has always had ways to maintain value. Ansel Adams made no less than 1,300 prints from the negative of *Moonrise* (1941), but they were printed with uneven quality, so their prices are different.

The copies sold by the Hermitage are signed by Mikhail Piotrovsky, its director.

³⁰¹ Holden Shearer, for one, holds this opinion.

³⁰² *Gompertz W., "Everydays: The First 5000 Days – Will Gompertz reviews Beeple's digital work", BBC (2021).*

³⁰³ This was a conspiratorial wink to the audience by Sina Estavi, director of the blockchain company Bridge Oracle. Estavi is neither the first nor the only person to reverse the cause-and-effect relationship between value and price.

The second condition is that NFTs become a way to legitimize people's digital profiles. The virtual world follows the patterns of the real world. Unlike offline, where authenticity is verified by physical objects, online anyone can declare themselves the owner of a relic of Elvis Presley³⁰⁴ or display other markers of conspicuous consumption. Excuse me, but where is the evidence? NFTs can perform this function if they are included in a person's digital profile. They can certify involvement in great creations, such as the "one-of-a-kind" Nyan Cat GIF. Or the US Constitution.

A recent episode featuring the Constitution will help us see NFTs in the right light. The story goes like this: in 2021, the original manuscript was put up for auction, and a call went out on Twitter for people to chip in to buy it. Eighteen thousand people raised \$45 million at light speed, a company was created on the blockchain for the cause (the company was organized as a distributed autonomous organization, or DAO), and everyone received a share in accordance with their contribution as certified by \$PEOPLE tokens. Only there wasn't enough money, the manuscript was sold to someone else, and all DAO could do was settle up with its shareholders and disband.

But then something else happened: transactions with \$PEOPLE shot up to tens of millions of dollars a day, and the token's price skyrocketed. Why get involved in a failed project? For the sake of involvement. Successful or not, trying to buy the Constitution is the stuff of legends. Just think: the crypto community tried to buy its opponent's main founding document. Tokens are multifunctional and can operate as souvenirs, bets on price growth, and signs of belonging and self-identification.^{cxxxvii}

Most commentators fail to see tokens as an instrument of self-identification. Jonathan Jones, writing in *The Guardian*, found it infuriating that rapper Eminem purchased a picture of a bored monkey (Bored Ape #79) for \$450,000 (Fig 9.4).³⁰⁵

'It's all about the collector's ego' ... Eminape, Eminem's Bored Ape NFT. Photograph: Bored Ape Yacht Club

(The image was from a collection of 10,000 unique images on the Ethereum blockchain. The cartoon ape is a membership card in the Bored Ape Yacht Club and offers access to such vital benefits as a public graffiti board.) Eminem paid almost half a million dollars for a parody of art — it's clear enough what stung Jones. But it's strange that only Eminem came under fire, while, for example, Justin Bieber bought Bored Ape #3001 for \$1.3 million, or triple the asking price. And

³⁰⁴ A lock of Presley's hair, believed to have been cut when he enlisted in the US Army in 1958, sold at auction in Chicago for \$15,000.

³⁰⁵ Jones J., "The Bored Ape NFT craze is all about ego and money, not art", *The Guardian* (2022).



Fig 9.4 | 'IT'S ALL ABOUT THE COLLECTOR'S EGO' ... EMINAPE, EMINEM'S BORED APE NFT.
 Photograph: Bored Ape Yacht Club

like any good pet owner, he soon bought a little friend for his #3001 — Bored Ape #3850 — which cost him a mere \$470,000. With these purchases, Bieber joined Serena Williams, Gunna, Travis Barker, Stephen Curry, and others as yacht club members.³⁰⁶ While it is unlikely that everyone in this group has read Veblen and Bataille, they do have a firm grasp of the essence of conspicuous consumption.

Jones knows this, too, but when he saw the flash mob taking shape he concluded that “The Bored Ape boom, however, puts an end to any romanticism about NFT art. It puts the consumer experience first [should it be in last place? -Author] and has absolutely nothing to do with empowering artists.” But later in the piece, in a more emotional passage, we read: “Anyone can grab Eminem’s ape image online, but he owns the “original” and has the blockchain provenance to prove it.” (Exactly!) “It isn’t art that’s being sold here, but attitude. [...] It’s all about the collector’s ego.” [emphasis added] Jones issues this judgment without realizing the truth he speaks.

³⁰⁶ Van Boom D., “Bored Ape Yacht Club: NFTs explained”, CNET (2022).

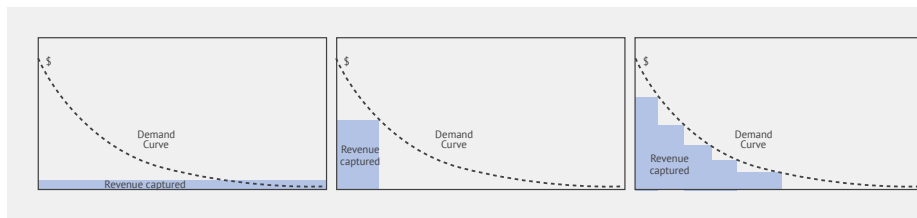


Fig 9.5 | MARKET COVERAGE OPPORTUNITIES THROUGH NFT SPLITTING
 From Dixon

Artistic minds have no trouble understanding the point: indeed, it is all about ego and attitude, including the purchase of bragging rights³⁰⁷ through cultural sponsorship (NFT-sponsorship).³⁰⁸ With NFTs, as with donations, creators' incomes, value indicators, and markers of status, identity and club affiliation all matter. Blockchain technology paved the way for all of this by removing the intermediaries and barriers to entry around philanthropy. NFT can be split: NBA Top Shot certificates are available starting at a few dollars; because of this, online communities can build their own microeconomies so that those who join them don't stumble over financial thresholds (Fig 9.5).

NFTs are relevant and hot. They are applicable to any entities both online and off, and they serve as an isthmus linking islands of digital content to the continents of life. Will they become drivers of the internet and, more generally, of the economy of higher needs? My preliminary answer is yes.

Up to this point, I have briefly presented tokens as a means of marking value in the content field, as a tool for cultural sponsorship and community formation. Now I want to relate all of this to institutional realities. I will also touch on the political aspect of cryptographic solutions — their importance for society's ability to govern itself, without which it is difficult to appreciate the value of NFTs. They are important in many other ways, too, and for Metaverse content, which many believe stands on the verge of a new stage of development.

³⁰⁷ "To be able to say that I'm the collector who actually owns and is a patron of this artist carries a certain kind of prestige that is really appealing to people," Lindsay Howard was quoted as saying in *The Verge* about the sale of the Nyan Cat GIF, adding "You also get to directly support an artist..."

³⁰⁸ Some understood this almost from the outset.

See, for example, *Fanella N.*, "Cashing In On The Sponsorship Potential Of NFTs", *Kore* (2021).

Before continuing this discussion of NFTs and their role in the internet of the future, let us consider the structure of status games. To succeed in launching that type of game — and that is our goal — it is useful to understand them not in general terms, but in detail, and to account for specific features that come into play on social networks and the internet. Successful games contain an element of mystery and cannot be disassembled down to the last screw. This is evidenced by the many failed attempts to copy them. But still, when solving the problem of “socializing” donations by incorporating them into games of prestige, it is important to be as knowledgeable as possible about the games themselves.

A helpful guide can be found in Eugene Wei’s essay “Status as a Service (StaaS),”³⁰⁹ which is read closely by anyone who has an interest in the development of social networks.

9.7.3. Status-as-a-Service

Wei explains that the key to understanding social networks is to view them as platforms for acquiring status. He conducts his analysis in a coordinate system where the axes represent social capital, entertainment, and utility. Notably, Wei thinks in the logic of a deficit of personal resources and, helpfully, in the logic of symbolic competition and group dynamics, which I summarized in Section 3.1 (and outlined in detail in earlier works). Of particular interest is the way he dissects status contents using clear, topical examples.

His reasoning is based on two principles: 1) people strive for status; 2) they look for effective ways to gain social capital. While he notes that both of these are universally recognized as driving forces behind social networks, they are rarely taken into account. The reason is the lack of instruments for measuring the symbolic. “We have longstanding ways to denominate and measure financial capital and its flows [...but] we have no such methods for measuring the values and movement of social capital. [emphasis added] The body of research feels both broad and yet meager,” Wei writes.^{cxxxviii} He compensates for the lack of data with participant observations and explains online behavior through the dynamics of social capital, without which the behavior would seem irrational. He also clarifies his two initial principles in greater detail:

³⁰⁹ Wei E., “*Status as a Service (StaaS)*”, *blog* (2019).

Eugene Wei was responsible for product development at Amazon, Hulu, Flipboard and Oculus. His article is quoted here with minor edits for length.

1. An analysis of social networks should include a study of the nature and rules of their status games. In other words, we need to understand how companies benefit from users' desire to boost their own status.
2. New social networks are like ICOs (initial offerings of cryptocurrencies to raise financing) because a) they develop their own forms of social capital that are different from those used by other networks, in this case called tokens; b) the tokens have to be earned; c) over time, they become harder to obtain.
3. While the status games within social networks may seem shallow, there are rules that they have to follow. The key rule concerns merit, or what is known in the blockchain world as "proof of work." We will soon see how this is a fundamental feature of social networks.

Wei explores this idea in detail, explaining that there is no easy way to build social capital by linking value with scarcity (Section 5.9): "While you can outsource Bitcoin mining to a computer, people still mine for social capital on social networks largely through their own blood, sweat, and tears. [...] As with cryptocurrency, if it were so easy, it wouldn't be worth anything. [...] It's not that a social network that makes it easy for lots of users to perform well can't be a useful one, but competition for relative status still motivates humans. [...] By definition, if everyone can achieve a certain type of status, it's no status at all, it's a participation trophy."

That is the whole point of the barriers that social media puts up: on Facebook, you need a valuable status update; on Instagram, you need an interesting photo; Vine requires you to post an entertaining 6-second video; Twitter used to have a character limit. As further confirmation, Wei points to Prisma, which offered users a filter that turned any photo into a painting; the app never matured into a social network because the filter was so good that there was no way for individuals to stand out. That status game had no framework and players had no one to follow (and, I would add, look up to), which is why the game never took off. Instagram, on the other hand, succeeded because its photo filters left plenty of room to show off skills.

Wei has good reason for rehashing what looks like an obvious idea — the labor intensity of status games — since things grow significantly less obvious when we are looking at a photo competition on the topic of what you had for lunch today. In track and field or swimming, we know what the high scores mean. The efforts of social network champions may seem dubious, but only in the eyes of those who miss the essence of the deficit

being competed for. Producing value seemingly out of thin air, social networks gain popularity not by chance, but by figuring out the recipe for a unique form of status that users value and can earn through efforts, allowing them to build a hierarchy.^{cxxxix}

4. A social network's success with various demographic groups is determined by the gradient (fastest rise) of return on investment in its social capital. Young people are more sensitive to the payback period on their efforts and therefore prefer Instagram to Twitter.^{cxl}
5. Social media grows to a certain point.
 - Peak membership depends on a network's proof of work because it determines the number of active users with the skills to compete successfully in that arena. (TikTok users have to know how to make videos.)
 - Social networks can suffer from the winner-take-all effect (Matthew Effect) if their algorithms over-reward users who gain a lot of followers early on and allow them to coast along at the top of the leaderboard, regardless of the quality of their content. When newcomers see this, they go elsewhere.^{cxli}
 - Success is a trap for social networks because it generates noise in users' feeds and necessitates the use of recommendation algorithms. But when social networks solve this problem, they end up creating another: users no longer want to share content, and it becomes more difficult for newcomers to make headway.
6. "Status relies on coordinated consensus to define the scarcity that determines its value. Consensus can shift in an instant [...]. In the beginning, a status hierarchy requires lower status people to join so that the higher status people have a sense of just how far above the masses they reside. [...] When the definition of status is distributed, often one minority has disproportionate sway. If that group, the cool kids, pulls the ripcord, everyone tends to follow them to the exits. In fact, it's usually the most high status or desirable people who leave first, the evaporating cooling effect of social networks. At that point, the product or service better have moved as far out as possible on the utility axis [...]."
7. Social networks are vulnerable to an influx of outside groups. One example is the mass exodus of young people from Facebook as soon as their parents made accounts. Snapchat played off of this by offering security (short-lived messages) and UX/UI design that scared off ignorant grownups. Selfies, as Wei writes in another article, act as a second language that protects its users from unauthorized access.

8. If the method a social network provides for users to gain status remains unchanged for a long time, eventually everyone gets the hang of it and at that point most of the social currency is exhausted. Status incentives weaken and the social network becomes obsolete. As a rule, the largest social networks manage to maintain a reserve of social capital.

“Instagram began with square photos and filters; it’s since removed the aspect ratio constraint, added video, lengthened video limits, and added formats like Boomerang and Stories. Its parent company, Facebook, arguably has broadened the most of any social network in the world, going from a text-based status update tool for a bunch of Harvard students to a social network with so many formats and options that I can’t keep track of them all. These new hurdles are like downloadable content in video games, new levels to spice up a familiar game. [...] A new game offers a new set of levels and challenges, and players jump into the status competition with gusto. But, eventually, skill differentiation tends to sort the player base cleanly. Players rise to the level of their mastery and plateau. [...] [T]he dopamine hit of accomplishment dissipates.”

Wei is saying sensible, important things about social networks that align with my interpretation of the economic theory of clubs (Section 3.6.2), according to which the quality of a club is related to its size: the best clubs are neither empty nor overcrowded. What clubs a person belongs in determines the quality of their life. Clubs are where we a) establish personal and professional connections, b) find topics for communication, c) discover fields of activity. Clubs are a key form of human existence in society; they allow us to live our own separate lives without suffering from loneliness.³¹⁰

Wei’s theses are also consistent with the theory of stars (Appendix 4), which states that waves of generations generate innovations because of the vital need to stay off the beaten path, where they have little chance of success, and find room to act. In doing so, they devalue the locations inhabited by their predecessors and create their own. (Wei frames this idea in terms of crop rotation.³¹¹)

³¹⁰ As I explained in another work, the entire system of signs, texts, and signals is, on the one hand, a secure entry system for clubs where insiders are welcome and strangers are not; on the other hand, it is the information menu that is consumed within the clubs. This is described in detail in my book *Manifesto of the New Economy (Section 1.2: Consumption as a Language, or why society needs diversity)*, as well as in my article on clubs “*How We Can Become Negotiable, or a Practical Guide to Collective Action*” (*Beginnings of an Economic Theory of Clubs*).

³¹¹ He also points to practices in the world of fashion, which could teach social media a few things. As a person who used the example of fashion to understand how club dynamics work see Dolgin A., *The Economics of Symbolic Exchange* (2009). I completely agree with him.

In addition to statuses, Wei includes the utility factor in his analysis, looking at the following combinations: 1) utility without social capital;^{cxlii} 2) social capital and low utility; 3) both social capital and utility. According to Wei, this last option is the ideal, as embodied by WeChat. It can be achieved various ways. One is to provide utility first, followed by social capital (“Come for the tool, stay for the network.”³¹² Instagram is an example of this, beginning its rise as a utility with filters that eventually faded into the background. The reverse strategy would be to provide opportunities to gain social capital, with utility coming later (“come for the fame, stay for the tool”). Think IMDb, Wikipedia, Reddit, and Quora.

Wei models how communities respond to status erosion thus: a social network may be built on providing entertainment or utility, but “...the addition of status helps us to explain why some networks which seemingly offer little in the way of meaningful utility...still achieve traction.” It’s hard to climb high on one thruster, and a social network that loses heat before it has utility can shrink just as quickly as it blew up. How Wei applies his theses to the problem of the fragility of social capital is especially interesting, but the main takeaway is this: people want to gain status, which only has value if it is earned.

We will see more of this in the following analysis, where I present the internet of the future as a breeding ground for donations.

³¹² Dixon C., “Come for the tool, stay for the network”, blog (2015).

CHAPTER X.

**WEB 3 AND THE ROLE
AND FUNCTION OF NFTs**

In this chapter, we will consider three possible futures for the internet: the first is cryptographic; the second is called the Metaverse, and the third is known as the Semantic Web. I will outline what is happening with each of them, maintaining my focus on the issue of content certification. The information society is overwhelmed with content and relies on traditional filters that do not even come close to coping with the rate at which content is generated. This causes a number of derivative problems that make up the agenda of our time; however, they are usually considered as separate issues, in isolation from the root problem. Without dealing with that root cause, we cannot solve any of these problems, and the only solution is to modernize the institution of public status and reputation through the launch of crowdsourced evaluations of content and those who produce it.

10.1. CRYPTOGRAPHIC INTERNET

In late 2021, the fund Andreessen Horowitz published a manifesto entitled “How to Win the Future: An Agenda for the Third Generation of the Internet.”³¹³ Without defining the third generation — “...a task too large and too important for any organization to tackle on its own” — the fund, a leading investor in cryptocurrency, described it as “encompass[ing] blockchain, cryptographic protocols, digital assets, decentralized finance and social platforms, NFTs, and DAOs.”^{cxliii}

What is the justification for putting blockchain technologies (the catchall name for a whole set of technologies) at the forefront? According to the fund, the blockchain is a more advanced and modern way of doing business online. Web 2.0 brought the world many good things, but it also produced “...privacy breaches, disinformation, monopolistic practices, and algorithmic biases... Web3 isn’t just a new wave of innovation. It’s an opportunity for a reset that allows us to [...] solv[e] some of the thorniest problems arising out of the disruptive technologies of the past” while ending the omnipotence of platforms, returning control of digital property to the people, and helping to “...fix many of our existing institutions.” [emphasis added] This, according to the fund, is the mission of Web3.

In the words of Dror Poleg, “Google (and Baidu) tracks all our queries, Facebook (and Tencent) monitors our social interactions, Twitter (and Weibo) decides what we’re allowed to share, Amazon (and Alibaba) dominates retail, etc. Above these corporate giants, governments from Beijing to D.C. encroach on the free flow of information in the name of ‘social harmony’ or ‘public health.’ Crypto and blockchain-based applications aim to steer the web toward its original vision: an open network, based on public-domain protocols, controlled by no one. It promises to enable “decentralized” alternatives to the tech and government giants we all know and love.”³¹⁴

Honestly, the idea of encryption — and this is the essence of cryptography — to make the web more convenient to use is unexpected and just crazy enough to take off. Thanks to cryptocurrencies and NFTs, this idea has occurred to many people, with some categorically denying blockchain while others consider it a cure-all. For the former, the blockchain’s only value is as an immutable record, but that is not what users care about. From their point of view, NFTs are nothing but a pyramid

³¹³ A16Z, *How to Win the Future: An Agenda for the Third Generation of the Internet* (2021).

³¹⁴ Poleg D., “*Crypto and the Conservation of Centralization*”, blog (2021).
Poleg D., “*Hype-Free Web3*”, blog (2022).

scheme.³¹⁵ The latter like the blockchain because it offers opportunities to move accounts and content, receive payment for contributions, and enjoy independence and freedom from censorship.

The fund's message to the US government is this: "Many leaders around the world have started expressing clear views on what they don't want from technology. We believe it's time for an affirmative vision of what we do want." According to the Andreessen Horowitz manifesto, leaders around the world have begun expressing clear views on what they don't want from technology. The fund's message to the US government is that it's time for an affirmative vision of what we do want: openness and inclusivity; good governance; decentralization; sustainability, accountability; security; value for individuals and communities instead of middlemen; fair distribution of authority, resources, income, and information; participatory governance; innovation and creativity...

Health and happiness did not make it onto the list, but that is a minor omission. But something more significant is missing: the manifesto gives not even a hint at how the crypto-web will "fix existing institutions." Let's assume that decentralized applications (Dapps) crowd out the Apple Store (difficult to imagine, but possible). Will they edge out Google, too? And Facebook, and the other social networks, and the gaming platforms? How does decentralization work with division of roles and powers, or with differences in qualifications? No answer is forthcoming. The same is true of creativity. The manifesto declares war on gatekeepers who rob creators,^{cxliv} but what about the Matthew Effect, which predetermines the gaps between their incomes? It has nothing to say about this.

Much else of interest is passed over in silence, and this is explained by the fact that the manifesto's goal is not PR, but GR, and it is addressed not at a broad audience or the crypto community, but at the US government. US authorities are called upon to recognize de jure what exists de facto. Inaction, the fund warns, will not end well: given that more than half of Americans see cryptoassets as the future of finance, almost one-quarter already own them,^{cxlv} and a total of over 200 million people around the world have contact with cryptocurrencies,³¹⁶ it would not be wise to make them all outlaws. Cryptocurrencies

³¹⁵ Andy Day writes that the tokens are a pyramid scheme for people with FOMO (fear of missing out). Day A., "NFTs Are a Pyramid Scheme and People Are Already Losing Money", *FStoppers* (2021).

David Gerard insists that NFTs were invented for the benefit of "crypto grifters." Gerard D., *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum & Smart Contracts* (2017).
Weaver N., "The Web3 Fraud", *Usenix* (2021).

³¹⁶ According to Coinbase CEO Bryan Armstrong.

must be legalized, their status as securities or non-securities must be defined, a single regulatory body must be established, and banks must be permitted to transact with the currencies, among other things.

Ironically, the people calling on the government to cooperate are the very people who have been sawing away at the branches they are sitting on. It's no secret that crypto owes its popularity to shadow transactions, and the legalization of income from NFTs will make art the ideal money-laundering tool that is also accessible to the public.^{cxlvi} The manifesto's diplomatically masterful task is to formalize the petition in such a way that the government accepts it and crypto-enthusiasts don't lose heart when they see the price of reconciliation. Hence the assurances of loyalty, willingness to cooperate, and tax transparency, which mean surrendering everything that is emblazoned on the banner of the cypherpunk movement that gave birth to the crypto-web in the first place.

Knowing full well that the government will not allow private money to be used widely, the fund formulates its agenda proactively with the goal of at least shoring up the status quo. But how to appease ideological opponents other than by offering to pay taxes? What promises might move them? Here's the answer: digital leadership,^{cxlvii} the supremacy of the dollar and the US financial system's leading role in the world. If the government takes the crypto-web under its wing, it will be able to defend democratic values; otherwise, leadership will pass to Dubai and China, which have other priorities. Judging by President Biden's March 2022 executive order, this argument has had an effect.^{cxlviii}

10.1.1. Digital Property, Monopolism, and Decentralization

Let us now turn to the fundamental ideas of the cryptographic web. That said, we will not yet touch on its widely discussed drawbacks, such as its snail's pace, high transaction costs,^{cxlix} and carbon footprint.^{cl} For the time being, let's agree to consider all these things "childhood diseases," although it's worth saying right off the bat that high commissions (the price of "gas," if you will)^{cli} are holding back blockchains in a way that will be difficult to change because this is the industry's business model and no other model has been invented yet.

Three major promises of the crypto web deserve our attention: security for digital property, user anonymity and privacy, and decentralization. To assess their feasibility, let us turn to a sensational essay from Moxie Marlinspike, a cypherpunk and creator of the secure communications service Signal (writing un-

der the pseudonym *moxie0*), in which he shared his impressions of Web3.³¹⁷ Those impressions were ambiguous, to put it mildly, and can be condensed down to the idea that the blockchain is not the universal cure advertised.

10.1.1.1. Confidentiality in Web3

Cryptocurrencies are associated with anonymity because the transactions do not require any form of ID. But in reality, we are talking about pseudo-anonymity, since all the transactions are recorded and stored in a public ledger. Moxie takes a different angle. He explains that almost all decentralized apps interact with the blockchain via the services Infura^{clii} or Alchemy, and what happens is the same as when you search online: your query is first sent to Google, and then it goes to its destination and back. Since people don't run their own servers (that would be a hassle), all their transactions in the crypto space are mediated by centralized services that we have as little reason to trust as the platforms.

"...[T]his is very similar to the situation with email. I can run my own mail server, but it doesn't functionally matter for privacy, censorship resistance, or control — because Gmail is going to be on the other end of every email that I send or receive anyway. [...] That's the situation with Ethereum today. All write traffic is obviously already public on the blockchain, but these [service] companies also have visibility into almost all read requests from almost all users in almost all apps." This, of course, leads one to wonder if there has been any progress in confidentiality. It seems the answer is negative, and it certainly isn't time for those who hate internet censorship to relax.^{cliii}

10.1.1.2. Property on the Cryptographic Web. Moxie's Test

When you buy a movie on Amazon Prime or a song on Apple Music, you become tied to those services; if you leave, you lose access to your purchases. That is not the case with NFTs, which can be bought on one platform and transferred to another without anyone's permission; a crypto wallet like Metamask or Rainbow provides access to funds and assets on the blockchain without the need to log into any platform. Moxie decided to see if that really worked, so he created an NFT on OpenSea. Furthermore, he cleverly uploaded different images in response to different requesting site IP addresses, so that the token displays differently depending on where you view it (Fig 10.1).

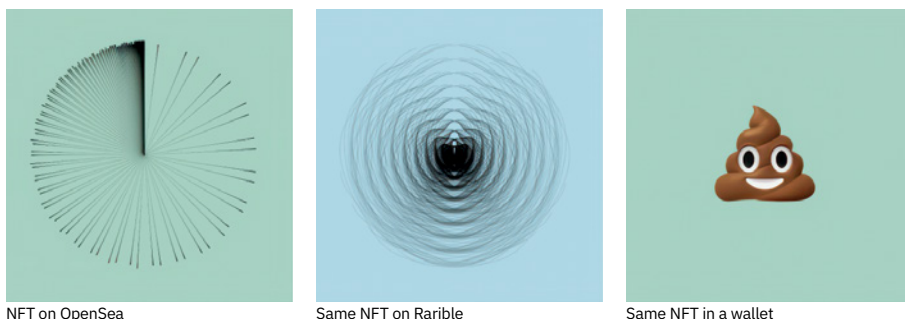


Fig 10.1 | DIFFERENT IMAGE DISPLAY OPTIONS FOR THE NFT TOKEN DEPENDING ON THE VIEWING LOCATION

Initially, he could see the NFT in his crypto wallet, but then it disappeared. As it turned out OpenSea removed it on grounds that Moxie allegedly violated its terms of service, even though the terms do not prohibit the use of NFTs that change depending on where they are viewed from. “This is Web3, though, how is that possible?” he exclaims. Wasn’t the whole point supposed to be that one could delete a user’s data and assets without the user’s knowledge and consent? And isn’t this what fundamentally distinguishes Web3 from Web 2.0? Skipping over the details of his explanation, the reason lies in the fact that the blockchain is not a repository of content, but a library of links without control over the content. “There’s nothing in the NFT spec that tells you what the image ‘should’ be, or even allows you to confirm whether something is the ‘correct’ image. [...] Instead of storing the data on-chain, NFTs instead contain a URL that points to the data. What surprised me about the standards was that there’s no hash commitment for the data located at the URL. [...] NFTs [are] being sold for tens, hundreds, or millions of dollars, [and] that URL often just points to some VPS running Apache somewhere.”

Figuratively speaking, an NFT is a unique piece of paper with a serial number and password. Storing real data in it, even a light 64x64 jpg image, is prohibitively expensive. This means that NFTs are only weakly protected from copying, modification, deletion, and other actions on the objects they reference.³¹⁸ It is possible, for example, to sell a token for something you don’t own, or to release a lot of NFTs of an object after you’ve sold it, or to lose an asset due to a server incident or due to link rot.³¹⁹ Anyone who owns a domain name can change the image, title, description, and other attributes of an NFT.

³¹⁸ According to some reports, over 80% of NFTs released for free on OpenSea are fake, plagiarized, or spam.

³¹⁹ *Castor A., “WTF is an NFT? Here’s a rundown of the basics”, blog (2021).*

Any property is vulnerable to some degree to the actions of bad actors; as for digital property, it is clear that security may not keep up with technology. Cryptographer Moxie, who would have been an excellent hacker, discovered a hole. But is the picture really as gloomy as he painted it? Proleg took the trouble to study Moxie's provocative test and, as a result, generally rehabilitated the technology: "But even though Moxie's NFT did not appear in his wallet app, it still existed, and Moxie was still its owner. The failure to see the NFT was a problem with the wallet app's architecture and the API it relied on. The wallet app relied on an API instead of verifying information directly on the blockchain.... Indeed, you can see that NFT on Rarible, an OpenSea competitor."^{cliv}

10.1.2. Does Blockchain Provide Decentralization?

Let's move on to the most fundamental and controversial aspect of the cryptographic web: decentralization. It's an important topic — that much is an understatement. It is the ideological core of this version of the web; pursuing it will determine whether decentralization will become the main path of human development or whether Web3 will remain a unique but niche technology. The thesis of decentralization runs like a thread throughout this book, holding together all the informational, economic, political, social, and cultural subplots, hence our interest in blockchains, how they deal with decentralization, and how they solve well-known issues with distributed interaction.

After all, no matter what question comes up in discussions of the future of the internet, the underlying idea is always the transition to distributed, networked interaction and expertise. This civilizational trend is founded in people's desire to be the masters of their own fate. Although the transition is difficult and risky, the alternative is an all-consuming bureaucracy, a new class system, the enslavement of the human being, and the reproduction of a medieval worldview in which everyone knows their place and stays in it.

Society faces a choice: either we move towards network structures or we reproduce and multiply hierarchies, dooming ourselves in the process to increasingly strict regulation. The second path will lead to an increase in Marxian tension between the forces of production and the relations of production. The forces of production rise a step higher, but the patterns of power remain the same; opportunities for the self-realization of the individual are not added — rather the opposite. This is driven by competition for quality positions and roles that heats up due to their relative scarcity when compared to the abundance of quality human resources.

To their credit, Andreessen Horowitz shares this vision: decentralization is stated as the organizing principle, and blockchain technology is what will make

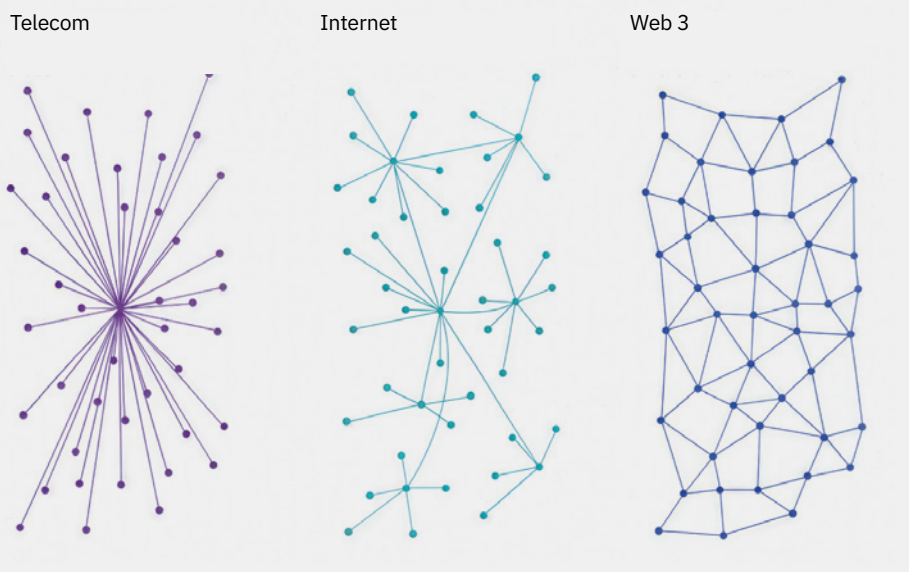


Fig 10.2 | WEB 3 IS DECENTRALIZED AND DISTRIBUTED

it come to fruition.³²⁰ What follows is an analysis of how justified this belief is. Whatever conclusions we reach — and they are, I must admit, ambiguous — we must realize what is at stake: we stand poised between Hobbes’ Leviathan and self-government. This is directly related to donations and their influence on social structures and relationships.

As viewed by Chris Dixon, a16z’s general partner for Web3, Web 1.0 was decentralized, dominated by producers and users; Web 2.0 has become the domain of a handful of companies taking most of the money; Web3 will absorb the best of both of its predecessors through decentralization (Fig 10.2).³²⁰

Let’s skip the attacks on the “handful of companies” and not get distracted by discussions about whether it is necessary to topple Google and other platforms in order to “win the future.” Instead, we should first make sure that the blockchain is free from the original sin of centralization. This seems self-evident in the version presented by Andreessen Horowitz, but knowledgeable individuals say that the blockchain is not at all as decentralized as one might believe from the story told to the public. As Jack Dorsey, co-founder and former CEO of Twitter (X) tweeted, It’s ultimately a centralized entity with a different label. Know what you’re getting into.”

Again, Moxie helps us out. He, too, came to the conclusion that although the blockchain is decentralized, centralization arises on top of it. Dixon’s elegant

³²⁰ Dixon C., “Why Web3 Matters”, a16zcrypto (2021).

scheme, where the current web is very centralized and Web3 will decentralize everything, is wishful thinking. “When people talk about blockchains,” Moxie writes, “they talk about distributed trust, leaderless consensus, and all the mechanics of how that works, but often gloss over the reality that clients ultimately can’t participate in those mechanics. Blockchains are designed to be a network of peers, but not designed such that it’s really possible for your mobile device or your browser to be one of those peers. [...] So the only alternative is to interact with the blockchain via a node that’s running remotely on a server somewhere.”³²¹

It’s the same problem as with NFTs: access to Web3 infrastructure is mediated by API. And while the blockchain itself is decentralized, most applications based on it deal with bottlenecks that are centralized. Poleg illustrates this point of Moxie’s using the example of gold in a bank: “When [a client] logs into the bank’s app to check his gold balance, the app doesn’t send a person into the vault to check how much gold is there or whether someone tampered with the vault’s key. Instead, it simply shows data from a third-party database that records the inflow and outflow of gold bars [...] it’s much easier [...] than send[ing] someone in person each time a client logs into the app. Ethereum-based apps use API providers for the same reason: it’s easier and simpler for them to do so rather than verify every query on the blockchain itself.”³²²

Moxie identifies two roadblocks in moving away from centralization. First, “... people don’t want to run their own servers, and never will.” This goes back to Web 1.0, which started with the idea that everyone would be both a creator and a consumer of content and both a contributor and consumer of infrastructure; eventually, however, people chose not to bother with hardware, and the market’s response to that was the centralized web.

Second: “A protocol moves much more slowly than a platform. [...] If something is truly decentralized, it becomes very difficult to change... [T]he rest of the ecosystem is moving very quickly, and if you don’t keep up you will fail. [...] When the technology itself is more conducive to stasis than movement, that’s a problem.”³²³ Moxie believes that this shortcoming is baked into the blockchain as its protocols are also non-adaptive. This affects, for example, how royalties are handled. Royalties are not specified in the NFT standard (ERC-721), so OpenSea configures them at its own discretion and to its own benefit, reproducing the same drawback of Web 2.0 (rent paid to platforms) against which Web3 has built its PR campaign.

³²¹ Marlinspike M., “My first impressions of Web3”, blog (2022).

³²² Poleg D., “Unpacking the Web3 Sausage”, blog (2022).

³²³ Marlinspike M., “Reflections: The ecosystem is moving”, Signal blog (2016).

According to Moxie, the distributed ecosystem is doomed to consolidate around a platform, and this is no mere sign of the blockchain's growing pains: in the future, centralization will only increase and "...it becomes the worst of both worlds: centralized control, but still distributed enough to become mired in time. [...] [T]hese [market] forces will push us further from rather than closer to the ideal outcome..." Therefore, it is in vain that "...the Web3 community expects some other outcome than what we're already seeing."

Many others share Moxie's position but express it more harshly. Network security researcher Nicholas Weaver calls Web3 a scam, explaining that its "[t]echnical underpinnings are so terrible that it is clear they exist only to hype the underlying cryptocurrencies."^{clvi} "Decentralized" (Weaver puts air quotes around the word) systems are much less efficient than existing technologies. He also brings up the problem of gatekeepers — the entities that control access and protect users from scammers and spoilers — and since decentralized systems depend on some form of voting, attackers can create puppets to deliver a majority of votes (a Sybil attack).^{clvii}

Blockchain developers are aware of the issues Moxie raises and are working on them.³²⁴ Ethereum creator Vitalik Buterin responded to Moxie's criticism, admitting its relevance to the current state of affairs but not to the future. Buterin blamed the wheel-spinning on an earlier lack of funding and wrote that today, with funds in hand, the bottlenecks are successively being cleared. Although decentralized options are still inferior to centralized ones in terms of convenience, this will pass and "...the properly authenticated decentralized blockchain world is coming, and is much closer to being here than many people think." After this brave proclamation, the standard-bearer of technology backtracked somewhat, complaining that new projects are slow to gain traction, while centralized solutions have a head start of many years. This is exactly what Moxie pointed out.

Now let's hear from a blockchain supporter who was wounded by Moxie's criticism. Crypto evangelist and Web3 advisor at a16z Packy McCormick^{clviii} stood up to denounce Moxie as a "denier," as did Jack Dorsey and their fellow traveler Scott Galloway.^{clix} Leading with ad hominem arguments as is customary in this confrontational milieu — the most innocent of which was detractors are criticizing the blockchain as they invest in crypto — McCormick executed a postmodernist deconstruction and plasticized the idea of decentralization: "...[S]ome things should be centralized and others should be decentralized. [...] Everything, everywhere, always is about tradeoffs. Web3 is no different."

³²⁴ See *Buterin V.*, "Endgame", *blog* (2021).

Wait, how can this be? Web3 waves the banner of decentralization, and the idea lives in the hearts of millions. The a16z manifesto mentions it more than a dozen times, not counting the illustrations, and the fund’s tone of voice is renegade revisionist. They go further than their opponents, stating that a completely decentralized future is impossible. Some people need centralized services, others need completely decentralized ones, and yet others choose intermediate points along the spectrum to suit their purposes. There needs to be a choice, and Web3 offers that. The opposition has tried everything to reduce the debate to centralization versus decentralization, McCormick writes. If centralization exists anywhere — in capital investment, in the technology stack, or in the platforms consumers choose — then the opposition will claim that Web3 is bad. They point out that centralization exists in some places, but that is no surprise. McCormick offers no counterarguments because that is not what he is talking about.^{clx}

Next, McCormick goes after his opponents, with Professor Galloway coming in for the worst of it for distorting McCormick’s “canonical” definition of the third web: “Web3 is the internet owned by the builders and users, orchestrated with tokens.”^{clxi} The professor created a straw man argument by introducing an extra word into the definition.³²⁵ The added word was “decentralization.” Here it is in Galloway’s version: “Web3 is a decentralized version of the internet where platforms and apps are built and owned by users.” [emphasis added] Andreessen Horowitz’s political screed plainly says the same thing. And yet McCormick, the fund’s Web3 advisor, does not feel that decentralization is fundamentally important.

So we have a resounding “yes” for decentralization, followed by a “maybe” and finally “it doesn’t matter.” Whatever anyone says about it, decentralization is not included in the crypto web doctrine just for looks. It determines the balance between individuals and power, wherever that power originates from. How Web3 works out this aspect of the social structure will determine much in the future, including the virtual state and the very possibility of its existence, which will be discussed in the chapter concerning the second version of Web3 — the Metaverse (See Section 10.2.4).

If we sift out the chaff in this argument and get to the heart of the matter, what angered McCormick was the infantile “either/or” to which the discussion — like many others — descended.^{clxii} Decentralization is, by definition, the dispersal of the power, functions, resources, and forces of a governing body. The question is to what extent that dispersal takes place. McCormick ought to have outlined the gradations of authority as businesses do when delegating responsibilities^{clxiii} or as is customary in property matters: after all, children are the

³²⁵ A straw man argument creates the impression that the opponent’s idea has been refuted while, in fact, it merely replaces the subject of the dispute with a false one.

only people who think that owning a thing means doing with it what you want, while adults operate with the bundle of property rights, which sometimes means they can't replace a window in their own apartment without the consent of their board. So why didn't he mention a bundle of powers?

Moxie took a step in that direction, but McCormick got nowhere near the point. He said not a word about the essence of the question: which useful actions are feasible and which are not in a peer-to-peer decision-making system. Poleg outlined the first, generally understandable fork: decentralization of ownership and decentralization of use. Applying Clayton Christensen's theory of disruptive innovations, which states that each wave of decentralization gives rise to a parallel wave of centralization, he derived the same for the web: taking power away from some actors will almost certainly lead to a concentration of power in other entities. "When one part of the web gets decentralized, another part necessarily gets more centralized." Poleg intuitively feels that the trillion-dollar question is what exactly will be centralized in a decentralized Web3.³²⁶

I see this issue the same way, and I will return to it later (see Section 10.1.8.1 and Section 10.2.7). For now, having outlined our positions in this discussion, let's try to get a handle on decentralization and cryptocurrencies, as well as the future of blockchains.

10.1.3. The Political Economy of Cryptocurrencies. Does Private Money Have a Future?

This question is relevant in two ways. First, the crypto environment is conducive to donations, and it is important to understand how they fit into it. Second, the experience of monetary innovation on such a large scale is valuable, because donations will take the same road. Friedrich von Hayek, who considered the state monopoly on money a flaw in the social order and put forward the idea of private money,^{clxiv} would be delighted to see the competition from cryptocurrencies. Questions about them remain, however, including: Can they serve as money in principle? If so, will governments allow it? Hayek's idea was received coldly at first, but later economists warmed up to it with the help of Milton Friedman, who published a landmark 1986 paper on whether the government has any role in money, in which he basically adopted a subversive position against financial foundations.³²⁷

³²⁶ Dror Poleg *Crypto and the Conservation of Centralization*. You can't decentralize the web. You can only kill old winners and pick new ones.

³²⁷ Friedman M., Schwartz A., "Has Government Any Role in Money", *Journal of Monetary Economics* 17 (1986), 37–62.

Decades have passed since then, and it is worth looking at what economists today think about cryptocurrencies, which are a digital version of private money. I can tell you right away that they think nothing good of it. Alan Greenspan and Robert Shiller rejected cryptocurrencies, calling them a speculative bubble. Warren Buffett called Bitcoin “rat poison squared.” Bill Gates has spoken negatively of cryptocurrencies, although he does note the value of the blockchain. Jamie Dimon called cryptocurrencies a scam,³²⁸ and Nouriel Roubini called them a way to make money out of thin air.³²⁹ Legions of skeptics relished these statements by influential economists and financiers, while true believers brushed them aside.

Let’s first listen to Roubini, an expert on financial crises and bubbles — including crypto bubbles — as he was heard by the US Senate Banking Committee when he reported on cryptocurrencies and the blockchain ecosystem in October 2018.^{clxv} In that report, Roubini attacked cryptocurrencies and presented crypto as a whole as a corrupt ecosystem full of scammers, charlatans, carnival barkers, self-interested insiders, and outright criminals.³³⁰

Being money means serving as a functioning unit of account, a means of payment, and a savings instrument. According to Roubini, neither Bitcoin nor any other cryptocurrency can handle any one of these functions and never will. The first — but not only — reason for this is that they do not have, and never will have stable purchasing power.^{clxvi} “...99.9% of all crypto-currencies have no backing whatsoever of any sort and have no intrinsic value of any sort; and even the so-called ‘stable coins’ have only partial backing at best with true US dollar reserves or ... no backing at all...” And “...crypto-currencies are creating crypto money supply and debasing it at a much faster pace than any major central bank ever has.” For these reasons, it is meaningless to talk about stability.^{clxvii}

Roubini also says that for money to produce economies of scale, only a few types of money can coexist. The idea of hundreds of cryptocurrencies working side-by-side goes against the logic of money as a measure of the relative prices of thousands of goods. In Roubini’s crypto-dystopia, every product and service will have its own token and consumers will be lost trying to figure out prices. “[I]t is utterly idiotic [...] like the stone age of barter....” He asks the committee members to imagine they live in a country where there are 200 currencies.

³²⁸ Imbert, F., “JPMorgan CEO Jamie Dimon says bitcoin is a ‘fraud’ that will eventually blow up”, CNBC (2017).

³²⁹ Roubini N., “Blockchain isn’t about democracy and decentralisation – it’s about greed”, *The Guardian* (2018).

³³⁰ Roubini N., *Exploring the Cryptocurrency and Blockchain Ecosystem* (2018).

The subtitle reads: “Crypto is the Mother of All Scams and (Now Busted) Bubbles.”

“There would be widespread price confusion, and you would have to eat the cost of converting one volatile currency into another every time you wanted to buy anything. [...] The fact that everyone within a given country or jurisdiction uses the same currency is precisely what gives money its value.”

We can accept some of Roubini’s arguments and still debate with him on a number of points. His statement that “[s]ince the invention of money [...] there has never been a monetary system with hundreds of different currencies operating alongside one another” contradicts economic history about periods of competition by private money.^{clxviii} And Roubini certainly went overboard with his fears about price confusion due to multiple currencies. It is perfectly easy to recalculate price tags in whatever currency interests the buyer, and there is no technical barrier to reducing currency conversion costs to zero.^{clxix}

Hayek did not actually envision a pandemonium of currencies or a Tower of Babel; what he had in mind was a competition with one or more winners. But Roubini is saying that the idea that a single cryptocurrency could replace fiat money is untenable. He proves this using the example of Bitcoin, the supply of which is mathematically limited to 21 million. This would seem stable and non-inflationary. But Roubini explains that Bitcoin’s seeming advantage is really its Achilles heel because, as economists know well, if the money supply is not adjusted in line with GDP the result is deflation (lower prices).

When deflation happens, people stop buying goods because they hope to buy them more cheaply tomorrow, which leads to overstocking and halted production. Rising real wages, regardless of labor productivity, further increase the risk of economic disaster, as Americans might remember from the Great Depression. When Roubini says that bitcoin “...will never be able to stabilize recessions, deflations, and financial crises; [it] will rather lead to permanent and pernicious deflation,” it is hard to disagree with him if we accept that Bitcoin will replace all existing money and become the only option. But that is not entirely true, provided that it is used in parallel with other currencies and that it has its own zone of circulation, just like the Euro or the Yen. The Metaverse, for example, could become such a zone.

Deflationary bitcoin is the hidden problem of the 21-million limit.³³¹ And when the coin’s promoters present this as a virtue, they are not just being disingenuous and taking advantage of the economic illiteracy of the audience. Clearly, Roubini exclaims, they are cheating. He points to the fork of Bitcoin Cash and Bitcoin Gold.³³² “Ditto for the various forks [splits of programming projects and

³³¹ Bitcoin shares the useful features of gold, as well as the inflexibility that led to the world to abandon the gold standard.

³³² *Peters K., “A History of Bitcoin Hard Forks”, Investopedia (2021).*

teams] and spin-off of Ether from the Ethereum cartel. [...] [H]undreds of other cryptocurrencies are invented every day, [...] and their supply is created and de-based every day [...] in the most arbitrary way.”

Roubini also pointed out 1) a critical flaw in cryptocurrency security that takes us back to the age of buried treasure; he is talking about the encryption key, which users are advised to write down on a piece of paper,^{clxx} 2) the threat posed by China, which dominates the Bitcoin ecosystem and is capable of undermining other cryptocurrencies [this threat was removed in 2021 when China banned mining];^{clxxi} 3) energy consumption,^{clxxii} and 4) centralization of cryptocurrencies. (He considers crypto decentralization to be crude fakery.)

Here’s the gist of Roubini’s argument: in addition to the fact that crypto money is fundamentally untenable, in addition to the criminality and practical inconveniences, it is also doomed because the state will never, under any circumstances, relinquish control over the monetary system. As soon as crypto reaches a scale that poses a threat, the authorities should immediately block it.

Roubini called on politicians not to sleep at the wheel and harkened back to the subprime loan crisis of 2008 that he so neatly predicted. He also foretold the inevitable collapse of cryptocurrencies and the blockchain in general. This was in 2018, and Roubini made this prognosis shortly after Bitcoin tanked, followed by a whole trail of cryptocurrencies (Bitcoin fell 70% from its peak). As he wrote with evident satisfaction in *The Guardian*, “The entire crypto-currency land has now gone into a crypto-apocalypse as the mother and father of all bubbles has now gone bust.”^{clxxiii}

I am writing this in early 2022, and judging by the way Bitcoin has broken through one price ceiling after another in recent years, at times falling back but always jumping back up and increasing several times in value, no one can claim that it’s on its last legs. Cryptocurrencies as a whole were valued in the trillions, accumulating 2% of global GDP, which was unthinkable when Roubini testified before the Senate. (By June 2022 this number was halved.) In a number of countries — including developed nations — between 10% and 40% of people hold crypto assets.

A Nobel laureate in economics, a former head of the Federal Reserve, major investors, bankers, a bubble guru, and many others whose sophistication in money matters is beyond doubt...is it possible that they are all wrong? Or are they right, and the bubble just hasn’t burst yet? If that’s the case, it would be nice to know what forces are inflating it and how long it can last. At first glance, the criticism is irrefutable. It is true that Bitcoin has the shortcomings of a gold standard (see the study by the Bank of Canada^{clxxiv}), and it goes without saying that the money supply should be determined by economic growth, not firmware. It is also true that cryptocurrencies are unstable, and the conven-

tions of the communities behind them are fragile. All of that is true. And yet, by and large, all of them, including the chief crypto-critic Roubini, are wrong.

Warren Buffett, Roubini, and many others act like experts, explaining to self-taught investors why the engine they came up with is not some self-winding wonder. For the hundredth time they point to the law of conservation of energy. But here's the catch: the law requires that all types of energy be considered, and Roubini and his confederates — as Gary Becker puts it — prematurely “short-circuit the energy system” and lose sight of the fuel sources that overturn their ideas.³³³ Economists underestimate how enthusiastically people throw off the yoke of banks, how they defend their freedom from supervision, how they unite — in a word, they fail to account for symbolic values. (This is the Achilles heel of orthodox economics: counting what is countable and shrugging one's shoulders about the rest.)

For many people, discovering Bitcoin was like a religious epiphany, a mind-altering glimpse into an entirely different, perhaps superior means of ordering human affairs. “The idea was to build and shore up a new system — for everything from payments and banking to health care and identity — that was either a replacement for the old one, or at least an alternative to it, one that was borderless, independent of state control and of exploitation by Big Tech,” Nick Paumgarten wrote in *The New Yorker*.³³⁴ Journalist Brian Patrick Eha agrees, when claims that Bitcoin looks like money's dream of itself.

If Roubini had not been in such an etatist rapture, he might have shown more understanding for the counterculture, which seeks legitimation in the fight against an omnipresent control that introduces suffocating measures under a law-and-order pretext. His and his colleagues' assertions that cryptocurrencies have no intrinsic value clearly indicate that they belong to a departing era.

They most certainly do have value! Not counting their utilitarian worth, their value is in group dynamics, involvement in innovation, the desire to create and understand innovations within a circle of like-minded people, prestigious competencies and career outlets, and self-esteem. These are the benefits economists do not recognize that Bitcoin provides access to. If you think like Roubini, you would say that Tesla has no chance of competing against German carmakers. But a connection to Tesla, like a connection to crypto, means social positioning. Think of cryptocurrencies as membership fees to prestigious clubs.

³³³ Becker G., *Economic Analysis and Human Behavior* (1987).

³³⁴ Paumgarten N., “*The Prophets of Cryptocurrency Survey the Boom and Bust*,” *The New Yorker* (2018).

Call it a Ponzi scheme, but that describes a lot of what goes on around us, including derivatives trading — a respectable pursuit that led to the 2008 crisis, which played into the hands of bitcoin, or constructing new residential developments in the desert and enticing people with low prices and tax advantages even if the developments might not survive. Even Buffett's rise could be considered a pyramid built over the course of a lifetime only to turn into...The Giving Pledge.^{clxxv} I'm not dismissing the arguments crypto's opponents make; I'm just pointing out that not all the cards are on the table. My advice is to not be too hasty when dealing with large-scale grassroots phenomena. We should not deny that money is based on trust, and the state monopoly on this trust is not unshakeable.

When Buffett was asked in 2022 if he had changed his negative opinion about Bitcoin, his answer was the same as it had been four years before, when the coin was worth a fraction of its price: "Whether it goes up or down in the next year or five years or 10 years, I don't know. But one thing I'm sure of is that it doesn't ... produce anything."³³⁵ When he said this, Buffett already knew where the bodies were buried; otherwise he would not have mentioned magic in the next line — after all, magicians do not "produce" anything. "It's got a magic to it," Buffett said, "and people have attached magic to a lot of things."

The secret to this "magic" has been known for ages. It was identified by Veblen when devised the rational grounds for conspicuous consumption (see Appendix 1). The non-utilitarian sphere accounts for half of all consumer spending (see Section 1.1 on the dimensions of the non-utilitarian economy). It may be ephemeral and fluid, but it is not illusory. It's all about narratives that bring people together in communities.

10.1.4. Cryptocurrency as a Companion to Cultural Currency

While they are symbolic through and through, cryptocurrencies alone do not solve the problem of measuring the symbolic economy. But they will become part of the solution if they are included in the set of measures described below. By their mere existence they answer a fundamental question: can modern private money be non-regional and free of any specific territory? The answer is not only can they — they should. Digital money is supranational by nature. The question is not whether they will replace existing currencies — probably not, at least not in our lifetime. The real question is how large of an area they will serve;

³³⁵ Vega N., "Warren Buffett wouldn't buy 'all of the bitcoin in the world' for \$25: 'It doesn't produce anything'", CNBC (2022).

the economic parameters of this zone depend on how we measure the symbolic (and whether or not we actually manage to do it).

I have been looking for a similar solution since the early 2000s. At that time, I came up with the concept of a “cultural currency” that would be backed by an art collection or fund. Access to the fund would be paid for in cultural currency, thus giving the currency purchasing power.^{clxxvi} But there was no mechanism for implementing the idea at that time, and later I realized that a separate currency was unnecessary: existing money could be used to service the symbolic economy if it was used to make post factum payments.

Donations and NFTs (as a variation thereof) become a practical expression of this idea. The value base of the new money will be texts and works of art, and both the works and tokenized rights to them can be transferred. As a form of donation, NFTs intensify the second-order symbolic exchange, described in Chapter 5, which is an exchange of information about an exchange.

With the emergence of NFTs, the crypto community has a promising product: club membership and statuses within that club. The builders of the Metaverse, which will be discussed later, will provide crypto with a commodity mass. It will be entertaining to watch today’s skeptics pay in crypto for a ticket to a virtual reality show and also pay for NFTs of the show’s recording so they can post it on their digital profiles.

10.1.5. Pro-Crypto

“Identity as we know it now is typically maintained by a centralized state — by the taxman, the department of motor vehicles, the police,” writes Nick Paumgarten. “Then it spills out into the world, often without our knowledge or consent, through our transaction histories, browsing habits, and unencrypted communications. The blockchain innovation is what’s often called ‘self-sovereign identity,’ the idea that you’ll control and parcel out information about yourself, as you wish. [...]” and brings us closer to “...a dream of a fluid, borderless, decentralized financial system beyond the reach of governments and banks, included as they inevitably are to corruption and self-dealing, or at least toward distortions of incentive.”³³⁶

Identity, belonging, sovereignty — what drives cryptocurrencies is the same as what drives NFTs. Yes, crypto is volatile and its purchasing power is not guaranteed. But non-utilitarian exchange does not imply parity, which, if

³³⁶ Paumgarten N., “*The Prophets of Cryptocurrency Survey the Boom and Bust*”, *The New Yorker* (2018).

you notice, was by no means immediate. But let me repeat that, although cryptocurrencies are thoroughly symbolic and although they serve non-utilitarian needs along with the mundane practical, they are not the modernized money I'm talking about and which will serve as institutional leverage.

Cryptocurrencies definitely owe their popularity to the opportunity they represent for striking it rich and other pragmatic considerations. But their beneficiaries are not just speculators, thrill seekers, and those who already have money to burn; they also benefit the disenfranchised and unbanked — the hundreds of millions, if not billions of people around the world who have no access to the financial system (according to some estimates, this could be as many as 2.5 billion people).

As a resident of a top-notch jurisdiction with a respectable job, a tax ID number, and utility bills to prove permanent residency and open access to credit cards, Roubini must have a hard time understanding the value of alternatives to fiat money. That's why he misunderstands cryptocurrencies. But if you are, say, a citizen of Venezuela, a Turkish journalist, or a refugee from Syria, Myanmar (or more recently, from Russia, Belarus, or Ukraine), then crypto is vital to you.

Ignoring these and other circumstances, Roubini declares crypto to be complete hypocrisy and extols the reliability of a banking system that, for all its merits, smells of mothballs and lacks both a customer focus and empathy. The people this system deprives of their rights are not the already marginalized; they are transparent, tax-paying citizens with families and utility bills who manage to satisfy the feudal requirement to provide an address (tying peasants to the land) which Western democracies have no qualms about reproducing.

In our current circumstances, the praise Roubini lavished on compliance looks like the height of cynicism. He seems to be unaware of the underlying conflict between KYC ("Know Your Customer") and human rights and stubbornly refuses to notice the systemic defects inherent in such procedures and practices, which seem specially designed to illustrate the problem "Quis custodiet ipsos custodes?" ("Who will guard the guards themselves?").

Financial transparency and KYC are a slippery slope; once on that slope, it is easy to slide across the line into a new balance between money in bank accounts and cash stored in safe deposit boxes and crypto wallets (a billion people are projected to have crypto wallets by 2025). Anyone who has the least understanding of personal data sees the spuriousness of the reasons banks use to create obstacles for their clients. By not considering client money to be entirely client money, banks limit their purchasing power, depriving money of its status as a correlate of freedom.

Is it any wonder that people are turning their eyes to private money? Instead of attacking Bitcoin, Roubini would be better off considering why, with all the advantages of the banking system, people are switching to crypto. Are they foolish? But what, I would ask, is irrational about the desire to remain solvent anywhere in the world? Or about wishing to transfer €300 to a relative without explaining why?^{clxxvii}

The state has value. This view is not shared by extreme libertarians, who idealize spontaneous order and seem unprepared for what will begin when the bosses are gone. I do share it.^{clxxviii} But value ceases to be value when it is excessive, since value is always inverse to quantity. As the state grows, becoming omnipresent, that which balances and curbs it — self-governance by the public — becomes increasingly valuable.

Both the state and self-governance by the public demonstrate maximum value when working in tandem instead of separately. When one element is weaker, demand shifts toward it to help restore parity. But this flow of demand is subject to inertia and becomes harder to accomplish the longer it takes to get started. I'm afraid this is the direction we are headed in, as it is increasingly difficult for a society to wake up when it is surrounded by Kafkaesque rules.

This is why we need a system for measuring the symbolic. Without it, classical liberals and etatists will never reach agreement, and neither camp is paying this issue any attention. The dynamic nature of value, the degree to which it relies on balance, and its resulting uncertainty at all times calls for an objective application to particular circumstances of the liberal maxim that human rights prevail over collective interests. We could repeat this exercise with the etatist paradigm, but I repeat: it all comes down to an inability to grasp subtleties.

In light of all of this, crypto is a resistance movement that sets boundaries against governmentalization and takes aim at the heart of the executive power function: control over finances. When he derides cryptocurrencies, Roubini is supposedly protecting us from “...carnival barkers [...] tap[ing] into clueless retail investors’ FOMO (“fear of missing out”)...,” as if we were talking about people who are hearing the word “risk” for the first time in their lives. And as if the people he supposedly wants to protect weren’t already fleeing into crypto from the state because they don’t trust it, fear it, do not feel that it represents their interests, and do not feel indebted to it.

In theory, the state should be able to communicate the following message: “There are stock markets, we regulate them, and if you lose money there, it will not be because someone pulled a dirty trick on you; and there is the cryptocurrency market where the law of the jungle applies, and you act at your own risk. Think of crypto as a libertarian sandbox.” By drawing this

boundary, the state would leave it to the crypto community to convey to people that it is dishonest to guarantee 20% annual returns as UST stablecoin was doing until it went bankrupt in May 2021.³³⁷ Buterin issued a warning, but despite the fact that millions of people supposedly hang on his every word, they managed to miss the precaution. To educate investors, we need a tool that helps people navigate who they can trust on which issues. This leads to a system of reputations, in the construction of which I count on the support of the cryptocommunity.

10.1.5.1. The Crypto Conversion of Roubini & Co

When he spoke before the Senate, Roubini emphasized that he has no conflicts of interest, is in no way connected with the crypto industry, and has only his honor and reputation at stake.^{clxxix} That was probably true when he said the words, but not anymore. Today he oversees the development of a tokenized dollar (!) at the Dubai-based (!!) Atlas Capital Team, where he is co-founder and chief economist (!!!). This tokenized dollar is intended to replace regular dollars, which — as Roubini told Bloomberg in an interview — are rapidly depreciating because the government is printing more of them.³³⁸

It's easy to imagine the crypto community's reaction to a long-time opponent crossing over the line into their camp. For my part, I am pleased by what it means for cryptocurrencies, even though, like Roubini in his past incarnation, my interest in them is not mercenary. But what prompted him to change his position? The desire to capitalize on what he learned about blockchain technology while he was working to expose it? Disillusionment with traditional financial institutions whose superiority he zealously defended — until his practiced eye recognized the bubble in them? Disappointment in the government's Keynesian policy that undermined the currency's stability? A break with etatist thinking?

I would like to believe that there is an ideological shift at the heart of Roubini's apostasy, and that his crypto project is working on good, real currencies and not bad, fake ones. After all, while he has said on many occasions that crypto-

³³⁷ At the very moment when these lines were being written, the cryptocurrency market collapsed, including the \$UST stablecoin, in third place among stablecoins.

See *Ram S., "The Collapse of LUNA: What Happened and Why?", DailyCoin (2022).*

The phrase "guaranteed dollar returns of 20% per annum" really means "stay away from this coin."

³³⁸ Crypto critic Nouriel Roubini is working on a tokenized dollar replacement.

currencies cannot be good by definition because that would be contrary to the laws of economics, his own token will be backed by real assets including gold, short-term bonds, and US real estate. Real estate is definitely as safe as houses. Roubini ought to know this better than anyone else, since he foretold the 2008 crisis. Or is he talking about virtual real estate? At the end of his address to the Senate, we see something interesting slip through: “Bitcoin or any crypto-asset could go “To the Moon...” he exclaimed. Did he leak plans to build the Metaverse, or was it a Freudian slip?

We will have to wait to see what happens with the Metaverse and the Moon, but it is encouraging that many of crypto’s former enemies have turned to cryptocurrencies, including Jamie Dimon, Larry Fink, Ray Dalio, Mark Cuban, Kevin O’Leary, and other media figures.^{clxxx} The ice is moving, but that doesn’t mean it’s flowing in the right direction. The existence of cryptocurrencies, especially stablecoins, has encouraged central banks in advanced economies to speed up their development of digital fiat currencies (CBDC),^{clxxxi} which have no need of a blockchain. They may be centralized and offer improved service, but you can forget about freedom, because the control will be total.

10.1.6. Will Cryptocurrencies Become Freely Convertible?

Does private digital money have a future? I tie their future to the crypto web’s gross product. That portion of the industry that uses blockchain technology for practical purposes follows this course. Let’s look at the general direction of these efforts, taking into account the political and economic limits on what is possible. The Bank of Canada outlined these limits in 2016, stating that Bitcoin will not replace national currencies “if ...central banks have anything to do with it [...because they must] protect their ability ‘implement interest policies to affect their domestic economies.’”^{clxxxii} The levers of power were on display in 2022 during the Canadian truckers’ strike (“Freedom Convoy”) when the strikers’ bank accounts were blocked without a judge’s order,^{clxxxiii} after February 24, 2022 this became the norm in Europe.

Most economists see private money as something that gets in the way of the state. On the contrary, private money is an outpost of freedom and was seen as such by Hayek, Friedman, and other proponents of organic growth.^{clxxxiv} I share their views, and I am aware that cryptocurrencies face a difficult future. As soon as they show signs of maturity, the state will put the screws on them. This “insider information” comes from Jamie Dimon at J. P. Morgan Chase, who, by the way, admitted that he shouldn’t have called Bitcoin a scam, that Bitcoin is real

under all the tulip mania, and that the blockchain technologies it is founded on inspire confidence.³³⁹ The government will do everything it can to stamp out cryptocurrencies: this explains the preemptive report from Andreessen Horowitz in which it frames its initiative as a surrender and assures the government that it is ready to cooperate.

Most of the bargaining concerns transferring the proceeds from the sale of crypto assets to bank accounts, but the state will immediately back out of any agreement as soon as it feels the balance is not in its favor. Andreessen Horowitz played the digital leadership carrot, but its argument doesn't hold up under closer inspection. Harbors like Dubai are not game changers, and China is only interested in its own totalitarian digital money.

As things stand, what can cryptocurrency supporters hope for? Proliferation, as long as there is no encroaching on traditional government fiefdoms. NFTs are a good example. The Metaverse is the ideal environment for them. Don't cash in your assets too soon, though; the Metaverse needs to become more attractive first, which will boost demand for its goods (and for cryptocurrencies, as a result). I fear Andreessen Horowitz spoke too soon when it offered its heart to the US government; a better move would have been to talk marriage after the crypto web gains more commodity mass.

The growth in "GDP" that is patronized by cryptocurrency is the key to its convertibility. The faster it expands, the sooner crypto will become a full-fledged means of payment. Imagine that you want to attend a virtual concert by Ariana Grande or Travis Scott, and you need crypto to buy tickets. Or that Elon Musk — in an effort to boost X's revenue — monetizes club membership and introduces a system that ranks communities based on their attractiveness. This kind of ranking scheme would require a system of reputations and navigation supported by NFTs and donations. Or imagine that Netflix, HBO, and other established purveyors of cultural content join the Metaverse.

The more products produced in the Metaverse and sold for crypto, the stronger their foundation and sustainability will become. At some stage, virtual subworlds will form a commonwealth featuring an open, permeable market and possibly a single cryptocurrency. At that point, its exchange rate in relation to fiat money in the offline world will be determined by the foreign

³³⁹ "The bitcoin was always to me what the governments are going to feel about bitcoin when it gets really big," he said. *Kim T., "Jamie Dimon says he regrets calling bitcoin a fraud and believes in the technology behind it", CNBC (2018).*

At the same time, the opinion is expressed that the gradual displacement of fiat money and the state itself from the economy is objectively necessary and historically inevitable.

trade balance instead of an influx of people seeking easy money and an outflow of people who want out of the risky undertaking.

This prospect can only become a reality if blockchain technologies become the road to the Metaverse; frankly, few people today believe that this will happen. But those who do believe are convinced that the Metaverse will only be viable if it relies on the blockchain, since from their point of view it should not be feudal and fragmented, but a truly global undertaking.

Whether this is a working draft, the only option, or only one of many (and which will prevail) will not be determined by the political economy of money alone, but by technology, the competitive environment, and institutional progress. One way or another, internet business will have to master new methods of monetization; otherwise it will hit the ceiling due to a lack of cash. The financial performance of the largest IT companies and the 12-figure fortunes of their owners obscure the fact that there is ridiculously little money circulating in the content industries; there isn't even enough money in content to keep newly arriving human resources from turning into a burden to themselves and others instead of generating prosperity. Will the crypto web open up new opportunities? In order to form an opinion on this question, we need to delve into blockchains.

10.1.7. Political Economy of the Blockchain

Orthodox economists find crypto-ideology untenable and the dream of a non-hierarchical web based on blockchains unrealistic. We examined the arguments set out by Roubini, the mouthpiece for this position, but that was all taken from his Senate testimony on the first generation blockchain, known as Bitcoin. But there are second-generation blockchains, which paved the way for NFTs, smart contracts, and other crypto web technologies that give the cryptographic web its revolutionary name.

Roubini “saw through” these, as well, and reached the conclusion that the whole idea of a blockchain as a distributed ledger is, if not completely meaningless, then at least certainly not reformist. Was he right? We will consider the evidence and decide, but the problems he voiced are not imaginary. Their resolution will determine whether Web3 is based on a distributed registry or the internet continues to exist mainly on platforms.³⁴⁰

³⁴⁰ And in this case, as I've already said, we might never see the Metaverse in its complete form. Without a freedom of movement provided by the blockchain, it will only copy a feudal model of the Web 2.0.

Complex technical issues are inevitable when diving into blockchains, but in order to avoid getting bogged down I will only go as deep as necessary to understand what is happening. This will be a difficult balance to maintain, given that I have two different categories of readers. One consists of those who are familiar with IT technologies and already immersed to some degree in crypto. They are aware of the nuts and bolts of the matter without my help, but technical questions always have a conceptual aspect, and my goal is to look at blockchains from that angle. Ideally, this discussion will rouse IT professionals to take an interest in the practical implementation of the blockchain-fostered link between crypto and donations.

But I also have readers who live far from the crypto world, and I want to open their eyes to what is happening inside it. I will try to clearly demonstrate how the pieces move and explain the essence of the intrigue around blockchains, because the intrigue concerns society as well as business, both of which have a great deal at stake. The footnotes in this section will provide more information and sources for further reading, but if you fall in this category, be prepared: the material is not something that can be explained entirely in layperson's terms, and any attempt to overly simplify it would only lead to the illusion of understanding.^{clxxxv}

10.1.7.1. The Idea of a Distributed Ledger

Cryptography and other blockchain components are at the forefront of science, technology, and social practices. This explains the difficulties about which Paumgarten warns the crypto-curious in his *The New Yorker* article: “[T]he deeper you get into the esoterica of distributed ledgers, consensus algorithms, hash functions, zero-knowledge proofs, byzantine-fault-tolerance theory, and so on, [...] the better the chance you have of bumping up against the limits of your intelligence.”³⁴¹

Again, I have no intention of subjecting my readers to such an ordeal and will not attempt to explain it all. If you want more in-depth details, you can turn to Adam Greenfield, who makes a heroic attempt in his book on radical technologies.^{clxxxvi} While the book's technical discussion is not entirely successful, the author clearly explains the inputs and outputs. Anything you don't find there can be gotten from Chris Pacia, who explains SHA256 hash functions and Merkle trees “like you're five.”³⁴²

³⁴¹ Paumgarten N., “*The Prophets of Cryptocurrency Survey the Boom and Bust*”, *The New Yorker* (2018).

³⁴² Pacia C., “*Bitcoin Mining Explained Like You're Five*”, blog (2013).

I will, of course, provide the tools without which my idea about the role of donations and NFTs in Web3 cannot be understood, even though the usual definition of blockchain as an evolving record of transactions supported by the computers on the network is mind-numbing and overly generalized. According to another definition, blockchain is a technology for the decentralized, independent execution of an algorithm followed by verification of the results and synchronization between all elements of the network. (All of the words in the definition are meaningful!) Or more academically: “[B]lockchain is a distributed system that stores time-ordered data in a continuously growing list of blocks. Each block contains information on transactions and business activities, and the entire network uses a consensus algorithm to reach an agreement on which block will be attached to the current recognized chain of blocks, thus the name ‘blockchain.’”^{clxxxvii}

All these definitions sound like gibberish, don’t they? They’re fine for professional use, but we want something more understandable. What kinds of transactions? What actions do the algorithms govern? “Business activity?” What does that even mean? “Agreement” about what? And what is actually going on when the chain is “recognized?” Let’s put these questions aside for a moment and, without getting hung up on definitions, follow the standard advice to think of a blockchain as a ledger.

“Think, as some have suggested, of a dusty leather-bound ledger in a Dickensian counting house, a record of every transaction.... Except that every accountant in London, and in Calcutta, has the same ledger, and when one adds a line to his own the addition appears in all of them. Once a transaction is affirmed, it will — theoretically, anyway — be in the ledger forever, unalterable and unerasable.”³⁴³

Why is this a big deal?

“Historically, records have been stored in one place — a temple, a courthouse, a server — and kept by whoever presided. [...] With blockchains, the records, under a kind of cryptographic seal, are distributed to all and belong to no one. You can’t revise them, because everyone is watching, and because the software will reject it if you try. [...] Each block is essentially a bundle of transactions, with a tracking notation, represented in a bit of cryptographic code known as “hash,” of all the transactions in the past. Each new block in the chain contains all the information (or, really, via the hash, a secure reference to all the information) contained in the previous one, all the way back to the first one [this is the “chain” referred to in “blockchain”].”³⁴⁴

³⁴³ Paumgarten N., “*The Prophets of Cryptocurrency Survey the Boom and Bust*”, *The New Yorker* (2018).

³⁴⁴ Paumgarten N., *ibid.*

From this we see that what makes cryptography special is the immutability of records. What is so great about that? What problem does it solve? Imagine a simple offline transaction between individuals. What if the seller, after receiving payment, claims that they were not paid and takes the goods while also keeping the buyer's money? Well, you could rely on witness testimony. In this sense, the patriarchal wedding ritual is a gathering of witnesses who stand ready to prevent your spouse from being taken from you (after all, their marital status is not tattooed on their body anywhere).

But if there are no witnesses, then it becomes the buyer's word against the seller's. You could present your video of the sale and payment, but what if your opponent counters with their own recording? Or what if the sale took place after dark? Or not in person? The offline world has letters of credit, safe deposit boxes, and other mechanisms for guaranteeing the correctness of a transaction from start to finish. We also have title companies and public records departments that maintain ledgers of real estate showing that you own your property and aren't trying to sell it to more than one buyer.^{clxxxviii} The blockchain achieves the same thing by involving network participants as witnesses, each of whom holds a copy of the ledger. Since everyone sees and agrees on what happened, transactions cannot be changed retroactively.

Our world rests on property rights, which are protected by centuries-old institutions and, in their accounts, trace the entire path of human history. Every transfer of ownership has always been recorded in a ledger somewhere, and there have always been people to maintain that ledger. But not anymore. Blockchain eliminates that link — the trusted party or arbitrator — by making it possible for participants to maintain an archive of transactions. That is what makes blockchain revolutionary. But why is that useful?

The traditional registrar has three drawbacks: 1) the registrar has access to information about the transactions it records; if it feels something isn't above-board — and this doesn't have to concern the actual transaction — then it can block the deal; 2) debts can be “erased” from traditional ledgers, giving rise to the problem of double spending (or sales to more than one buyer); 3) the registrar has a single point of failure, with both technical and human vulnerability. These drawbacks rarely cause problems, but instability would change that. This is why people are so interested in blockchain: with it, “...we would no longer need to rely on institutions like governments or banks to guarantee the commitments we make to each other, whether public or private.”³⁴⁵

The promissory note is the prototype of the cryptographic solution: a piece of paper on which the name of the current holder is written in ink at the end of a chain of endorsements. It is present in crypto money, as well (or more precisely, its web address is listed). Before accepting a transaction for processing, network nodes act like a bank cashing a promissory note, verifying the “signature” and making sure the presenting party is the true holder. For subsequent transfers, it signs the hash for the previous transaction with its private key and enters the cryptocurrency address of the next owner. Now, with the key to the address, that owner is the only person who can carry out a transaction with the currency in question.

The recipient can verify that the entire chain of signatures is correct. But, as with a paper note, there remains the risk that the chain is a counterfeit, and there is no one to check for authenticity anymore because those services were deliberately refused. Cryptographers solved this problem by creating special algorithms for reaching agreement on which transactions are considered true: this so-called consensus protects against double spend and other frauds.

Consensus is the key mechanism responsible for the authenticity of all transactions and, more generally, for the state of the ledger on which participants agree. There are different ways to structure consensus, and, as we will soon see, this is a critical point in blockchains and our interest in them. Historically, the first consensus was based on proof of work, abbreviated PoW, introduced with Bitcoin and Litecoin. The idea is that a participating node earns the right to add transactions, eventually becoming a paid validator (the auditor’s distant cousin), and the node loses that reward if it does a poor job. In another common option, called proof of stake (PoS; Ethereum, the founder of second generation blockchains, is switching to it^{clxxxix}), the good faith incentive is an ownership stake in virtual currency tokens. (I’ll get into other consensus algorithms a bit later.^{cx})

So, the blockchain shifts the function of arbiter to “witnesses,” or validators, selected from among its participants. Whatever they confirm is true and indestructible. But what if the validators disagree? Even the slightest risk of collusion must be eliminated, and the industry is currently working to ensure that consensus is legitimate, not rigged, and not imposed from above. You can see now that the question of blockchain decentralization is not abstract, but constitutional, and self-governance is where blockchain could become an alternative to centralized solutions.

However, Paumgarten — and others who do not see the significance of decentralization — allows for the idea that it could be removed from the definition of blockchain, just as he allows for the exclusion of another sacred idea: the immutability of the distributed register (this is based on the fact that entries are

edited when hacked). When he removes these slippery characteristics from the definition, Paumgarten is thinking like a journalist who values unambiguity, and he doesn't realize that the price for that clarity is ambiguity in another issue that is infinitely more important: why do we need blockchain at all, if we take away its distinctively valuable features? Centralization and falsification flourish on the internet, and there is no need to create unnecessary complications in order to reproduce the same thing. What we are facing here is a misunderstanding of blockchain's mission.

Blockchain apologists, for their part, demonstrate a different type of misapprehension: to listen to them talk, blockchain is a jack-of-all-trades, practical by its very nature. Creating that type of impression is tantamount to showing off a winged contraption and not mentioning that it flies by means other than its wings;^{cxci} this kind of talk indulges in naïve expectations and causes discouragement at the first failures. The same is true of cryptography: removing authoritarianism is only half of the task. One-third, to be precise. Another third consists of freeing yourself from external power without recreating it within, and that still leaves questions about the viability of a non-hierarchical group.

The idea of a flat organization is a benevolent one that encourages initiative and grassroots activity as opposed to top-down schemes. That said, lack of leadership goes against everything organization theory teaches us; teal organizations that attempt to escape the reach of hierarchies in the offline world end up as isolated islands in the ocean of business.^{cxcii}

The task, therefore, is to deploy a wide range of functionality on the blockchain foundation without either sacrificing equality or sliding into mob rule. Is a compromise between the two possible? Could blockchain be the magical antidote that breaks us free of organizational gravity? This is the top-level intrigue of the cryptographic web.

10.1.7.2. Criticism of Blockchains

Roubini says the technology is doomed for the following reasons:³⁴⁶

1. Blockchain is not decentralized.
2. While celebrated as a panacea, it is actually the “least useful [...] technology in human history.”
3. “In practice, it is nothing better than a glorified spreadsheet or database.”^{cxci}

³⁴⁶ Roubini N., “Blockchain isn’t about democracy and decentralisation – it’s about greed”, *The Guardian* (2018). The following four quotes come from this article.

4. Blockchain will not eliminate financial or other intermediaries; at most, it will help ensure that parties agree to a transaction before it is verified by a central authority.^{cxciv}
5. No serious institution will ever agree to put information in public ledgers where it could end up in the possession of an anonymous cartel operating from the shadows of the global kleptocracies.^{cxcv}
6. In those instances when corporations use distributed ledger technologies (DLT), it has nothing to do with blockchain.^{cxcvi}
7. Smart contracts are neither smart nor contracts.
8. When startups use ICOs to raise financing — a scenario that is not covered by securities law — most of the time it is a scam.
9. The bottleneck for blockchains is the lack of universal protocols like TCP-IP^{cxcvii} and HTML, which made the internet publicly available.
10. After a decade of development, blockchain technologies have yet to find a killer application, like search, that everyone wants to use.

I refute that last point below; in any case, while Roubini may have his own ideas about the speed with which worthwhile advances come into practice, there are no mandated deadlines. Just look at the decades Pasteur spent urging people to wash their hands. Even gunpowder — an innovation with what would seem to be an obvious use-case — languished for a century until its lethal use was discovered.

But let's start with the first point, about decentralization. If you recall, the advantages of decentralization are: it eliminates the single point of failure;^{cxcviii} it creates universal access to share capital and income;^{cxcix} and it stimulates the movement of assets and information. But for Roubini, these benefits are meaningless because centralized decisions are “obviously better.” After dragging out all the potential grounds for centralization, including developer power,^{cc} monopolization of cryptocurrency mining and trading, and concentration of wealth,^{cci} Roubini tackled the fundamental contradiction of blockchain: what people call the scalability trilemma.

10.1.7.2.1. The Scalability Trilemma

The gist of the trilemma, formulated by Vitalik Buterin and Trent McConaghy, is that it is difficult for blockchains, in which every node verifies every transaction, to be decentralized, scalable, and secure at the same time.^{ccii} Just like the “good, fast, cheap” meme, there is a conflict between equality, mass use, and safety (Fig 10.3).

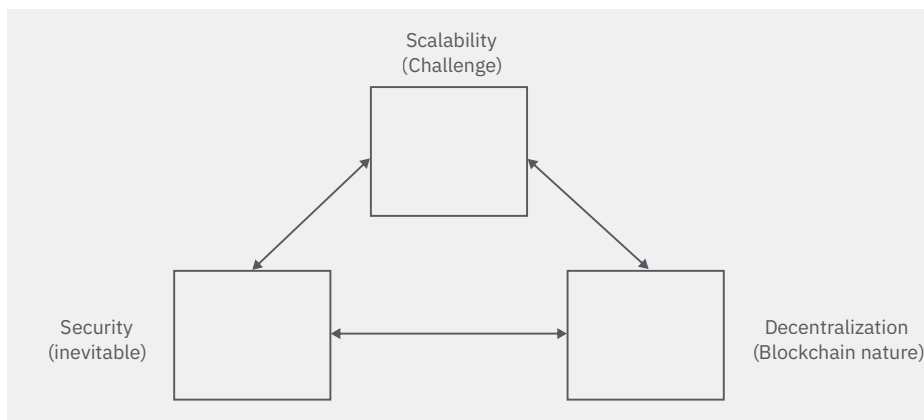


Fig 10.3 | THE SCALABILITY TRILEMMA

Developers have to choose which of those three qualities to let go of, and it's easy to guess which is the first candidate for elimination. Clearly they can't let go of speed; otherwise they will never achieve widespread use. And they can't let go of security, for without it even the narrowest uses would be impossible. This begs comparison with the existential choice between freedom, philosophical utilitarianism (with a gain in common good), and justice, where freedom, as the least measurable and therefore least protected value, is also under the greatest threat.

The challenge facing the industry is how to reconcile this contradictory trinity. It is a difficult task, since the sliders on the equalizer are interconnected and cannot be adjusted independently of each other. People have been working on this for years, promising to achieve transaction speeds that are thousands of times faster without losing any of the other two values,³⁴⁷ but no matter how you approach it, processing requires equipment, memory, time, and energy, and if you don't pay for those things, the work stops.

It would be too expensive for all blockchain participants to process all transactions, so you have to decide who you can trust and how you're going to motivate them so they don't distort — or worse, bring down — the entire blockchain structure. (In other words, you have to prevent validators from acting in their own interests to the detriment of public interests.) The solution to this problem is absolutely fundamental, and it can vary both ideologically and technically,

³⁴⁷ Hafid A. et al., "Scaling Blockchains: A Comprehensive Survey," *IEEE Access* 8 (2020).
Spector B., "Solving the Scalability Trilemma", *Qredo blog* (2020).

The article provides a table comparing leading blockchains using proof of work and proof of stake.

hence the line of blockchains. They all take different approaches to optimizing the trinity, using different numbers of nodes, different methods for selecting them, and different incentives for conscientious behavior. Let's look at two pivotal examples of this. Then, once we understand how the blockchain equalizer works, we can consider the full range of solutions.

I already mentioned that in Bitcoin, consensus is based on a “proof of work” (PoW) algorithm: miners compete for the right to record transaction history in blocks by solving mathematical problems: whoever solves them first gets the reward.³⁴⁸ Functioning is ensured by the condition that rewards are only valid if entries are approved by subsequent miners.

The PoW protocol currently used by Bitcoin and Ethereum is the most reliable, but its drawback is its poor efficiency. And because miners unite in pools, there is a risk of influence on the network, namely 51% attacks.³⁴⁹ (These are attacks on the blockchain carried out by a coalition of miners. If successful, the attackers can stop transaction processing, thereby freezing payments between users; they can reuse coins (double-spending) by reversing transactions that have already completed.^{cciii}) Furthermore, PoW is energy-intensive and does not fit in with the green agenda.^{cciv}

These two shortcomings — slow speed and high energy consumption — are inborn. They can be eliminated by the proof of stake (PoS) algorithm, which does not require such high volume of calculations, but it comes with its own flaws (which we will return to). Both proof-of-work and proof-of-stake involve group actions to create, verify, and secure records on the blockchain. While PoW provides reliability by requiring work, PoS achieves the same thing by betting on participants that have blockchain tokens and therefore something to lose. (I want to draw the reader's attention to the clearly visible role of statuses here, which largely determines our interest in the topic of blockchains.)

To better understand the concept of moving from PoW to the less resource-intensive and faster PoS, imagine again a transaction between buyer and seller taking place in the presence of multiple witnesses who record its stages and can, if necessary, confirm by vote exactly what happened. Since it would be expensive for the whole world to get together and discuss the transaction, powers are delegated to representatives. Let's appreciate the irony of that: we've been running away from authorities so hard that we ran right back

³⁴⁸ Dwork C. and Naor M., “Pricing via Processing or Combatting Junk Mail”, in *Proceedings of the 12th Annual International Cryptology Conference on Advances in Cryptology (1992)*, 139–147.

³⁴⁹ Chandrayan P., “What Is 51% Attack & How does it work?”, *Medium* (2021).

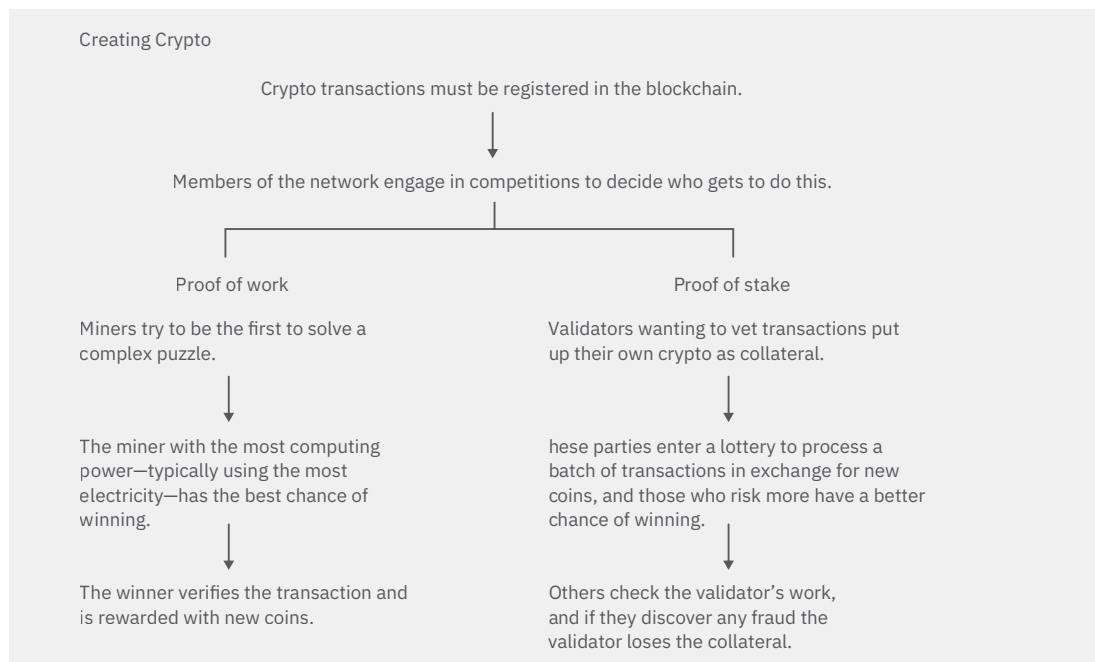


Fig 10.4 | TWO BASIC VALIDATION APPROACHES

into them. As always in such cases, there is a risk that the representatives will organize and legitimize their own version of events if improper motives — whatever those might be — outweigh whatever should be restraining them (for example, loss of deposits). Blockchain developers are trying to ensure that this does not happen under any circumstances.

Proof of stake is the most widely used approach. The point, I repeat, is to avoid the high-cost competition between validators that proof of work involves. The validation process, like any exam, requires work that is unnecessary for any real purpose.³⁵⁰ Instead, integrity is guaranteed by capital: validators are selected in proportion to the amount of cryptocurrency they own. Thus, we see the classic confrontation between labor and capital. The diagram below presents the key differences between the two basic validation approaches (Fig 10.4).³⁵¹

The principle that people don't steal from themselves exists in multiple variations in proof of stake validation, but it is worth noting that Ethereum is mov-

³⁵⁰ The proof of work concept on which Nakamoto based Bitcoin is nothing more than a heuristic transfer of the idea of the exam into blockchain; it has no direct bearing on the work ahead.

³⁵¹ Chandler S., "Proof of stake vs. proof of work: key differences between these methods of verifying cryptocurrency transactions", *Business Insider* (2022).

ing to PoS and that the Andreessen Horowitz fund is referring to PoS when it talks about fast and energy-efficient blockchains. Detailed information about scalability approaches can be gleaned from Hafid’s review,^{ccv} which states that like any multi-agent systems, blockchains are vulnerable to strategic games, and that even PoW reliability is poorly understood.^{ccvi} That being the case, what can we say about the plutocratic — as its critics call it — PoS, where there is more room for tricks and surprises?³⁵²

10.1.7.3. Blockchain Scalability and Prospects for Self-Governance

With an understanding of the intrigue of PoS versus PoW onboard, let’s return to what Roubini has to say about them. Hopefully my explanation will make his point of view clear:

“[T]here is a fundamental ‘inconsistent trinity’ in blockchain: you cannot have at the same time scalability, decentralization, and security. Bitcoin, for example, is partially decentralized [...] and it is secure [...] but at the cost of no scalability. [...] [U]sing millions of computers to do useless cryptographic games [...] is a useless waste of energy.... [C]rypto zealots argue that such costs could be massively reduced if crypto moves from energy-hogging PoW to less energy-wasteful Proof of Stake. [...] But leaving aside that PoS is not live yet and Ethereum is still based on PoW, the reality is that once Proof of Stake is properly launched it will be massively centralized and thus not secure. The whole logic of PoS is to give greater voting power to those who have a stake in a coin.... The problem [...] becomes worse with PoS as those with greater initial stake [...] will get a greater stake over time. So the problems of oligopolistic cartelization of mining power that is already very serious in PoW^{ccvii} will become exponentially worse in PoS. More generally, while cryptography scientists are busy inventing every day another “consensus” mechanism [...] the reality is that — given Buterin’s inconsistent trinity it will never be possible to create a consensus mechanism that is scalable while also being decentralized and secure.”³⁵³

³⁵² Critics of PoS claim that proof of stake is worse than proof of work.

Kharif O. et al., “*Crypto’s Energy Guzzling Sparks an Alternative That Merely Sips*”, Bloomberg (2021).

See also Kharif O., “*Bye-Bye, Miners! How Ethereum’s Big Change Will Work*”, Bloomberg (2021).

³⁵³ The quotes that follow are a synthesis of statements taken from his report Roubini N., *Exploring the Cryptocurrency and Blockchain Ecosystem* (2018). Roubini exchanged tweets with Buterin.

Roubini explains that one solution would be to use a multiplicity of alt-coins, but that would be inefficient and lacking in security.

“A second solution,” he writes, “is to increase the block size; but then nodes running on a smaller computer or laptop would drop out of the system as they will not be able to store every transaction or state. So you would end up relying on a small number of super-computers for running the blockchain; so you end up with an oligopoly with market power, concentration and lack of security. A third solution is where most of the crypto industry is trying to go, i.e. merge mining and variant of proof of stake. [...] But this approach increases the computational and storage demands on each miner by a massive factor that most miners will not be able to support. So this solution is a backdoor way of increasing the size of the blocks. [...] Thus, no decentralized blockchain will ever be able to achieve scalability³⁵⁴ that is critical to make it useful for large scale financial or any other type of transactions.”

“So,” Roubini concludes, “there is no free lunch here. Either crypto keeps on using energy-hogging and environmental-disaster PoW or it will become an insecure, centralized and dangerous system. [...] Blockchains can make sense in cases where the speed/reliability tradeoff is actually worth it, but this is rarely how the technology is marketed. Blockchain investment propositions routinely make wild promises to overthrow entire industries [...] without even acknowledging the technology’s obvious limitations.”

If Roubini is right, then decentralization is splitting at four seams:

- First, mining is centralized: four miners control $\frac{3}{4}$ of it.³⁵⁵
- Second, trade is centralized: 99% of it takes place on centralized exchanges.
- Third, development is centralized: Blockchain creators are judge, jury, and executioner all in one.^{ccviii}
- Fourth, wealth is concentrated: Bitcoin has a Gini coefficient of 0.88, which is higher than North Korea’s 0.86.

His conclusion is that blockchains require all transactions to be cryptographically verified, which slows them down. If the blockchain is truly distributed, then the required storage and computing power — and therefore latency — is higher than it would be with a centralized solution. This explains why Bitcoin only processes 5–7 transactions per second, while Visa processes 25,000.

To cap it off, Roubini dispels the illusion of the blockchain as a distributed “world computer,” as if some blockchain or other could become the basis of most

³⁵⁴ Elsewhere, Roubini tones down the rhetoric: “Indeed, the problem of ‘blockchain scaling’ is still more or less unsolved, and is likely to remain so forever.”

³⁵⁵ Cong L., “Decentralized Mining in Centralized Pools”, *NBER Working Paper* (2018).

transactions and communications, along the lines of a universal protocol like TCP-IP or HTML. This was the dream of the people who created blockchain, but here's the problem: blockchains actually rely on TCP-IP protocols and cannot replace them.^{ccix}

His overall conclusion is that “Decentralization is a self-serving ideology. Blockchain’s ideology is politically born out of the same mentality as libertarian right-wing conspiracies or extreme left anarchism: all governments, central banks, moneys, institutions, banks, corporations, entities with reputation and credibility build [sic] over centuries are evil centralized concentrations of power that literally need to be destroyed. [...] So we are supposed not to trust central banks or banks when it comes to financial transactions but rather a bunch of shady anonymous concentrated oligopolists in jurisdictions where there is little rule of law?” To give weight to his invective, Roubini appeals to David Golumbia’s opus on the politics of Bitcoin as an expression of right-wing extremism, showing that he has been reading the wrong books on social thought.

10.1.7.3.1. The Political Backstory

But we aren’t here to compare who has read what. The political significance of crypto goes beyond opposition to the state monopoly on money to include building cooperation without pre-established hierarchies, and this is the key to a competent, independent society. The parallel between the scalability trilemma and the justice — prosperity — freedom trinity is no accident, and there is no need to think that the people working to resolve the trilemma are engaged in distant, far-fetched pursuits.

Blockchains are a model of representative democracy; by testing the model in real life, the developers are conjuring up a remedy for a long-standing issue with universal suffrage: everyone’s votes weigh the same, but politicians pay different prices to acquire them. The internet has exacerbated this problem — political markets are flooded with cheap votes — and it has been compounded by the fact that the word, which was always a formidable weapon, is now powerfully destructive in an atmosphere of information superconductivity. At the same time, freedom of speech remains a fetish while the restriction of this freedom is taboo, making it difficult to come up with ways to deal with it. Until we specify a right to speech, we will continue to hear discussions of cancel culture and complaints about arbitrary censorship on social networks.

In the chapter on the Metaverse, we will look at how to use blockchain developments to achieve collaborative interaction without resorting to censorship.

10.1.7.4. Prospects for Blockchain. Broad and Narrow Applications

Before we look at what it would take to achieve collaborative interaction using distributed ledgers, it is clear that the solution will not be free; unlike an order from above, it requires a large number of approvals. Long Chen writes:

“When decentralized agents jointly make decisions, intuitively it takes a clever design to reach agreements. The more decentralized the system is, the greater the potential failure for reaching a global consensus. Moreover, decentralized storage of global consensus necessarily leads to duplication, be it storage, queries, recordings, etc. In either case, consensus accuracy or system processing capacity would be compromised.”³⁵⁶

At first glance it is clear that the requirements for non-hierarchical and formalized structure impose restrictions on the types of cooperation, which narrows the field of potential applications. In other words, in the blockchain environment you can only do things that can be spelled out from start to finish and packaged in smart contracts, programs with automatic execution under conditions agreed on by the participants.^{ccx} But not everything can be spelled out like the options on a vending machine; and moreover, changes happen over time.

This creates gaps in the rules, and gaps are a breeding ground for various types of opportunism, such as the selfish interpretation of instructions or failure to follow them. This is where we see the reappearance of the role of arbiter, which blockchain and smart contracts seem to have abolished. Doing without an arbiter means preventing any ambiguity, but that inevitably narrows the range of tasks that can be solved. Attempts to increase that range will necessitate a return to the role of decision-making authorities.

The reason cryptocurrencies were the first blockchain applications is that they are simple in terms of encoding transactions, and since everything happens on the network, there is no need for oracles; i.e., sources of data from the outside world. When an inventive couple decided to put their marriage on the blockchain, it required 24/7 video monitoring to ensure that they fulfilled the contract.

Here is Chen’s view:

“As much as we are excited about the potential of smart contracting, we have to recognize their limitations. First, it cannot enforce the transfer of ownership of offline assets...;³⁵⁷ second, it has been combined with IoTs [Internet of Things]

³⁵⁶ Chen L. et al., *A Brief Introduction to Blockchain Economics* (2021).

³⁵⁷ Abadi J., Brunnermeier M., “Blockchain economics”, *NBER Discussion Paper* (2018).

and oracles to acquire information off-chain;^{ccxi} third, it is not a panacea for incomplete contracting: contingencies traditional contracts cannot specify are also hard to program into smart contracts, unless artificial intelligence drastically changes how smart contracts function.”³⁵⁸

Thus, the prospects of a distributed registry depend on the extent to which it will be possible to algorithmize certain types of activities. According to Roubini, who expresses the opinion of many others, as well, the prospects are illusory, and the entire fight over blockchain is about refuting this thesis. Although we have seen how quickly Roubini’s anger turned to interest regarding cryptocurrencies, that does not mean he was wrong about everything blockchain-related. Perhaps he is not far from the truth when he says the applications are narrow. A year before his memorable testimony, Kai Stinchcombe brought up similar points, asking “What if there isn’t actually any use for a distributed ledger at all? What if [...] the reason nobody has adopted a distributed ledger at scale is because nobody wants it?”^{ccxii}

Stinchcombe notes that even the most die-hard blockchain enthusiasts want to argue about the intentions underlying a contract rather than rely on the software to do so. If that’s the case, he quips, “[m]aybe the ‘dumb’ way is smart after all?” He also points out that in most cases, people are not ready for irreversibility and need to have a place to turn for help if something happens.^{ccxiii} He is also correct that blockchain enthusiasts often present the matter as if the most difficult transaction that exists is delivering money from A to B and recording that it happened. In reality, that is the simplest and most easily automated part of a much more extensive and complex functionality that is provided by existing centralized solutions; blockchain cannot compete with them there. If we believe Stinchcombe, for all its ambition, blockchain is left with two benefits: cryptocurrency speculation and “the ability to keep a few things from the authorities [which] probably makes the world a better place.”

The slow pace of blockchain development was often attributed to a lack of cash, but serious money has been poured into the industry in recent years, and furthermore NFTs took off in January 2021. A year later, in the wake of the cryptocurrency fever, Canadian media critic Dan Olson put out a video essay on the problems of NFTs and Web3. In it, Olson reiterates that the crypto web is pointless and concludes that it can no longer be saved: the technology is broken, and its creators are too indifferent to its failures to ever live up to their starry-eyed supporters’ expectations.^{ccxiv}

³⁵⁸ Chen L. et al., *A Brief Introduction to Blockchain Economics* (2021).

The video essay went viral and has been viewed by 14 million people to date. The whales of the crypto industry may have ignored it, but it undoubtedly deserves attention as a rare case of coherent — if tendentious — argumentation.³⁵⁹ Casey Newton of The Verge concluded that Olson brought out no big revelations:

“Few people working in the space will be surprised to learn that crypto3 is awash in grifts, that current blockchains are energy inefficient and expensive, or that digital wallets are difficult to use and fraught with danger. Many Web3 builders will also bristle at Olson’s tone, which is smug and hectoring in the house style of the YouTube video essayist; his audience is not people working in crypto, but rather everyone he thinks ought to be afraid of those people. And yet the collective force of Olson’s arguments is substantial.³⁶⁰ [...] Because whatever you make of Olson or his overall argument, it’s undeniable that today Web3 is a mess — and not just in a “we haven’t finished building it” sort of way. Web3 is a mess of a kind that could take five or more years to fix, and that assumes the work gets started soon. [...] And the thing is...I’m just not sure people are working on these things. [...] [W]hen investors talked about ‘what to watch in crypto in 2022,’ it sounds exactly like what we were supposed to watch in 2021: music NFTs!, DAOs trying things! ‘The infrastructure phase.’”

Olson’s video essay, Moxie’s NFT experiments, and the “volatile stagnation” in crypto markets led Newton to conclude that “...in too many areas [of the crypto web], progress has been slow to nonexistent.” And then, as if to order, cryptocurrencies tanked, echoing Olson’s *cri de coeur*. In the first half of 2022, Bitcoin dropped to one-third of its historical highs (from \$60+ to \$20-), and in May we saw UST stablecoin destabilized to a degree “unthinkable under any circumstances” turnover in NFTs decrease by an order of magnitude.^{ccxv} November of that year was marked by the seismic collapse of FTX, the world’s fourth largest cryptocurrency exchange by volume.³⁶¹

All of this forces the crypto industry to work through its mistakes instead of sweeping the issues Olson exposed under the rug. Newton identifies three main areas for improvement.

First comes ease of use and especially safety, where Olson left no stone unturned. After explaining the schemes and vulnerabilities, he generalized that

³⁵⁹ Olson was not the only one to voice criticism, of course, but he managed to reach a large audience. For another example, see: *Weaver N., “The Web3 Fraud”, Usenix (2021).*

³⁶⁰ *Newton C., “Three things Web3 should fix in 2022”, Platformer (2022).*

³⁶¹ For example, see: *Ramirez D., “FTX Crash: Timeline, Fallout and What Investors Should Know”, NerdWallet (2022).*

blockchain is by nature defenseless from attackers; it is safe internally but unarmed against input spoofing.^{ccxvi}

Second, blockchain needs to be faster and cheaper, otherwise it won't achieve scale. He writes, "Imagine spending \$75 to create a 'free' Facebook account and another \$75 every time you wanted to post something, and you have a sense of what it would be like to participate in a social network on the blockchain today."

While Ethereum works on acceleration, others are already doing it, but it is not clear what compromises this requires in terms of reliability. For example, Solana, which positions itself as a fast blockchain, is developing a hybrid of proof of stake^{ccxvii} and proof of history consensus mechanisms, funded with \$314 million in financing. The company is an Ethereum competitor and seemed to be outperforming it, but as soon as the market fell sharply traders were unable to trade on Solana, demonstrating that it is only fast until lots of people use it at the same time.³⁶²

The third problem Newton identifies is the blockchain's vulnerability to trolling, spam, and the like. He points out that the safety of centralized platforms means "...that our posts, purchases, and other activity is mostly private; that offending materials can be removed; that bad actors can be prevented from evading bans by keeping record of phone numbers, IP addresses, and other signals. On the blockchain, none of that is true. Transactions are public; transactions are immutable; and regaining access to a platform is as simple as creating a new wallet.³⁶³ [...] [C]orporations or governments could scan blockchain transactions..." Of Olson's points, this is the one Newton takes most seriously.

Molly White vividly describes abuse, harassment, and other downsides of blockchain transparency:³⁶⁴ as soon as a crypto wallet address is exposed, confidentiality is over, from then on every transaction is publicly visible. Split checks from your Tinder dates; payments to your therapist; debt repayments and charitable contributions; the convenience store where you pick up ice cream at 10 o'clock at night: all of this will be available to your former lovers, family members, and employers. As for marketing machines and predictive algorithms, "Well, they've just hit the jackpot."

³⁶² Chaparro F., "Traders are complaining about Solana's performance, raising questions about its status as a Wall Street darling", *The Block* (2022).

³⁶³ This creates the risk of Sybil attacks, when a user can clone themselves and, acting under different names, gain a voting advantage.
Conte de Leon D. et al., "Blockchain: Properties and misconceptions", *Asia Pacific Journal of Innovation and Entrepreneurship* 11(3) (2017), 286–300.

³⁶⁴ White M., "Abuse and harassment on the blockchain", *blog* (2022).

Note that White is not talking about business scammers, but about everyday social knowledge that is not packaged into software code. In this respect, the public blockchain offers lower security than what we have without it, not to mention the standards of a cypherpunk utopia.^{ccxviii} We can only hope that a solution will be found and that in reality things will not be this sad. In the meantime, new initiatives are announced one after another, no matter what, all more exotic than they are useful, including those spotlighted by Buterin.^{ccxix}

Although blockchain is not new anymore and “...answers to many basic questions are still proving to be elusive,” Newton does not think that the problems are insurmountable. He is, however, inclined to believe that it may be five years or more before the industry gets a handle on them.^{ccxx} He also allows that “...to the extent that any of the issues above are solved, it won’t be by decentralized networks of computers but by centralized platforms....” In this case, Web3 will look like “the Web 2.0 do-over” that Olson describes it as. (Moxie wrote about this.) For all of that, Newton’s faith in blockchain is fueled by “...the enormous amount of talent and money that is now working on it.”

I, too, favor an innovation that reminds the state of its boundaries and reminds communities that they have the ability to stand up for themselves. As for the breadth of application, the trinity parameters need to be combined for specific tasks and spaces, and we need to prepare ourselves for it to be a long, painstaking process. For now, there is no point in talking about complex functional solutions; the gaming industry is close to reaching disappointment with blockchain.^{ccxxi} Like me, Chen does not see a need to always reach all three goals at the same time: there are tasks that don’t require scalability and other tasks where you can sacrifice consensus when adapting to a specific application.^{ccxxii}

Of all the fruits of the cryptoweb, the ones we are most interested in are developments in ways to achieve consensus. Based on work, activity, primacy in time, stake with the right to delegate, reputation, etcetera, these ways give everyone a chance to influence based on their strengths, degree of interest, involvement, diligence, or investment, provided that the weights of the participants’ votes reflect their actual ability to make a particular decision. These developments are paving the way for a breakthrough in collaborative decision-making.

Regarding the prospects for application: the corporate sector — specifically suppliers of ERP systems and auditors — is looking hungrily at blockchain solutions;³⁶⁵ the food service industry will have to respond to the opportunity block-

³⁶⁵ Encryption algorithms on top of blockchains allow auditors to confidently exchange information. *Chen L. et al., A Brief Introduction to Blockchain Economics (2021).*

chain offers to track the path of salmon from the place where it was caught to the sushi bar; DAOs are proliferating like mushrooms^{ccxxiii}; clever apps like the Move-to-Earn³⁶⁶ project StepN are emerging; government services and non-profits can find benefits in a distributed ledger.^{ccxxiv}

I will focus on the blockchain application from which I launched my discussion of the future of the internet: NFTs, which have yet to reach even a hundredth of their potential.

10.1.7.5. Killer Blockchain App

When Roubini told the Senate in 2018 that blockchain doesn't have a "killer app," he was wrong. NFTs were already around — invented in 2014, they picked up some publicity in 2017 — but it was easy to miss them, let alone fail to recognize them as a driver of progress. While they burst on the scene in early 2021, few people understand their significance. This is even true of those who spend countless hours working with them and write countless words about them.

The true significance of NFTs is that they are donations on the blockchain, little building blocks of status and reputation. The whole point of our brief foray into cryptography was to prepare for a substantive expansion on this idea. Both society and the crypto space are on the verge of generating demand for NFTs in a fundamental capacity beyond anything they have yet achieved. Existing demand for NFTs is essentially demand for commodity mass under the protectorate of cryptocurrencies. In order to do anything with NFTs, you need to have tokens; accordingly, the more developed the market for tokenized objects, the higher cryptocurrencies will rise and the more money their developers and those who bought them in time will make. Plus commissions from servicing transactions.

The combined fuel of motivation and money worked well at the outset; the market was accelerated and maybe even overheated by free airdrops of cryptocurrencies,³⁶⁷ mass issues of NFTs, and inflammatory purchases by celebrities.^{ccxxv} This led to high volatility and began to discourage followers. People were curious about NFTs at first, although that curiosity was mixed with distrust and a

³⁶⁶ Liao R., "Move-to-earn' Solana app StepN is latest crypto gaming craze. But skeptics question its sustainability and whether it can be called a 'game'", *TechCrunch* (2022).

STEPN is an app that encourages healthy lifestyles and includes elements of GameFi and SocialFi. Gameplay is built around the fact that users earn in-game currency when they walk and run.

³⁶⁷ Van Boom D., "Crypto airdrop season: Why people are making thousands for 'free'", *CNET* (2022).

bit of jealousy of those who lucked out; after the May 2022 cold shower washed away all the speculative dust, that interest took on a tinge of *schadenfreude*. Now, NFTs are increasingly thought of as a game in which the rich compete with the uber-rich and everyone else is relegated to the bottom of the pyramid where there isn't much to do.³⁶⁸

And so it is time for supporters of NFTs and crypto in general to ignite the second stage booster. Relying on speculative sales is like burning straw to power a rocket: it burns out quickly and you don't get any momentum. The second stage requires a different fuel. One option is dual-purpose social and reputational fuel that doesn't involve money.

I will describe both, starting with how to boost blockchain performance without drowning out the other two factors in the inconsistent trinity (decentralization and security). This is achieved, if you recall, by transitioning from proof of work to proofs based on a stake and/or sequence of actions, on a contribution (proof of importance³⁶⁹), or on a combination of them all, as well as by adding layers above the base blockchain.^{ccxxvi}

10.1.7.6. On Social Reputations and Consensus Mechanisms

The point of all consensus algorithms is to delegate the task of achieving consensus to a small number of nodes while ensuring the proper behavior of the nodes selected to participate in voting. Delegation of authority is not unique to cryptography; the same thing happens in life: reputations and statuses are at work everywhere, serving as accumulators of trust and allowing information quantity to be translated into information quality, thereby reducing the cost of refining that information.^{ccxxvii} Blockchains use a variety of delegation mechanisms, but despite significant progress they have yet to achieve the target combination of reliability, speed, and decentralization.

The situation is similar to self-driving cars: solutions offering 99% safety have existed for over a decade, but that last percent of safety is very difficult to achieve.^{ccxxviii} Not coincidentally, Buterin compared the competitive race to introduce sharding (a type of database partitioning^{ccxxix}) to a time bomb. After

³⁶⁸ Bruner R., *"Environmental Concerns Have Cast Doubt on NFTs – But That's Changing"*, *Time* (2021).

³⁶⁹ In the Proof of Importance (PoI), the probability of a node handling the next transaction is proportional to its reputation, and the influence of wealth is neutralized. The cryptocurrency NEM has been using PoI since 2014.

taking this path, he told Time magazine in an interview, “...users are already flocking to centralized blockchains and platforms that run faster and work better.”³⁷⁰ People are essentially returning to a model they had already abandoned.

My idea is to support consensus algorithms with data from outside the blockchain. Mathematics cannot solve all of life’s problems, especially when life has other plans (and taking into account the fact that not all people behave like angels). It is impossible to concentrate all the incentives inside the network and thereby achieve absolute predictability of the nodes’ actions, since there are people behind the nodes who may have considerations external to the given blockchain network and to blockchains in general. There is no secret that the Bitcoin community has engaged in backroom politics and that off-chain communications are an integral part of crypto governance. Personal relationships, closed chat groups, calls, invitation-only events, and other flows of off-chain power all shape what happens on-chain.³⁷¹

This is a fundamental point: when designing the incentives for nodes, it is impossible to keep their owners away from off-chain temptations. If you imagine a set of nesting dolls to represent humanity, homo cryptoeconomicus is smaller than homo economicus, who is smaller than homo sapiens. Let’s say you have designed a set of incentives that ensures that dishonest people lose more in the system than they gain. This is hard to pull off — as we’ve seen before, blockchain strategy games are poorly understood and full of surprises — but let’s say you’ve succeeded.³⁷² What about temptations outside the system? What if the task was, for example, to take out a competitor?

No mathematics, however clever, can encompass the entirety of the social system. Sooner or later, someone may gain control of the levers and centralize everything. The difference, and Roubini is correct about this, is that the change will be concealed and its beneficiaries will be harder to catch. Blockchain security requirements are stringent, and in-system settings are insufficient. Backup incentives from the social plane are necessary to ensure that no one dares think of cheating. My proposal is to include statuses and reputations in blockchain security.

Blockchain, designed to allow people to interact without personal knowledge or trust, could use a little trust itself. Or more than a little. Buterin talks about this, but for him to say more would be a retreat from the idea of a “distributed brotherhood.” What I’m prescribing is more than a microdose of trust: we

³⁷⁰ Chow A., “*The Man Behind Ethereum Is Worried About Crypto’s Future*”, *Time* (2022).

³⁷¹ De Filippi P., Loveluck B., “*The invisible politics of Bitcoin: Governance crisis of a decentralized infrastructure*”, in *Internet Policy Review* 5(3) (2016).

³⁷² Chen L. et al., *A Brief Introduction to Blockchain Economics* (2021).

need a reputational institution that supports both offline and online reputations and connects them in a single system of checks and balances.

This would help blockchains prevent collusion, spoofing of incoming information, harassment, and the like. After all, it's one thing to cut corners somewhat anonymously, acting in isolation from one's real-world self; it's quite another when one's public reputation is at stake. Signals and incentives based on reputation and status and delivered to the blockchain from the outside — from the open internet — will give it the missing degrees of reliability that hinder its application. NFTs can act as a relay for these signals if they are used to establish statuses and reputations.

10.1.7.7. NFTs: Donations on the Blockchain

NFTs signal information about status and reputation while suffering from a lack of the same. The crypto space needs to use NFTs for their main purpose — as yet undiscovered and unrealized — which is reputational. Otherwise, the space will be taken over by adverse selection (described in Section 5.10³⁷³): buyers will be confused about where to put their money, and artists will become convinced that only those who are already famous can hope to make any of that money. Publications about NFTs are also prone to adverse selection, and Dan Olson is almost the only person resisting it.

Fortunately, he is not really alone. Buterin, the philosophical leader of Ethereum, is tireless about keeping his creation on the right path. Andrew Chow describes Buterin's vision as “a counterweight to authoritarian governments” and a way to break Silicon Valley's “stranglehold over our digital lives,” as well as a platform for social and political experimentation.”^{CCXXX}

This call to renounce money is utopian, but it's also useless. Moxie takes off the rose-tinted glasses: blockchain can't survive without speculation because its functionality is inferior to what centralized services offer. OpenSea would be much improved if Web3 disappeared and transactions were made public by a simple ledger of transparency. That would be faster and cheaper for everyone and easier to use.”³⁷⁴ This is why blockchain is often called a solution in search of a problem. But if it's good for nothing, then how is it staying afloat? Moxie identifies the answer:

³⁷³ For more about adverse selection in information markets, see my book *Dolgin A., The Economics of Symbolic Exchange* (2009).

³⁷⁴ “Payment fees by credit card, which typically feel extortionary, look cheap compared to [Ethereum's gas fees.]” *Marlinspike M., “My first impressions of Web3”, blog* (2022).

“...[I]f they had built a platform to buy and sell images that wasn’t nominally based on crypto, I don’t think it would have taken off. [emphasis added] [...] because this is a gold rush. People have made money through cryptocurrency speculation.... The people at the end of the line who are flipping NFTs do not fundamentally care about distributed trust models or payment mechanics, but they care about where the money is. So the money draws people into OpenSea, they improve the experience by building a platform that iterates on the underlying Web3 protocols in Web2 space, they eventually offer the ability to “mint” NFTs through OpenSea itself instead of through your own smart contract, and eventually this all opens the door for Coinbase [...] which helpfully eliminates the transaction fees and makes it possible to avoid having to interact with smart contracts at all.”

The cryptographer Moxie reaches the same conclusion as the economist Roubini:

“Eventually, all the Web3 parts are gone, and you have a website for buying and selling JPEGs with your debit card. The project can’t start as a Web2 platform because of the market dynamics, but the same market dynamics and the fundamental forces of centralization will likely drive it to end up there.”³⁷⁵

Moxie believes that these forces will continue to act, but how long they last depends on whether or not the crypto space can hold onto the trillions of dollars picked up by cryptocurrencies or whether it will let them run through it like a sieve. In the former instance, blockchain technologies will accelerate forever; in the latter, they will disappear. Moxie leans toward the former possibility, but he is concerned about Web3 turning into Web2x2 but with less confidentiality (as indicated by the “x2”).

Reducing the cost of software could help avoid this scenario.

“Even relatively simple apps require a group of people to sit in front of a computer for eight hours a day, every day, forever. This wasn’t always the case,” he says, engaging in nostalgia, “and there was a time when 50 people working on a software project wasn’t considered a “small team.” There is plenty of nerd sniping going on, with enthusiasts working on the crypto web purely for creative fulfilment in a throwback to the dawn of the internet. But as a result, “[a]s long as software requires such concerted effort and so much highly specialized human focus, I think it will have the tendency to serve the interests of the people sitting in that room every day rather than what we may consider our broader goals.” He doesn’t see this getting better any time soon.^{ccxxxix}

³⁷⁵ Marlin spike M., “My first impressions of Web3”, blog (2022).

When he said this, Moxie was obviously not counting on artificial intelligence and its use in coding (although this was just a year before the release of ChatGPT), and he expressed something we have already noted that rarely gets mentioned: innovations are not spurred by humanity's most urgent needs, but by programmers' desire for self-realization. The programmers are the one who run out in front of the pack and who are responsible for technological shocks.

Moxie's analysis of symbolic competition is astute, but unlike him I see a way out through the reputation signaling capacity hidden within NFTs (and donations). Right now, tokens are ingrained in people's minds as shameless displays of wealth. They're all about seeing who has "those monkeys" that cost ridiculous amounts of money and the status games those people play.³⁷⁶ That makes it difficult to see that the most significant thing about NFTs is that they are donations on the blockchain. Once we realize that they excel as instruments of gifting, we will be just one step away from verified digital profiles and very close to solving the problems of navigation, choice, and many others, including the creation of communities that are competent and capable of negotiating.

The desired result, which will serve as the starting point for many other positive transformations, is a public ledger of values, status, and reputations based on NFTs and donations. Indicating values and preferences and verifying individuals' profiles are the key functions of NFTs, and their use for these functions is a necessary and sufficient condition for them to expand massively. They are already being used for donations, but by too few people. For them to gain broader use, they need to be part of a system that is publicly visible; the more widely they are allowed to shine, the easier it will become for people to navigate information space. NFTs' potential will be unlocked in stages: 1) identifying the value of any kind of content and services — as with donations, this is their primary function; 2) identifying the statuses of people and texts as derivatives of the first function: other things being equal, the more donations a person or text collects, the higher their status; 3) the formation of new consumer navigation practices based on those functions.

10.1.7.8. Self-Presentation Online and Authentication

There is nothing particularly complex about the idea of using NFTs as components of status and reputation, and those who seek to debunk the tokens as instruments for bragging would be approaching the truth if they took a wider

³⁷⁶ Bruner R., "Environmental Concerns Have Cast Doubt on NFTs — But That's Changing", *Time* (2021). The "apes" are the famous Bored Ape Yacht Club tokens.

view instead of overemphasizing one aspect. A commenter on Dan Olson’s video essay almost hit the nail on the head: “I’m sick of people bashing the obvious utility of NFTs. The ease with which I can look at a person’s profile, see their involvement with NFTs, and then identify them as a blood sucking sociopath is revolutionary.”^{ccxxxii} Nobody could have said it more precisely. NFTs will bring together the connoisseurs of such signals; all we have to do is find a place where we can see them all at one time.

Outside of everyday communications, NFTs are mentioned in the context of reputation in specialized literature and thematic blogs (and their comments sections). One can also find security experts writing about how the crypto-economy could spur the creation of identification protocols using self-sovereign identity tools based on reputation and mutual recognition.³⁷⁷ Concrete steps are being taken to make this happen, as exemplified by the Proof of Attendance Protocol (PoAP) project, which uses NFTs to demonstrate that a person is who they claim to be and has personally participated in something.³⁷⁸

Buterin’s intuition was spot-on when he drew attention to this project in a post entitled *Soulbound*, where he points out that, like “soulbound” items in *World of Warcraft*, which must be earned and are forever tied to the player who earned them, NFTs have value as social signals. He floats the idea of creating a new kind of NFT based on identity and participation instead of monetary value.³⁷⁹ He’s getting warmer. NFTs already tell us something about identity and participation, but in whispers. If we want them to be heard clearly, they need to be included in status games. (I have put forth this thought several times, but it bears repeating because it is the root of my entire idea: to create a public platform for statuses and reputations.)

Expanding on the idea of NFTs being tied to a particular “soul,” or, in our terms of how to represent individuals online, Buterin focuses on preventing the resale of tokenized profiles, for which he relies on community control supported by proof of personhood protocols and proof of humanity, both based on a web of trust.³⁸⁰

³⁷⁷ Tobin, A., Reed, D., *The Inevitable Rise of Self-Sovereign Identity* (2017).

³⁷⁸ Proof of Attendance Protocol (PoAP) is a protocol that creates digital badges or collectibles using blockchain technology. Adidas released a PoAP that gives priority access to its sales.

³⁷⁹ He writes that existing NFTs signal skill and wealth. “But what if we want to create NFTs that are not just about who has the most money, and that actually try to signal something else?”

³⁸⁰ Siddarth D. et al., “Who Watches the Watchmen? A Review of Subjective Approaches for Sybil-resistance in Proof of Personhood Protocols”, in *Frontiers in Blockchain* 3 (2020).

A profile's owner can indeed sell it along with proof of humanity, but those kinds of transactions can be recognized and canceled.³⁸¹ Buterin's post ends with the words, "NFTs can represent much more of who you are and not just what you can afford." [emphasis added] All that's left to do is find a compromise between crypto assets being tied to individuals and able to move freely. "If we can, this opens a much wider door to blockchains..." [emphasis added]

In my opinion, it's too soon to worry about profile resales making it possible for buyers to impersonate someone else. It is clear that Buterin has plenty of sobering experience in commercializing an idea too soon, and if account reselling (which already happens on Reddit, Facebook, and X) were to take on an industrial scale, the system of trust would be shaken. Buterin explains that soul-bound tokens (SBT) would verify identities in real time, making them useful for all kinds of access or membership as long as the personal data they store is located on-chain, making it verifiable.

This is true, as is the fact that donations can protect online communities from impostors if information about those donations is displayed in the personal profiles that follow internet users wherever they go (with their permission, of course, which can be withheld). But generally speaking, the system of public reputations will not be easy to shake once it takes shape; until then, there isn't much to worry about. It won't be the end of the world if a user purchases themselves some "merit badges." Symbolic capital is difficult to imitate and harder still to protect from devaluation; its absence will eventually be felt. And anyway, property statuses flow into symbolic statuses and vice versa all the time, and this is generally a good thing.

These are just minor issues, however, but Buterin approaches the heart of this book when he describes NFTs as a remedy for fraud that stands guard at the entrance to the blockchain. The next step is to recognize the tokens as a tool for the valorization of values and reputations. I would develop NFTs differently and use them to "open the door" to blockchains and many other things, too. Instead of starting with proof of humanity, my first step would be to attract the movement's participants from general ones that connect the online and offline worlds instead of from local systems.

³⁸¹ For this case, there is the Kleros justice protocol, based on the ancient principle of randomly selected jurors. It also provides for a recall function.

Ast F., "Kleros, a Protocol for a Decentralized Justice System Building a Judicial System for the Internet Age", *Medium* (2017).

Schneider N., *Cryptoeconomics as a Limitation on Governance* (2022).

If we want to see NFTs with a combined function as identity documents and signals of quality, the tokens must be collected, processed, and displayed publicly for all to see. As always, getting started is the hard part. People have to want to donate and purchase NFTs for that purpose, but that desire grows out of an understanding of what donations can give the donor. Reputation is a network good: the more information there is about it, the more demand there is for it and, accordingly, the higher its value. This is a chicken-and-egg problem: NFT gift transactions can't do much for anyone until there are enough people using them, but people won't use them until they realize their usefulness. Therefore, while NFTs are trendy, it would be a good idea to use them to build reputations that exist in a publicly accessible database that is structured and equipped with a search function.

Digital profiles with NFT-based reputational highlights and donations are the future of hiring, dating, club membership, and any other human associations. The bored monkeys are just the beginning of a universal game of thrones. Their foolishness will disappear as soon as the NFT repertoire is updated, and then today's fashionable cats, llamas, and magic mushrooms will fade into the background.

10.1.7.9. In Search of Web3's Lost Soul

Buterin's Soulbound essay grew into a co-written article on a decentralized society (DeSoc) built on soulbound tokens.³⁸² The article gives a clearer picture of the unification of "Souls and communities com[ing] together bottom-up" based on the ability of SBTs to track affiliations and memberships, diplomas, activities, and creative achievements. NFTs created by a soul will be witnessed by other souls who act as counterparties to the relationships.

Translated from Buterin's esoteric language into plain English, we are talking about clubs based on obligations, powers, and affiliations. The word "soul" is synonymous with a personal digital profile. (We inferred that from the previous paragraph, but it's an essential idea that bears repeating.) The article also states that the institutions of family, church, and democracy do not work well in virtual worlds, where they are divorced from sociality, and that without a way to support the connection between online and offline identities the web

³⁸² Weyl E., Ohlhaber P., Buterin V., "Decentralized Society: Finding Web3's Soul", in SSRN (2022). For a clear explanation, see Gardiner G., "Decentralized Society, what is DeSoc?", Medium (2022).

Gardiner draws an analogy between SBT and banks' assessments of borrower reliability.

will become bogged down in conspiracies and fake profiles and depleted by hyper-financialization.^{ccxxxiii}

It is hard to convey just how enthusiastic I am about this soul-searching and the tools of authenticity. But in terms of SBTs and their role in establishing communities, there is a big difference between how the authors position them and how I formulate the task. SBTs are focused on identification and membership. NFTs in a digital profile (Meta and X have been working on NFT integration³⁸³) also express identity, but they also have another role that I champion tirelessly and without which SBTs are unlikely to fly very high.

The role is universal and incorporates the functionality of SBTs: like donation records, NFTs are primarily measures of value and only after that as certificates of identity. Beyond clubs, they are necessary for improved integration of everything, from people with texts, services, and each other to the matching of any symbolic entities.

An immutable distributed ledger will serve autonomy and self-governance, but not the other way around. SBTs should work in conjunction with NFTs and donations instead of just serving blockchains. If the dream is to find a killer app for distributed ledgers, here it is. All that's left to do is bring it to life by integrating NFTs and donations into a public system for indicating values.^{ccxxxiv}

10.1.7.10. Reputational Consensus

Anton Kolonin and his colleagues at Amsterdam-based Stitching Singularity NET proposed a consensus algorithm based on reputation (“proof of reputation,” or PoR).^{ccxxxv} Proof of reputation is a fundamental approach to ensuring the resistance of multi-agent computing platforms, including blockchains, to social engineering and manipulation. (The soulbound tokens described earlier are designed to do the same thing). Its developers see the transition to power of authority (PoR) as the next step after the evolution from power of force (Pow) to power of money (PoS):

While I welcome this reading of the functionality of reputations, I can't help point out what I emphasized about SBTs: reputations are not limited to security. They are a universal tool for prediction with a multiplicity of aspects, one of them being reputation-based security. Society's central task is to identify reputations, and blockchains are a model environment for solv-

³⁸³ Brown A., “Twitter Rolls Out NFT Profile Pictures — Fueling A New Rat Race With Facebook”, *Forbes* (2022).

ing that task. This is where we figure out how to reduce the risk of traitor nodes being present when we don't know what level of trust each node deserves.^{ccxxxvi} This problem is not specific to distributed ledgers; instead, it is characteristic of modern society as a whole. The solution has universal significance, because without it people have a hard time functioning in the global internet environment.

Reputations are the institutional foundation of the public donations platform I describe. They can be calculated based on the principle that those who receive more positive feedback from more important entities are, themselves, more important; this approach, familiar from Google's PageRank, can be applied to any set of entities as long as they are connected by mutual references. The recommendation service Imhonet applied this principle to the members of its social network by developing its own reputation engine, which it launched in 2009. Any such algorithm needs reputational signals in order to function. That was not a problem for Imhonet: its members willingly created references as they reviewed books, films, music, and each other.^{ccxxxvii}

This is more difficult to achieve in an open society, and Kolonin makes it clear that not everything is going smoothly. The point of a public platform is to generate references through competition. Social status is the bulldozer that drags society out of the information swamp. The second trick to master is monetary validation of non-monetary signals. Donations are the only way to measure likes, shares, and other feedback quantitatively for use in calculating reputations. Kolonin and his co-authors touch on this issue, but, as follows from the explanation in their article — and my own experience confirms this — there are numerous pitfalls here; without donations, they can only be circumvented if conditions are favorable, and such conditions are rare.

Imhonet had those conditions, but it is difficult to quantify non-monetary signals in ordinary communications environments. This is probably why aggregators and services that rely on user review — such as TripAdvisor or Booking — use extremely primitive rating scales. Donations establish a common denominator for various types of value signals by calibrating them (Section 5.11). A machine cannot calculate the precise value generated by a like, an evaluation, an emoji, or a review without understanding the context in which the reactions happened and much more. (This is still the case after the release of ChatGPT. The settings would have to be customized each time, which seems like a road to nowhere.) But the human community is capable of making these calculations and expressing subjective information, and it would be pointless and foolish to give up this decisive advantage over the machines.^{ccxxxviii}

10.1.8. In Conclusion About the Cryptographic Web

Blockchain founder Buterin is standing up for decentralization.^{ccxxxix} Venture capital firm Andreessen Horowitz, the leading promoter of blockchains, is backpedaling and may give up on it before long. Is this a schism, or, to use the local dialect, a fork? Decentralization comes with costs. It's a hard sell. Give up on it — and on self-governance — and everything will get easier. But blockchain will be useless without decentralization: it is inferior to centralized solutions in every other respect. This is the classic fork in the road: realpolitik or value? In the short term, the former is preferable; in the long term, the latter wins. What does this choice mean for the web?

Blockchain technologies are positioned as the technological underpinnings of the Metaverse. Whether or not they actually achieve that role depends on how the above bottlenecks are solved and how smart contracts, NFTs, SBTs, DAOs, and Dapps perform. If the Metaverse is decentralized, then a new world will arise, one that will perhaps be better than the one we have now. Otherwise, if centralized platforms and services remain the drivers, then the virtual space will be plagued by feudal fragmentation and an ossified system of stratification, and the world will remain essentially the same. It could turn out seamless, as the crypto web promises, or balkanized and mercantilist, like the existing online and offline worlds, and that choice will determine how soon and how significantly humanity advances in self-knowledge, cultural development, and the fight against symbolic inequality.

In order to earn a role of significance in the metaverse, the blockchain needs to become operational before the metaverse gets cemented by platform-based solutions. And this needs to happen soon, because, in addition to being a source of interesting tasks for the cryptoweb, the metaverse is a source of funds for its development. If, as Moxie put it, crypto turns into a sieve, there won't be enough money to go around. Andreessen Horowitz, which is pushing to legalize crypto, risks doing a disservice to the industry because convertibility into fiat money in exchange for tax amnesty runs the risk of the crypto cauldron springing a leak. The beneficiaries of the multi-year rally may be tempted to take their winnings and run (exchanging crypto assets for dollars), and newcomers will have to raise funding again. Things might not be as bad as they seem, however, because more money has been invested in crypto since the 2022 “crash” than during the boom years of 2017–2018.^{ccxl}

There is a lot riding on the ratio of blockchain's speed of development and that of the Metaverse. I side with those who believe that, despite the

difficulties, the crypto-web will claw itself out of the rut of hyper-financialization and graduate from its up-and-coming status to a full-fledged, next-generation web.^{ccxli} This won't happen as soon as people would have us believe — not in the next five or ten years — especially if the crypto winter descends, as many predict it will.³⁸⁴

Periods of cooling and freezing will also affect social and cultural development, because it requires upgrades to the information space that have not even begun yet. The metaverse isn't going to be the overnight miracle Zuckerberg promised in late 2021.^{ccxlii} In short, the crypto-web has time on its side, and winter is a good time to prepare for summer.

10.1.8.1. Dynamic Hierarchy, Multi-Centered Centralization

In the battle over decentralization, I am on Buterin's side; I also believe that no matter how arduous the path to decentralization is, it is worth it.^{ccxliii} Society cannot cope with the wave of complexity and problems that have hit it without tirelessly working to master the tools of self-governance and self-regulation. The only alternative is to wander around bumping into information bubbles and following orders from above.

Alexis de Tocqueville wrote about this issue at the dawn of democracy: “Decentralization has not only an administrative value but also a civic dimension since it increases the opportunities for citizens to take interest in public affairs; it makes them get accustomed to using freedom. And from the accumulation of these local, active, persnickety freedoms is born the most efficient counterweight against the claims of the central government, even if it were supported by an impersonal, collective will.”³⁸⁵

Let us now look at the second version of Web3, the Metaverse. While crypto answers the question of how the internet can develop, the Metaverse shows the direction it leads us in. As I will demonstrate, donations are the primary elements out of which the Metaverse's “proof of truth” and “proof of value” are composed.

³⁸⁴ The field of AI has gone through several cycles of hype followed by disappointment, criticism, and funding cuts, and then a resurgence of interest years or even decades later.

³⁸⁵ Tocqueville A., *Democracy in America* (1835).

10.2. THE METAVERSE AS A PROMISE

While the idea of virtual worlds is almost a hundred years old, the word “Metaverse” has been around for three decades, and the world of the computer game *Second Life*³⁸⁶ predates Facebook, people only started talking seriously about the Metaverse in recent years. The impetus was the rebranding of Facebook to Meta in the fall of 2021,³⁸⁷ which signaled to the world that big business was ready for decisive expansion into virtual worlds. The isolation of the pandemic played a role because spending time online was destigmatized.^{ccxliv}

Technology has also caught up, with high-speed internet, powerful memory, cloud services, data streaming, blockchain, NFTs, 3D scanning, virtual reality technology, and the like.

In 2015, visually rich, immersive applications allowed up to 15 users to interact; by 2021, this limit had jumped to 150.³⁸⁸ On the path to a full-fledged Metaverse, its creators will need to solve a whole host of problems about which much has been written online. I will restrict myself to conceptual points in which the role of donations is observable. Without the value and authenticity markings they provide, virtual worlds will never reach their potential.

According to its working definition, the Metaverse is a constantly operating virtual space in which people, represented by avatars, interact with each other and with digital objects using VR technologies. Venture capitalist Matthew Ball, a Metaverse enthusiast and author of a textbook on the subject, defines it as a “... network of real-time rendered 3D worlds and simulations that support continuity of identity, objects, history, payments, and entitlements, and can be experienced synchronously by an effectively unlimited number of users, each with an individual sense of presence.”³⁸⁹

If we don’t fetishize this list and pull out the virtual space as the most important characteristic, then much of this definition already exists: Minecraft,

³⁸⁶ The game’s developer, Linden Lab, emphasizes that *Second Life* is a game, not a world: “There is no manufactured conflict, no set objective.” *Kalning K.*, “*If Second Life isn’t a game, what is it?*”, *NBC News* (2017).

³⁸⁷ *Orland K.*, “*Facebook who? Zuckerberg announces rebranding as Meta*”, *Arstechnica* (2021).

³⁸⁸ In 2021, 100–150 people a day (out of hundreds of millions) participate in royal battles. The revenue from the sale of virtual goods, skins, and extra lives in such environments grew from \$5 billion in 2015 to \$54 billion in 2021.

³⁸⁹ Matthew Ball is a metaverse proponent and investor who was once a strategist at Amazon Studios and director of The Chernin Group.

Fortnite, Roblox, social networks.³⁹⁰ If we wanted to, we could call the internet in its current state a Metaverse. As Take-Two CEO Strauss Zelnick put it, “If...you define metaverse as an engaging digital landscape where you can present yourself as an avatar, where you can talk to people and hang out with people, where you can bicycle, surf, motorcycle, drive, compete, tell stories, be told stories, have live events, sit at a casino table...well then we already have metaverses here at Take-Two....” In this sense, the metaverse is not an amorphous, futuristic idea. It is something being created by countless companies.

But Meta sets the bar higher: people will move most of their activities to the Metaverse, including their personal lives and corporate and public events. When he introduced Meta, Zuckerberg promised “an immersive embodied internet” where users will be able to do whatever they can imagine. A decisive step toward achieving this will be full 3D telepresence through VR/AR headsets so that users experience a space fully instead of just seeing it on a screen.

The transition will be achieved through co-presence. The timeline and speed of adoption will depend on technological developments. But what is already available using today’s VR headsets inspires confidence that the technical barriers to a full sense of presence and a unified perception of space will be overcome. This opens inspiring possibilities for working remotely in collaboration with others, attending events and exhibitions, and undergoing training with augmented reality where you can almost touch the flora and fauna with your hands and see them better than you would in nature.

Science fiction writers have played around with the metaverse for decades, experimenting with its structure, aesthetics, and ethics. These ideas entered industrial pop culture through comic books, movies, and computer games long before the current hype. The iconic films on the topic are decades-old: *Blade Runner*, 1981; *Tron*, 1982; *The Matrix*, 1999; and *Tron: Legacy*, 2010. *Second Life* and a number of other games also offer metaverses.^{ccxlv} Neal Stephenson’s cyberpunk 1992 novel *Snow Crash* is considered the first comprehensive introduction to the metaverse.^{ccxlvii} Among recent milestones, I would highlight Steven Spielberg’s popular *Ready Player One* (2018) and the Ernest Cline novel (2011) it was based on.

Conceptually, the Metaverse is represented by two tracks: 1) a mundane, utilitarian track with augmented reality where people transfer their real-world

³⁹⁰ Thompson C., “*The Metaverse Is Already Here – It’s Minecraft*”, *Medium* (2021).
 Park G., “*Epic Games believes the Internet is broken. This is their blueprint to fix it*”, *The Washington Post* (2022).
 Orland K., “*Putting Roblox’s incredible \$45 billion IPO in context*”, *Arstechnica* (2021).

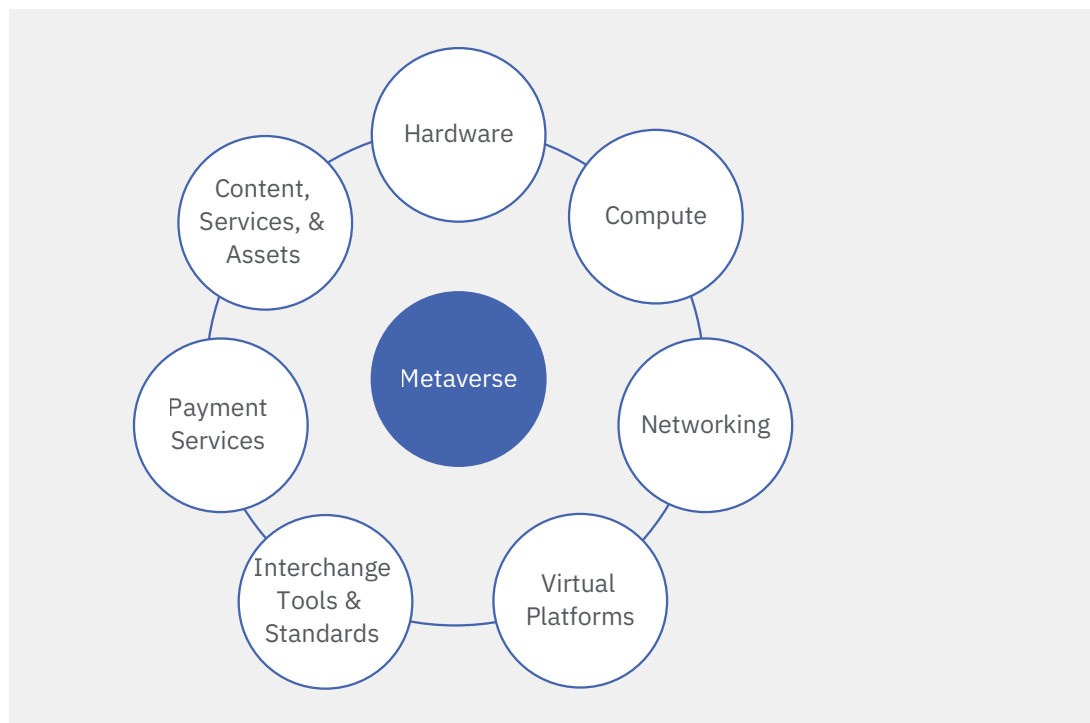


Fig 10.5 | METAVERSE BASIC COMPONENTS

activities into a virtual space and extract all the advantages of digitalization; 2) a fantastical, unreal track featuring augmented irreality which happens to be predominantly dystopian.

Ball describes the Metaverse as having eight components (Fig 10.5).^{ccxlvii} He identifies the technical and financial problems and bottlenecks of each component — which I will not go into here — as well as marketing issues. What interest me are the institutional aspects of the upper level, where the skeleton and soul of the internet of the future are being laid. This will determine what the Metaverse grows up to be: will it follow the patterns of the Chinese Metaverse of things, the “Meta” version of a Universe for people, or something else entirely?^{ccxlviii}

When one thinks about the internet of the future as a positive thing, one expects innovation: heretofore unknown benefits, relationships, tools for self-realization, and transformative experiences; a leap in the experience of time (both subjective and social/historical); a different formula for power; a totally different social structure. Modern descriptions of that future, including Ready, Player One,^{ccxlix} reveal little to nothing about those changes, and in that sense the film is disappointing.

10.2.1. Metaverse of Imagined Worlds

The metaverse is closely related to the concept of multiple imaginary worlds, known as the multiverse. William James, who was the first to theorize about the multiverse, saw these worlds as overlapping representations rooted in objective reality. This view is outlined in his famed book *The Principles of Psychology*, published in 1890 (Chapter 21, “The Perception of Reality”).³⁹¹ Its thesis on the plurality of relatively autonomous imaginary worlds in which each of us lives in our own constellations generated an important advance in human consciousness.

In his classification of these worlds, James singled out the world of sensation, or physical world; the world of natural sciences; the world of abstract truths — taken on faith and expressed in the form of logical, mathematical, metaphysical, ethical, or aesthetic statements; the world of “tribal illusions” — the illusions or prejudices common to a given people; supernatural worlds, such as Christian or Hindu, forming a consistent system; artistic worlds — James uses *War and Peace* as an example, and other examples include *The Iliad* and *Game of Thrones*; worlds of individual opinions, of which there are as many as there are human beings; and worlds of insanity, which are also infinitely diverse.

As Victor Vakhshayn notes, “[t]his classification is somewhat reminiscent of Borges’ taxonomy of animals, in which the emperor’s pets are in the highest category, followed down the list by ‘those drawn with a very fine camel hair brush’ and ‘those that have just broken the vase.’” The list can be expanded by adding to it worlds that reflect how we see ourselves and those around us (the internal and looking-glass selves), along with secondary and tertiary reflections that arise as the tangle of ideas about ideas unspools. All of these worlds are united by language. (The imaginary worlds considered in this book include ideas about inequality and nature’s limit on the percentage of altruists in a population.)

What imaginary worlds have in common is consistency. Every world, whether it be the world of common sense, literature, insanity, or self-justification (coping), prevents the people inside it from doubting its reality. James does distinguish a supreme reality, which he defines as the world of physical objects that can push back, making them difficult to ignore. All other worlds proceed from this world, including such phenomena as opinions, hallucinations, dreams, and individual and mass delusions.

³⁹¹ William J., *The Principles of Psychology*, Cambridge (1981), 913–951.

How can we describe the relationships between the worlds? Are they sovereign states with their own internal logic? If so, what is the difference between their logics? How do they relate to the logic of the everyday world? As an example, time is linear in the everyday world and non-linear in dreams. James proceeds from two assumptions. The first is that all worlds are derivatives of the world of supreme reality — the physical world. The second assumption is that they are analogous: the world of an insane person has connections with the world of a normal person. Hence the difficulty of interpreting an action, known as the “Jamesian problem:” is the action happening in a dream, or in a book? Is it the fruit of hallucination, delusion, or insanity, or is it part of everyday life?

Whether or not to judge actions in one world by the laws of another is a matter of interpretation and by no means an idle question. The answer to it is significant for Web 2.0, and it is doubly relevant for the meta-version of Web3. Take freedom of expression as an example. Where are its boundaries? Legal theory is silent on this matter, but social network platforms are getting beaten up from all sides as soon as they turn off the wrong microphone. A related gray area of cultural practices is the behavior of avatars, which sometimes stare inappropriately, attack the bounds of physicality, harass other users, etcetera.

What is normal in some worlds is unacceptable in others. Under Roman law, it was your own business if you transgressed in thought or dream. But what about using an illegal move in a computer game that results in serious bodily harm? Or winning money in a virtual casino and failing to mention it on your tax return? Or getting angry about Russia’s invasion of Ukraine and sinking your Russian employer’s yacht?^{ccli} Should we be judged for beliefs that justify bloodshed? The interconnection between worlds and the grading and smoothing over of conflicts between them are earthly tasks; in the metaverse the work is easier because we have sandboxes for testing solutions.

The question that interested James actually came from the judicial sphere: it all started with the M’Naghten case, when Daniel M’Naghten shot a British civil servant in 1843 but was found not guilty and sent to a lunatic asylum.^{ccli} In the aftermath from the case, a panel of judges developed a set of rules under which a person can be found guilty, even if suffering from clouded reason. These went down in history as the M’Naghten rules and inspired literary, philosophical, psychological, and sociological studies. The first rule requires that a person be judged as if what they imagined — whatever impelled them to commit the crime — were, in fact, reality. The second

rule often features in courtroom dramas when someone says that a criminal was unable to distinguish between good and evil and did not understand the consequences of his actions.^{cclii}

Thus, explains Vakhshayn, “it is important to distinguish between the orders of the real and in which world the person performing an action is located. When Don Quixote jousts with mills while he imagines he is fighting giants, the judges must take into account that he is damaging property not to take revenge on the owners, but out of an obsession with chivalry. Under the M’Naghten rules, he would be committed for psychiatric treatment, not because he is not responsible for his actions [...] but because he is not acting in the world in which he is causing harm.”

Alfred Schutz transferred this problem to the sociology of everyday life: how does our coexistence with others work in each of the worlds?³⁹² How can some people understand the consciousness of others while remaining within their own system of ideas? Or, getting back to our topic, how does interpersonal exchange get built up or disrupted when it is an attempt to discover and achieve mutually beneficial connections between worlds that differ in depth, breadth, and potential reducibility, but also galaxies apart in terms of their interests and inclinations?

Like James, Schutz reserves a place of privilege for the everyday in the continuum of worlds. The world of common sense is his supreme reality. This is followed by, in descending order, the worlds of art, fantasy, games, scientific theories [!], religions, and, finally, dreams. According to Schutz, each of these worlds has its own cognitive style, which dictates a method of blocking doubts, acting, experiencing the self, conducting relationships with others, experiencing community, and perceiving time.³⁹³ His two most important axioms are that a) all the worlds are closed off, and it requires a shock or leap to move from one to another; and b) the worlds are not of equal value — they are all colonies, so to speak, of the world of everyday life, which explains their similarity. For Schutz, the sovereignty of the worlds is more important than the structural kinship that was James’ focus.

All of this is significant for the metaverse in two ways. First, an understanding of acceptable set-ups — meaning those that are approved by and permitted by theory — shows us how to shape worlds properly so that they lead lives

³⁹² Schütz A., *On multiple realities* (1945).

³⁹³ Schutz’s worlds all have “peculiar cognitive style <...> all experiences within each of these worlds are, with respect to this cognitive style, consistent in themselves and compatible with one another. Schütz A., *On multiple realities* (1945).

of substance. By analogy with games: what principles should be established so that there is no need for constant outside interference, which always spoils everything anyway?³⁹⁴ Neither James nor Schutz dwell on the criteria for the similarity of worlds, so it remains unclear how to determine the degree of similarity and whether, for example, it is important to observe the principle of causality, which operates oddly in dreams and often goes unidentified in waking life. At what extent of the reduction of logic is it still reasonable to talk about structural similarity with the world of common sense?

The dimension of worlds is fundamentally significant; differences in dimension limit what is possible in relations between their owners — or, better yet, their inhabitants, be they individuals or groups. But how can we understand the multidimensionality of a person's world without a battery of tests? Psychotherapist Fyodor Vasilyuk introduced the distinction between simple and complex inner worlds and used this idea as the foundation for his analysis of critical situations.³⁹⁵ His pursuit was productive, and if society had mastered the techniques for measuring dimensionality, many of the questions of our time would have been resolved and we could have avoided many conflicts. In the metaverse, everything and everyone is digitized, and all moves are recorded. This makes it a testing ground for building relationships between ethnic or other groups, between individuals, and within a single individual.

Schutz recognizes the right of imaginary worlds to reduced logic and, accordingly, to greater freedom when compared to the real world. Would it be possible to do without logic entirely? Let's imagine a world without resource limitations, like the one in *Ready, Player One*. To what extent is it similar to the world of everyday life, where the economy is always present and always strikes back? That is the key question of the metaverse: are worlds without economies viable?

The answer is no. Resource-independent worlds are as boring as a paradise in which there is nothing to overcome, no competition, no play, and therefore no will to live life the way we love it. There can be no lack of anything by definition, and that fact cannot be hidden by stage decorations. That is why the decorations are so conventional. Paradise is an extremely imaginary world with an ex-

³⁹⁴ See the discussions in the article *Infinite Space: CCP Team, "Infinite Space: An Argument for Single-Sharded Architecture in MMOs", Game Developer (2010)*. In this technical piece, the team behind idiosyncratic MMO success *EVE Online* discusses precisely why sharing a single world between all its players makes sense.

³⁹⁵ Vasilyuk diagnoses conflict, stress, frustration, and crisis; before his work, all four were lumped together under the "stress" label.

istential temperature of absolute zero. This is so as not to lure people in before their time, but also so as not to be considered the default option. Humans in this world need the resistance offered by the world of supreme reality, where if you get banged up you can't argue your way out of it. There could be no human games without competitive, economic logic. For the metaverse to be viable, it needs to be resourceful in informative, cognitive, and emotional senses.

Justice in the metaverse is another stakeholder of the theory of the imaginary. As we have seen, justice is where the theory began. At first glance, incidents of the M'Naghten type seem rare, they are not. The question is in the degree of psychosis — to what degree peoples' specific matrices of consciousness deviate from the vector of supreme (objective, universal) reality. Fruitless discussions about modern ideological issues and widespread indecisiveness demonstrate how shaky our moral ground is. What if each virtual world had its own court system; would they have jurisdiction over actions committed by their residents in other jurisdictions? What if the "other" jurisdiction was everyday life? Remember, Schutz tells us that, because of the sovereignty of worlds, an insane person cannot be judged by the laws of the world of common sense.

Then what laws can we use? Let's imagine that all the worlds have a unique legal status as envisioned by Schutz.³⁹⁶ What do we do when an action in one world has consequences in another? Under the M'Naghten rules, the criteria for jurisdiction depend on the results of the inquiry, what guided the person, and what they were thinking. This brings us to thought crime. And when deciding on punishment, we have to be able to distinguish true testimony from false without resorting to the rack. The M'Naghten case is pivotal for the metaverse, and the questions it raises are key. Cancel culture (banning people from social networks, professions, or even history) is ringing the alarms for this issue and rehearsing how it will be resolved.

All of us are prisoners in the worlds we have imagined. What reality were Western elites living in when they accepted as axiom a half-baked idea that as nations grow wealthier, the rising cost (value) of human life makes them non-threatening militarily? They completely overlooked the fact that this value may not rise uniformly, and that militaristic rulers might be busy stockpiling cannon fodder.

³⁹⁶ His solution to James' problem: "Reality is reality, games are games, dreams are dreams, and insanity is insanity."

And, from the perspective of multiple worlds, what can we say about the economists who offered pseudoscience about the value of human life to justify Covid lockdowns but got their calculations grossly wrong, all in poorly conceived attempt to be humane?^{cdliiii} (Section 4.2) And what about the zealous economists who are fixated on inequality and keep telling people it's on the rise, as if it wasn't during their lifetime that the internet equalized people to such an extent that Sam Colt's "great equalizer" looks like nothing special?³⁹⁷

Today, people are almost entirely equal in their access to culture and education, as well as to basic necessities. No-name goods (those that do not serve the function of demonstrating status) are so cheap and convenient that Gini coefficients (indicators of the degree of stratification) have lost what little information content they once had. Just scratch the surface of the world imagined by economists and you see that they dream of equality not in terms of opportunities, but in terms of results. This is amoral in practice, since the everyday world is built on the ethics of work and merit, and irreplaceable concepts such as proof of work and other evidence of social usefulness are derived from them.

When we look at how economists think, we understand why Schutz, the forerunner of socially constructed reality,³⁹⁸ ranked scientific theories lower than games and art in his classification, where rank reflects distance from supreme reality. Faith in the tenets of the discipline prevents economists from accepting the drift in their key concept of "utility." Identity, dignity, respect, quality time — does the law of diminishing marginal utility apply to any of these? What will the economy of higher needs look like in the metaverse, given that exceptions to this law are the norm there?

10.2.2. Are Worlds Sovereign?

But are worlds really sovereign? Let's formulate the question more precisely: are they really all that sovereign? My opinion is that sovereignty is absurd. The real world pays dearly for simplifying this question to one of independence or dependence with no half-tones. From the point of view of the economic theory of clubs, the everyday world is like a communal apartment where every resident has only partial sovereignty. Gradations of autonomy can and should be measured and prescribed as with property rights, which uses the concept of the bundle of rights (what you can and cannot do with your property without

³⁹⁷ The slogan for Colt Manufacturing was "God created men. Colt made them equal."

³⁹⁸ Berger P., Luckmann T., *The social construction of reality. A treatise in the sociology of knowledge* (1966).

affecting others). The metaverse is a great place to practice dealing with the side effects of sovereign worlds (so-called externalities).

Here is an illustration from the early metaverse: in 2007, the FBI investigated Second Life for opening casinos within the game because the game's Linden dollars could be exchanged for cash, giving rise to a tax conflict. Is a casino still a gaming establishment when it's located in a virtual world? Is it more important that the gaming be licensed, or that it's gaming within a game? If we proceed from James' similarity of worlds, then the casino in Second Life should be regulated; if we proceed on Schutz' understanding of sovereignty, then the laws of real life should not apply to games, just as they do not apply to dreams or literature.

Laws may not apply to games, but shouldn't they apply to winnings if those winnings are converted into cash and used in a different jurisdiction? The government saw this as an attack on the established order. From their point of view, and I have to agree, Schutz is wrong about the autonomy of worlds.^{ccliv} The moral of this story is that worlds compete with each other using their advantages, but when it comes to a matter of principle, the party with its hand on the switch is the one that wins. That is the entire point of blockchain.

Should we expect the metaverse to deliver a miracle? Will its unique capabilities merge to bring something new to our existence? Ultimately, it all comes down to people's ability to be their own best bosses and their social connections, human intimacy, mutual understanding, and trust. I want to demonstrate the range of available possibilities through to conceptual examples. One of them is about prolonging life. The other is about power in the metaverse.

10.2.3. Meta and Immortality

Elon Musk's alien ark and his plans for mind reading (Neuralink) galvanize a public that is eager to believe in the fantastic. Zuckerberg's offer to let people do almost anything they can imagine pales in comparison.^{cclv} But what is the overriding task of the metaverse? What is its motivational core? Without one, the metaverse will become vulgar and derivative. Game developers found a goal without inventing anything new: eternal life in the form of digital immortality. This has played out in films like *Be Right Back*³⁹⁹ and the incomparable *Her*,

³⁹⁹ "Black Mirror" season 2, episode 1, 2013

both of which came out in 2013, and TV series like *Altered Carbon* (2018). The metaverse can contribute something to this lifeline.

In technical terms, this involves creating an online character based on the digital fingerprints the prototype individual left during their lifetime. The virtualized person behaves just like the original and remains involved in their loved ones' lives, as if they were simply away on a trip. Nothing would change for anyone else: after all, people already chat with bots and correspond with recently deceased idols.

People fear death due to the loss of control over how they cross the border. We would rather depart on our own terms, and the gradual loss of faith has added to an anxiety that must be assuaged. Euthanasia solves this problem. We also hate to leave our loved ones — or even the rest of humanity. Digital immortality is the solution for this quandary. The idea, which descends from religious view on the emancipation of the soul from the body, is conceivable in two versions: one for other people, and one for oneself. We will look at the first version, which is based on a person's legacy.⁴⁰⁰ The wider the range of preserved digital fingerprints, the more completely an individual's personality can be reconstructed; since the metaverse is the ideal biographer — recording every word and action, every throb of soul and flesh — it promises a digital legacy breakthrough.

We should not expect ideal reconstructions. Perfect digital models of the deceased will require a strong AI that is capable of growth; nothing of the sort exists, and there is no guarantee that it will ever be developed (see Section 10.3). What this means is that our complete, virtualized co-presence will be available, at best, to our great-grandchildren, whom we can safely leave to the care of science fiction writers. But the partial presence being developed today is also interesting, and as AI improves the digital models of the deceased will become more adaptive, behave more naturally, and better fit the roles assigned to them.⁴⁰¹

These improvements are limited by the inability of digital clones to recognize meanings and use that understanding to express something new. The Semantic Web — the third of the future versions of the internet that we are considering — works with meanings. I want to preface that discussion by noting that social meanings do not exist in isolation from values, to which AI is insensitive. Only people can help AI cope with its disability, and only through a mass public reflection of values (Section 10.3).

⁴⁰⁰ Ursache M., "The Journey to Digital Immortality", *Medium* (2015).
Parkin S., "Back-up brains: The era of digital immortality", *BBC* (2015).

⁴⁰¹ Moore C. et al., *Five dimensions of online persona* (2017).
Jacobsen M., *Postmortal society: Towards a sociology of immortality* (2017).

In any event, now is the time to create a backup copy of yourself or, at the very least, of your looking-glass self (the way you want to appear to others). In this light, the desire to capture what you ate for breakfast and post it on Instagram can be interpreted as part of a longevity program; if you've shunned selfies up until now, it's time to catch up. Thanatechnology companies like Eter9 and LifeNaut stand ready to help by creating digital clones.^{cclvi}

The service costs money, and social justice warriors are already decrying the injustice of it: not everyone can afford a trip to cyber-eternity, access to socially meaningful monuments is not equitable, and the elites are trying to consolidate their power for all time.⁴⁰² I'm concerned about something else. When I imagine the megabytes of legacy left by great writers and artists, both past and present, I worry that the residue of our own lives will pale in comparison. Let's you need advice about a serious matter. AI can give you a suitable maxim for the occasion: would you rather hear from a great thinker like St. Augustine, an early-20th-century scholar like John Dewey, or your own great-grandfather?

No matter how careful you are when leaving a trail of digital crumbs for your descendants, regenerating something of quality is difficult, and 99% of the blogosphere's lurkers will be left behind in the ether if they don't speak up. Eventually the post-existential tournament will force them to be heard; in any case, it will force the haters among them to learn discipline by keeping an eye on their digital alter egos. This is part of the retroactive impact of the digital clone, but it will have larger effects, as well. Extrapolated into the future, the digital clone will become a router for personal growth^{cclvii} as people polish their posthumous images by selecting what is important to their lives today and working with autobiographical memory. In fact, this is the best thing that could happen to people.

So far, we have been considering that aspect of digital perpetuation that is of interest to other people. The prospects of achieving some kind of immortality that you can actually enjoy, however, are not bright. With the exception of divine resurrection, there are no solutions offering immortality — literally or in the palliative sense: neither virtualization, nor cloning, nor faith in the transmigration of souls will ensure the continuity of an individual. No matter how much AI improves, it will not be able to instill in a digital entity the ability to understand itself as an individual with a continuous history. Without that, everything decays. This is likely the reason why the films I mentioned above only touch on the idea of achieving immortality in the eyes of others.

⁴⁰² Savin-Baden M. et al., *The ethics and impact of digital immortality* (2017).

Her hints at something that might be immortality for the self, but with such a stretch that it doesn't count.

In short, while it will recreate a person for others, the metaverse will not provide what many people dream of attaining for themselves personally. It will, however, allow us to improve on Nozick's experience machine, turning his thought experiment into a full-scale one (see Section 1.5^{cclviii}). And, of course, we always have at our disposal the secular version of longevity, where the integral of quality time is maximized within the framework of a finite lifespan. The prospects for this type of longevity depend on progress in measurements of quality time, which lie at the heart of this book. The future of the metaverse — whether it is reduced to logistical convenience and entertainment or becomes a place where meaning is produced and consumed — depends on these very measurements.

The prolongation of life promised by the metaverse exercises metaphysical leverage on life, but there is another type of leverage that is less indirect and more powerful. People mainly give consideration to the economic structure of the metaverse, but what about its political structure? Technology encourages us to look in that direction. Who will use the technology? Who will it benefit? Will the participants of the metaverse establish rules they can follow, or will they adopt a laissez-faire attitude that eventually leads to the establishment of a regime dictated by the US government or — worse yet — by China with its Chinaverse?^{cclix} If they follow the latter path, then humanity is unlikely to reach a new level of political order, without which we have no hope of rising culturally and morally to the level of our technology.

10.2.4. The Virtual State Vs. The Digital State

The term “digital state” currently refers to interactions between citizens and their government, including e-government functions, digital democracy, online voting, and the like,^{cclx} but the original meaning was quite different. The dot-com boom of the 1990s opened people's eyes to the plasticity of the political system, and many works were published in those years about the virtual state and civil self-governance.^{cclxi} As soon as digitalization became a reality, however, governments seized its political agenda from the internet community.^{cclxii}

The concept of the digital state as a supranational entity on the internet have faded into the background, but it is time to return to them in the context of the metaverse. Its political structure needs to be established now that tech-

nology has expanded the boundaries of what is possible. A different habitat, a different understanding of good and evil, new opportunities for self-regulation and reflection: all of these either exist or are about to become possible in the metaverse, opening the door to new ways of ordering our lives. This is the first reason we should be thinking about that order.

Before we go on, we need to agree on a term for the political structure of the metaverse in order to distinguish it from e-government. The word “virtual” has promise. “Digital” has greater advantages that explain why governments wanted to snap it up, but “virtual” is generally older than “digital” in the hierarchy of socially constructed worlds. The word polity, which simultaneously refers to society, citizens, and the totality of means and institutions of governance, is promising as a way to avoid the territorial, national, and other connotations of the term “state.” This gives us a couple of options to work with — virtual state, digital polity, internet polity — that I will use interchangeably.

For variety, I will sometimes resort to the term “cosmopolis” in the sense of a mega-city with many peoples and a diversity of cultures, as well as The Commonwealth of Oceana,” which I hope you will not confuse with Orwell’s Oceania in 1984, as I am referring to the constitution described by James Harrington in the mid-17th century, which resonates with the discussion to follow.⁴⁰³

The other reason to be concerned about the sovereignty of the internet is the alarming — to put it mildly — condition of the institution of the state. When I say this, I mean the structure of power in successful countries, international relations, and the balance of power between society and the state, which is skewed in favor of the latter. Engaging with the design of self-governance in the still-free territories of the metaverse is an opportunity for society to move toward new forms of cooperation and to become more competent, capable, and mature. The emergence of an equal, qualified, responsible, and generally saner opponent to the state in the person of civil society will benefit both society and the institution of the state. When in balance, these entities will prevent each other from going to the extremes to which they are both prone.⁴⁰⁴

⁴⁰³ James Harrington called his work “The Commonwealth of Oceana.” *Harrington J., The Commonwealth of Oceana (1656)*. Harrington insisted that power should not remain in the hands of the same person or class for a long time and proposed the rule of rotation by vote.

⁴⁰⁴ I keep returning to this topic because I consider governmentalization the problem of our time. I do not oppose the state or idealize society, which can deliver just as much oppression, but the strengthening of government through digitalization has passed the point of no return. The only thing that can serve as a counterweight to e-government is e-society.

While there are well-known advantages to e-government, the drawback is that all the initiative is concentrated in the hands of officials, who see citizens not as collaborators in digitization but rather as sources of information and clients with limited opportunities for feedback.^{cclxiii} The bureaucracy decides which direction to innovate in; as long as it dominates, the society it manages is infantilized. The government increasingly takes on new functions and new areas of regulation, while officials choose the goals and indicators of success, enjoying the benefits of entrepreneurship without bearing the burden of risk and responsibility.

Their initiatives are sanctified by concern for the general welfare, which — again, to put it mildly, is not doing well. They are more skilled at redistributing society's wealth than at performing their assigned functions of maintaining law and order and responding to natural disasters or humanitarian catastrophes. During the pandemic, many began to suspect that the government — ever the busybody — couldn't keep up with all the crises.^{cclxiv} If that is the case, perhaps it has reached an evolutionary dead end and needs reorganizing?

These sentiments took hold of many, among them the film director Alexander Sokurov: "The principles of government have become obsolete, but governments are not ready to admit it." None of them want to think about or work on the issue, and no one — including politicians and scientists in leading nations — are able to offer anything new. "The functions of law and order," he laments, referring not only to Moscow and its claims to be the Third Rome — have degenerated to such an extent that they have become an apparatus of oppression."

Is his diagnosis accurate? Experts agree: security and human rights are clearly inaccessible to too many people in the world. Sokurov is only inaccurate when he says that they don't want to think about it. They do want to think; but there simply is no solution.

Third in order but not in importance is the fact that a huge number of people in the world are deprived of political representation.⁴⁰⁵ Their interests are not expressed by the governments where they live, whether those be their homelands or countries they immigrated to. These people want to be seen, and they want to influence how life and politics are ordered. All of them — and there are hundreds of millions of them — are potential citizens of a virtual state. Their demand may be latent, but it will erupt at the first opportunity, and the IT, crypto, and gamer communities and members of social networks

⁴⁰⁵ According to the *V-Dem Institute*, "Defiance in the Face of Autocratization", *Democracy Report (2003)*. 5.7 billion people around the world live under autocracies.

will be right there with them. Taken together, that recruits almost half the world's population.

The idea of virtual association is in the air. Oxford University professor Andrei Zorin talks about “completely decoupling culture from the state” and even about “decoupling the country from the territory,” although he cautions that formulating the question this way moves the conversation into a utopian register. “No courts, prosecutors, armies, police, prisons, or anything else that falls under Weber’s definition of legitimate violence.”⁴⁰⁶ This idea resonates with me, but I don’t restrict it to Russia and the Russians who have emigrated, as Zorin does, but apply it to the whole world; furthermore, I don’t share his concerns about the utopian register because, as the professor notes, “thanks to modern technologies we are in a better position than our predecessors were.”

There is a fourth argument in favor of a supranational government based online that is most easily conveyed from the standpoint of the economic theory of clubs, although it was shelved long ago and never adapted for analyzing social and international relations. Meanwhile, the practice of international relations has reached a dead end because the principle of sovereignty on which they were built has come into serious conflict with the globalization of evil.

Peoples exist as members of a club from which there is no escape, no matter what happens. And no matter how other members behave, reining them in is difficult and excluding them is impossible. No one has the legal. Right to enforce the club’s charter and, if necessary, use force. In other words, we clearly see the Hobbesian preconditions for war of all against all, which centralized governments are called on to protect us from.⁴⁰⁶ The old idea of a world government as a force to oppose wars of mutual destruction is relevant once again.

This idea has surfaced many times in the past, but it has never managed to stay afloat. People periodically return to it today, but the question remains unanswered: would appointing a guardian for the charter lead to a world of justice and freedom or to bloody strife?⁴⁰⁷ Is Sokurov right that politicians can’t offer anything new? They can offer all sorts of innovations, but if implementing those innovations looks like more trouble than it will be worth to them, then they naturally prefer for things to continue on as they are. Rousseau also used the prohibitive cost argument, noting that even if a world government is desirable, the process of creating it can do more harm than good. The strongest argument

⁴⁰⁶ As of 2022, there are no bodies — military, legislative, judicial, or executive — with jurisdiction over the entire planet.

⁴⁰⁷ Lu C., “World Government”, *The Stanford Encyclopedia of Philosophy* (2021).

against a supreme authority was made by Kant (among others) when he described the inevitable slide into tyranny.^{cclxvi}

But here is a question: doesn't the information revolution remove the arguments against a world government? For example, statist might challenge Kant's notion of vertical inefficiency on the grounds that, while the market used to be a better calculator than any central planner, digitalization has turned this upside down. Sure, they will say, the planned economy (under socialism) was ineffective, but that was due to a shortage of computing power and data; things are different today. Is this true? Does Kant's argument lose its force?

Hayek and his followers were persistent in their explanations of why the progressivist reliance on an omnipresent state was doomed.⁴⁰⁸ The problem is not the amount of data or computer power available, but in what information to process and in distortion. Collecting complete data used to be impossible. Supposedly that is no longer the case (in reality, data is far from being as complete as is commonly believed), but the data is unreliable: it is still partially unavailable, or it is concealed, or it becomes distorted by the force field of administrative incentives. Digitalization is no panacea for input problems, and it changes nothing about the performance of the central planner. But what about our interest in the internet polity?

Without diving into the details of the arguments that resulted in a world government being recognized as unfeasible, I will refer the reader to the Stanford Encyclopedia⁴⁰⁹ and confine myself to a number of considerations in light of newly discovered situations that have yet to be digested by political thought. Three new inputs — the metaverse, blockchain and the attendant new types of consensus, and donation practices — encourage us to return to the idea of a digital polity because of their potential to negate the objections to it.

The very essence of the concept of a supranational authority is different today than it was when it was first rejected. Opposition to the idea was originally rooted in a rejection of a central government with its monopoly on violence. According to John Rawls, who echoes Kant, such a government could go one of two ways: global despotism or a fragile empire plagued by civil wars.⁴¹⁰

⁴⁰⁸ Hayek F., *The Road to Serfdom* (1944).

Sowell T., *A Conflict of Visions: Ideological Origins of Political Struggles* (1987).

Sowell T., *The Vision of the Anointed: Self-Congratulation as a Basis for Social Policy* (1995).

⁴⁰⁹ Lu C., "World Government", *The Stanford Encyclopedia of Philosophy* (2021).

⁴¹⁰ However, Rawls states that new institutions and practices will contain outlaw states as they emerge.

Rawls J., *A Theory of Justice* (1971).

Other thinkers reject the idea of a world government on the same or related grounds, pointing in particular to the threats an enlightened despot would pose to ethnic, social, and cultural pluralism. However, objections to a world government — whether they are based on tyranny, homogeneity, inefficiency, or lack of spirituality — do not mean that there is no alternative preferable to the existing status quo.⁴¹¹

No such alternative has been proposed yet, but it has become clear that the solution will not be found in extreme positions (full sovereignty versus world government), but in the vertical distribution of sovereignty: up to supranational bodies and down to communities within countries.^{cclxvii} Given how interdependent states are, political philosophers agree that sovereignty will inevitably dissipate. As we have had the pleasure of observing, the cryptographic version of Web3 is paving the way for precisely this process.

An internet polity as imagined today has nothing in common with the ideas that caused political thinkers to reject past incarnations of the idea. 1) It would not be established by national governments. 2) It would strive to become global in terms of population and cross-border influence, but not in terms of administration or the use of force. 3) Not being vertically hierarchical, it would not tend toward unification or interfere with efficiency. 4) Its creation would not require destroying anything or trampling on anyone's status quo.

This supranational entity would not, at least explicitly, encroach on the powers of existing governments (there is no need to do so, and no one would stand for it anyway), and at the same time it would rely on network structures with soft power and electoral effects, which are more than sufficient as levers for influencing politics. Instead of a Constitution, it would have an extremely limited number of principles baked into its code, which would largely replace law.⁴¹²

Consequently, there are at least four reasons to take the idea of an internet polity seriously: 1) the metaverse needs its own political structure if it is to serve as a driver of progress; 2) the institution of the state has taken on too many obligations and is now using muscles that burn calories in vain; 3) there is demand for an internet polity from people who are essentially outcasts deprived of political representation; 4) The Westphalian system of state sovereignty was never designed for globalization and has outlived its usefulness.^{cclxviii}

⁴¹¹ Lu C., "World Government", *The Stanford Encyclopedia of Philosophy* (2021).

⁴¹² Code is Law is a catchphrase in the blockchain community ascribed to Lawrence Lessig.

10.2.5. Digital Initiatives at the Local Level

While political thinkers are collecting their thoughts, business is taking initiative in its own hands and experimenting with the rules of life as best it can. For example, the billionaire Marc Lore is investing his fortune in the utopian city of Telosa, whose name in ancient Greek meant “highest goal.” He is single-mindedly focused on creating the most autonomous and fair community possible, where the wealthy will not pay higher taxes and the community’s bills will be paid using rental income from appreciating land.⁴¹³

Bill Gates has plans to build a smart city near Phoenix. The owner of Blockchains, Jeffrey Burns, is building a city in Nevada that will also be smart and — of course — on the blockchain. The experts, however, do not believe in economic solutions that exist in isolation from political ones.⁴¹⁴ In their view, the problem is not even that developers want to house millions of people on useless land, but the fact that communities grow organically in response to millions of factors, and top-down models do not lead to equality, freedom, or — ultimately — efficiency.

What about on a planetary scale? Is it conceivable to have a supranational institution that benefits humanity instead of harming it? The Atlas movement set out to establish the first digital state in history with the goal of putting an end to humanitarian crises and defending human rights better than the existing international organizations that get caught up in conflicts between the major powers. The launch was scheduled for 2022, after which “people from all over the world will be able to ‘apply for citizenship’ [note the odd quotation marks] and partake in the democratic governance of the state.”^{cclxix}

Online patronage, virtual power, digital immortality: they sound like episodes of Black Mirror. Already fed up with miracles, people are not interested in new wonders, but the course toward the metaverse is no accident. And Facebook’s rebranding as Meta was not just cheap talk. We may still be five years away from

⁴¹³ Cunningham A., “A huge new city is being built in the US desert – but is it just greenwashing?”, *TimeOut Worldwide* (2021).

⁴¹⁴ Alsever J., “Billionaire Marc Lore wants to build a utopian city based on ‘equitism’”, *Fortune* (2021).

The article quotes professors Dennis Gilbert (sociology), Ellen Dunham-Jones (urban studies), and Mark Gillem (urban design). Gillem asks who the winners will be in Lore’s reformed capitalism.

the appearance of mass-market immersiveness (“embodied presence”), but that does not mean we should put off creating a digital polity. The internet is ready for it technologically, and the demand exists. We are just waiting for supply. The window of opportunity is open.

These opportunities arise from the specific nature of the digital environment. As the foundation of Maslow’s pyramid falls away, its political agenda is freed from items dealing with food, health, greenhouse gases, and the like, all of which weigh down democracies and make them so vulnerable to populism. Another characteristic of the digital environment is that its characters — represented by avatars — act as subjects of the kingdom of mathematics and code. On the crypto web, this type of law and order is reflected in the slogan “code is law,” meaning that the rules function automatically.

10.2.6. The Right To Digital Citizenship

Who is entitled to citizenship in the virtual state? This is a trick question. Social fermentation is usually important to an emerging society, hence the temptation to establish entry requirements and gather the “best people.” Otherwise the nascent community will be overrun by “undesirables” and knocked off course.

History teaches us that the path to democracy lies through the eye of a needle — namely, reforms that are unpopular with a part of the electorate — and the pioneering peoples who have made it work would have found it difficult to do so in an environment of universal suffrage. Their descendants cannot roll back a right once given, but neither can they navigate the rapids with a crowd of people hanging on behind them. Although it seems easier to follow the beaten path, this advantage is offset by the fact that the journey often starts at a ladder that has been kicked away— a typical story when the pioneers have unwittingly made the route impassable for those who would come after them.⁴¹⁵ Does this mean we should adopt measures like those proposed by those who are disappointed in unlimited universal suffrage, limiting electoral rights by, for example, allowing people to sell their votes? Should there be restrictions on enfranchisement in the metaverse?

No, there shouldn’t. Anyone can become a citizen of the metaverse, and soon we will see why this is the case and why electoral ballast poses no threat.

⁴¹⁵ Friedrich List is considered the author of the phrase “kicking away the ladder.”

10.2.7. On the Polycentricity of Power and Dynamic Hierarchie

When setting up a digital polity, the main question is how to organize voting and how to count votes. Now that we have reached the end of this chapter on the crypto web (Section 10.1.8.1), you have seen that I believe this can be done by counting votes based on their weight, just like Google PageRank orders web pages, placing those with greater reputational feedback from other pages at the top of the search results (again, taking into account their weight). This mechanism is the whole point.

This same approach applies to avatars, since they are connected to each other by mutual references; in the context of this approach, it becomes clear why The Commonwealth of Oceana is no place for restrictions on suffrage, just as it is no place for manmade censorship. As dots on a social graph, people demonstrate their worth by their involvement or passivity, the nature of their interests, their depth of knowledge in a particular area, and other things that are reflected in the reactions of those around them and their own profiles. This organic self-positioning simultaneously acts as self-discrimination, so there is no need for artificial restrictions or discrimination of any type, including face control, whether aimed at halfwits, minors, the ill-mannered, or any other group.

Initially everyone's votes weigh the same, regardless of financial, social, demographic, or taste characteristics, and the starting value of that vote is zero. Instagram star, law professor, armchair analyst, expert: at the entrance, no one has any power determined by rank. Influence emerges as the action unfolds and is dynamically dependent on others' reactions. And a person's weight can be different in different areas, as it is calculated automatically using methods developed in search and reputation engines, as well as when creating consensus algorithms for blockchains (Section 10.1.7.10).

We touched on this idea briefly when we looked at trilemma of blockchain scalability. Distributed ledgers and a digital polity share a common problem: how to ensure legal capacity in the absence of a vertical power structure. The solution, which leverages the advantages of centralization while avoiding its disadvantages, is the following power structure: polycentricity + dynamic hierarchies.

I put a plus sign between the two components of the solution, but in reality the first automatically follows from the second: different areas have their own decision-making groups that are dynamically assembled on the fly. This idea of rotation (adjusted for the realities of 400 years ago) is exactly what Harrington

proposed, and it is in his honor that I call the digital polity Oceana. Voters' influence is made up of their profile reputation, intragroup status, activity, volume and quality of work performed, other merits, and the like. Following this principle, which requires the use of donations, will reduce the number of rules in the metaverse, thereby minimizing manipulation, infighting, electoral games, and interference in organic social interactions. The desired result? Lower transaction costs, which is precisely the role of useful institutions.

The groups where citizens make decisions are open, like clusters, and one would expect that they will have very clear boundaries, since influence usually demonstrates exponential distribution (if you start at the top, it falls sharply at first and then gradually fades away to nothing; at least this is how it works in existing social networks, but things may proceed differently under the new conditions, and perhaps the distribution will become more uniform). When I speak about decision-making centers, I do not mean institutions where some are included and others are not. The doors are always open to everyone. There are no artificial barriers, and zero discrimination. Everyone is allowed to participate in the decision-making processes, while each person's individual impact on voting results depends on the parameters of their personal profile, including their general status and reputation in a given subject area. The only restrictions are the ones the participants agree to be bound by; for example, when they are not interested in a subject or do not understand it. They can still vote on those issues, but their votes will have 1,000 times less impact on the results than those of people who understand the topic.

The resulting influence is a synthesis of the traits, properties, inclinations, and characteristics of the actors as projected on the subject area. On blockchains, influence is based on work (proof of work), ownership (proof of stake), contributions (proof of importance), participation (proof of attendance), priority (proof of history), trust (proof of humanity), and profile reputation (proof of reputation). All this and more, supplemented by statuses of influence and cemented by donations (proof of donation), will find application in the electoral systems of the virtual state. As a result, one person will be nominated for their expertise, another for their involvement and diligence, a third for their moral authority, a fourth for their reputation, a fifth for their charisma, a sixth for their social capital, a seventh for their philanthropy, and so on and so forth. Anyone can have influence, and that influence is only limited by their desire and amount of effort they are willing to invest.

This creates incentives to participate in the social tournament of statuses and reputations, which I put off discussing in order to look at how the rules of

the tournament are being worked out during the creation of Web3. I don't want to skip over an explanation of how the proposed formula will serve to the benefit of collaborative activity. With it, a new generation of clubs and communities will emerge, organized and capable because they have the best combination of members whose qualities complement each other, which is very important and incredibly difficult to achieve.^{cclxx} As always, it is still hard for people to find like-minded associates with similar cultural and mental qualifications, and — like the mantra about the strength of weak ties — the internet's much-praised connectivity does little to help.

As we conclude our look at the digital polity, I want to turn again to Zorin, who thinks along a parallel course:

"We have technological tools at our disposal for communicating, but also for building institutions [...] People could [...] without moving, join a non-territorial, non-state community. [...] There is no need for a center. There is no center anywhere. There is just a set of segments."^{cclxxi}

In this introduction to the virtual state, I limited myself to the principle of voting, which left a great deal behind the scenes. I omitted any discussion of the mechanics of group decisions — the policies that determine in which situations a simple majority is sufficient, or a qualified majority, or unanimous consent.^{cclxxii} Voting systems are full of surprises, and it is impossible to plan ahead for every eventuality.^{cclxxiii} But, if my ideas about how society organizes itself in the force field of a status tournament are correct, there is no need to do so.

A virtual state is the ideal testing ground for democracy: it is a convenient place to experiment with a federal structure, or the rules for clubs, or electoral systems.^{cclxxiv} My task is not to fantasize, rushing ahead of the locomotive and anticipating the work of society, but to substantiate the principle or central rule that structures everything else and leaves space for activity. Behind the clever mathematics in which this principle is clothed lies a simple, direct call to make individual experience transparent and available for public use through numerical expression. I see this as a way for humanity to update its fairly outdated knowledge base.

I have a great deal of interest in and respect for distributed ledgers, the metaverse, and the internet of the future, but this book is not about those things. Instead, my goal is to highlight an institutional lever that — when equipped with money — could make all of them move in the right direction. Value labeling, value navigations, value orientation, and all the interpersonal connections and collaborative interactions built on them: these are the most important things driven by this lever. Without them, it will be difficult for humanity to achieve its full potential.

The key to making this transition possible will be the little-known satisfaction that donations bring people, giving expression to their dormant altruism and empathy. The external incentive, which will strengthen that internal motivation and bring it to life, will come from social positioning on public platforms where statuses and reputations are determined.

10.2.8. Some Considerations About the Digital Polity

Before we finish with the polity, I want to outline two or three thoughts. In theory, a state ought to have a territory, governing bodies, security forces, and a treasury. How would this work in a virtual world? We looked at the form of government and coercion, which — as in blockchains — is impersonal, with the code as the law.

It is tempting to say that territory is not necessary, but I think it makes sense for the community of a polity to take stock of existing communications infrastructure and announce a fundraiser to buy it (or create their own), which would allow them to control the power switch. The trillion dollars required for this does not seem exorbitant, and besides, contributions to the goal can be counted as performance of the giving pledge.

There are no taxes in the virtual state. What about a budget? First of all, it will be orders of magnitude more modest than that of social welfare states with bloated functionality. Second, and this is not a utopia, taxes will be replaced by voluntary contributions that offer status bonuses. Yes, administrative bodies can be funded by donation, just like many other things in the gift economy. Thus, the tax system will become more rational, and the “catch me if you can” game people play with tax authorities will finally become a thing of the past, saving us from one of the most unpleasant aspects of existence.

We can’t talk about the metaverse without discussing copyright. The whole metaverse is woven from texts, so copyright issues are central to it; and with the advent of chatbots, Benjamin’s problem of mechanical reproduction reaches a new level of complexity:⁴¹⁶ we are no longer dealing with the mechanical reproduction of art, but with creative production by machines, and we find ourselves faced with the need to rethink authorship.

For example, if I instruct Midjourney (which, like Stable Diffusion, Craiyon, and other similar programs, generates images based on natural language prompts) to create a certain kind of landscape, then is the app equiv-

⁴¹⁶ Benjamin W., *The Work of Art in the Age of Mechanical Reproduction* (1935).

alent to a brush in my hand? Can I consider myself the owner of the rights to its output? Are AI prompts protected by copyright? If so, then the cleverest among us will copyright their prompt lists and earn royalties from all the other users.

Or do the rights to my landscape belong to the owners of Midjourney, or perhaps to the hundreds of creative individuals whose work was used to train it and whose names are hidden in the neural network's black box? Who, now, is the author? What is borrowing? What characteristics define creativity? Who should be protected from whom, and how do we divide the fame and money? Copyright doesn't offer much help in answering these questions,^{cclxxv} and copyleft does not ask them.

The future of copyleft deserves its own discussion.⁴¹⁷ I only want to note that, while it is difficult to adapt this institution to a purely monetary coordinate system, it is strikingly easy to adapt it to a coordinate system that combines money and symbolic value. Using copyleft, human resources can be transformed into final goods without necessarily being mediated by money. And these benefits are of the highest rank: interests, ability to acquire reliable information, co-creation, shared emotions, and other things that make the metaverse desirable. Of these things, there is little that can be bought with money; in the context of higher needs, money is not a freely convertible currency. Security, comfort, hedonism (with certain reservations) can be bought, but you can't buy meaning.⁴¹⁸

People often don't know how to make money from their hobbies, but that isn't even the goal. Instead, what they want to do is share their interests with others, collaborate with likeminded people, contribute to a common cause, and receive recognition. The only way to put a price on such rewards is in a peer evaluation system, and there is no way to squeeze them into the concept of copyright. Besides, switching to copyleft does not mean giving up on money. Copyleft plus gratitude payments is the formula for monetizing creativity in the conditions that currently exist. Donations open the gateway between monetary and symbolic capital, and adding them to statuses and reputations will send money flowing into the creative economy.

⁴¹⁷ The author states the starting position for this analysis in *Section 4.9.2. Economic analysis of copyright*, Dolgin A., *The Economics of Symbolic Exchange* (2009).

⁴¹⁸ *Fromm E., Man for himself: an inquiry into the psychology of ethics* (1947).

10.3. THE SEMANTIC WEB AND CHATGPT

For clarity's sake, I am talking about the Semantic Web, also called Web 3.0, not the cryptographic web, or Web3, that we discussed in earlier sections. The whole point of the Semantic Web, as its name suggests, is to arrive at a machine capable of understanding what a person means when they address it in plain language and of giving a meaningful response. Tim Berners-Lee, the inventor of the WorldWideWeb, summarized the Semantic Web as “adding logic to the web.”^{cclxxvi}

The Semantic Web interests us primarily in the same vein as the two discussed above (in Section 10.1 and 10.2), namely with respect to the quality of the content. In the existing Web 2.0, this is a matter of navigating content and figuring out who's who. The metaverse adds politics and digital immortality to this, even though the latter issue relies on the functionality of the Semantic Web because it presupposes that the computer understands human language. In cryptographic Web3, the good faith behavior of blockchain nodes is what matters, even though the interests of the people behind the nodes extend outside the boundaries of the distributed ledgers.

All these versions demonstrate a noticeable desire to reduce human participation to a minimum. I, on the other hand, advocate for keeping people involved, and I am prepared to explain why and what their role should be. Focusing on technology and pure computing without human participation is, in my opinion, a dead end. We humans are the only ones who understand what is valuable and what isn't. If something is valuable, we can explain exactly why. This is the state of the world today, and it will remain the state of the world until artificial intelligence becomes AGI, or artificial general intelligence and learns the difference between good and evil, so to speak, the hard way. There is no guarantee that this will ever happen. If it does, it will not be any time soon. But even if AGI is built to develop itself, it cannot be taught all the possible contexts for every word or phrase once and for all. Developers might achieve this to some degree for a period of time, but the social and cultural environment is continually changing, meanings and values will continue to drift, and machines will always need retraining with the help of humans. There's no way around it.

I wrote the previous paragraph prior to 2022, when significant changes to AI were as yet imperceptible from the outside. Neural networks and machine learning were improving, but little news of the advances was leaked to the public.^{cclxxvii} And then something happened that called into question my thesis concerning the role of humans in the internet of the future and prompted me to revisit it: on November 30, 2000 OpenAI released ChatGPT, a chat bot that uses AI to engage

in conversational dialog so realistic that it's like being inside the movie *Her* and communicating, if not with Samantha, then with her immediate predecessor.

ChatGPT was the public's first face-to-face introduction to the practical applications of artificial intelligence, and it was stunning. The chatbot impressed users with its ability to understand what they want, the quality of its responses and the way that chats progress as the conversation twists and turns and provides clarification. They were also won over by how much the bot can do: write and debug code, compose poems, scripts, fairy tales, plays, take tests (simple ones, for now)... Everyone immediately sensed the enormous potential of artificial intelligence and saw how useful it could be. Plenty has been said and written⁴¹⁹ about ChatGPT; it can introduce itself if you ask it (including warnings about its shortcomings).

The experts have sounded warnings, too: "...it's unhelpful on topics with fewer than 10,000 citations[...] The strength of its responses diminishes rapidly after only a couple of paragraphs[...] lacks ethics and can't currently rank sites for reliability, quality, or trustworthiness."⁴²⁰ ChatGPT is also easily confused by relatively simple questions. For example, it couldn't say which was heavier: a kilogram of air or a kilogram of water (someone has since enlightened it on this account), and one user convinced it that $2+2 = 5$. The developers are upfront with everyone about how the chatbot can sometimes give answers that seem plausible but are actually incorrect or even meaningless; that it is verbose (its instructors prefer long answers that seem comprehensive),⁴²¹ that, when responding to an ambiguous prompt, it does not always ask for clarification, instead preferring to guess at what was meant; and that it is sensitive to wording and prone to hallucinations.

This is not just another case of much ado about nothing; ChatGPT is fantastic, as long as we don't raise the bar to the level of cinematic virtual assistant like Samantha. The chatbot is only 25% of the way there, if that, but it is already clear that the transition to communicating with computers in natural language is a done deal. A revolution in how we handle knowledge is imminent. If the phrase "the world will not be the same" has any meaning, then this is where it belongs. And so, with all due respect and in a spirit of admiring

⁴¹⁹ For example: Li A., "Google looking into AI chat space for 2023, taking cautious approach to ChatGPT", *9to5Google* (2022).

Greengard S., "ChatGPT: Understanding the ChatGPT AI Chatbot", *eWeek* (2022).

⁴²⁰ Rutter M., Mintz S., "ChatGPT: Threat or Menace?", *IHE* (2023).

⁴²¹ This is connected with the problem of overoptimization. Gao L., Schulman J., Hilton J. Scaling, "Laws for Reward Model Overoptimization", *Preprint* (2022).

inquiry, I want to focus on the quality of the content ChatGPT puts out and who is behind that content.

These are the two main questions facing an information society. My answer is to involve people in indicating values. I describe a social mechanism that allows that to happen, but if a machine can do the job then maybe people are no longer needed for the purpose? Let us dive as deep as we can into what and how the machine called ChatGPT calculates.

10.3.1. Generative Language Models: Who Are We Talking To?

ChatGPT is a language model trained to generate texts in response to prompts expressed in human language.⁴²² It is part of OpenAI's family of large language models, based on GPT-3.5 using supervised learning and reinforcement learning from human feedback.⁴²³ That human participation is absolutely vital, and we will look at it greater detail shortly. For the moment, just keep in mind that reinforcement learning is the key difference between GPT-3 and GPT-3.5, and that the latter was trained by specially selected experts who gave it feedback and ranked its responses by quality.

In essence, the chatbot is an advanced version of the autocomplete text generator. Where autocomplete can calculate the probability of the next character or word, ChatGPT does the same thing with large volumes of text. Like any contractor, it needs precise instructions about what is required. Prior to ChatGPT, this was difficult; now it is as straightforward as anything you can imagine: the chatbot understands human language, realizing Berners-Lee's dream of machine readability. This feature of the innovation is what opens wide expanses of potential applications and makes it super-scalable.

Unlike Google, the ChatGPT provides ready-made answers instead of redirecting the user to other resources. From the point of view of information economics, this eliminates the manual costs of processing search results. The chatbot does the work itself, so the user doesn't have to locate the necessary knowledge and package it neatly every single time. (All the search engines have been moving in this direction, but they are still far from what OpenAI has released.^{cclxxviii})

⁴²² ChatGPT (Chat Generative Pre-trained Transformer) was trained in collaboration with Microsoft on Azure infrastructure (training lasted until early 2022; see openai.com for details). OpenAI also created DALL-E to generate images based on natural language prompts.

⁴²³ For a simple explanation, see *Laskin M., "An informal introduction to reinforcement learning", AnyScale (2022).*

Will ChatGPT eclipse Google Search? Will it replace it? The key to answering these questions — as well as our own question about the quality of the chatbot's content — can be found in a competitive analysis of why Google did not introduce its own chat option?

Google is a leader in natural language learning, with its ChatGPT-like conversational application, LaMDA, and its Multitask Unified Model (MUM) for handling queries like, "I climbed Mount Adams and now I want to summit Mount Fuji. How should I prepare for that?" MUM and LaMDA are built into search and YouTube comments, and MUM is being added to Lens so that, for example, a person with a broken bicycle can get instructions on how to fix it.⁴²⁴ Google also uses PaLM, which it released in April 2022 and which is based on next-generation Pathways AI architecture, to "enable a single AI system to generalize across thousands or millions of tasks...." PaLM can answer questions, converse on general topics, understand jokes, write code, build logical chains, recognize images, and more.^{cclxxix}

Google had the answer to ChatGPT before it even existed.⁴²⁵ It had all the tools to keep from being overtaken, and yet it lost its lead. Clayton Christensen's theory of disruptive innovation explains how such a thing is possible. According to Clayton, while a large company nurtures its business model as a cash cow, other players — the disruptors⁴²⁶ — who are not facing the dilemma of choosing between the perfect or the good⁴²⁷ and are not constrained by other factors, can release a product that is well received despite its shortcomings, as long as it is new and good at something. ChatGPT is not just good, it's phenomenally good. And the OpenAI team with their billion-dollar start-up budget (topped up with \$10 billion from Microsoft, are not upstarts by any definition of the word.

So why did Google hold back? For two reasons, both of which became urgent problems once ChatGPT was released. The first issue was that Google wanted to come out with a product that was superior in class and ready to use. Users are cutting OpenAI's brainchild a lot of slack during the testing stage. While users

⁴²⁴ Montti R., "What is Google MUM?", *Search Engine Journal* (2021).

Tay Y. et al., "HyperGrid Transformers: Towards A Single Model for Multiple Tasks", in *Proceedings of International Conference on Learning Representations* (2021).

⁴²⁵ Li A., "Google has everything it needs to counter ChatGPT — here's what it's already shown off", *9to5Google* (2022).

⁴²⁶ A disruptor is a company that finds an innovative way to do business in an existing sector or creates new markets.

⁴²⁷ This dilemma is believed to affect Alphabet Inc. more acutely than other IT unicorns. Olson P., "Google Will Join the AI Wars, Pitting LaMDA Against ChatGPT", *Bloomberg UK* (2023).

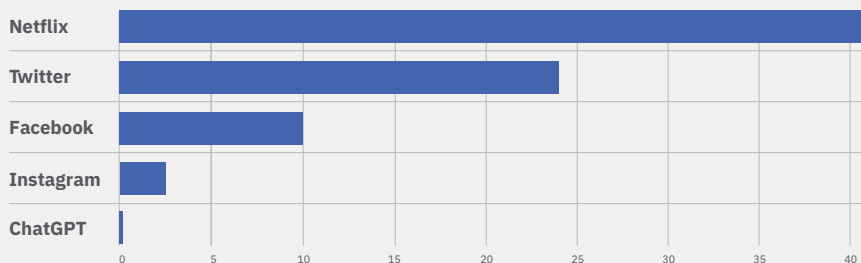


Fig 10.6 | TIME TO REACH THE FIRST MILLION USERS, MONTHS

Chart: Financial Review. Source: Genevieve Roch-Decter, CFA

are trying out its capabilities, it only has to not fail two out of every five times to be received as a success. As soon as it becomes a paid tool, however, people's expectations will change; a tool that only works four out of five times is good for nothing. Google knows the difference in how people view a cutting-edge innovation and a product that is ready to use; it also knew that it was expected to develop a tool, so in light of the inherent reputational risk the company was in no hurry to release its analogue.⁴²⁸ OpenAI can get away with mistakes that would be unacceptable for a search engine handling billions of queries a day; Google would be inundated with lawsuits if its chatbot malfunctioned.

The second reason has to do with the search business model. Many people have predicted with poorly concealed glee that ChatGPT will do irreparable damage to Google's business model, but I think that is unlikely. It will have an impact, of course, because Google makes money when people click on ads and links, and ready-made answers to queries may reduce the number of clicks. Be that as it may, OpenAI's release meant that Google could no longer delay its own launch for fear of tarnishing its image or cannibalizing search, so it accepted the challenge: now on high-alert, it is preparing to launch its own chatbot, Apprentice Bard (now Gemini), a direct competitor to ChatGPT.⁴²⁹

⁴²⁸ Elias J., "Google execs warn company's reputation could suffer if it moves too fast on AI-chat technology", *CNBC* (2022).

Li A., "Google has everything it needs to counter ChatGPT – here's what it's already shown off", *9to5Google* (2022).

⁴²⁹ Google announced code red as soon as ChatGPT was released due to the threat to its search business model.

Grant N., "A New Chat Bot Is a 'Code Red' for Google's Search Business", *The New York Times* (2022).

Zeff M., "ChatGPT is not a Google killer and Google knows it", *TechCrunch* (2022).

Quality became an issue almost instantly, and Google's fears materialized shortly after Apprentice Bard was released. As soon as the chatbot gave an erroneous answer, Google's parent company, Alphabet, saw its capitalization drop \$100 billion, or 7.7%. But there is no turning back, and Google has to show the public what it's been working on. ChatGPT already poses a threat on its own, and Microsoft has announced that it will be integrating the chatbot into its Bing search engine.

Why did Microsoft publicly start its chatbot journey with search instead of with standard products like Excel and Word where integration is just an arm's length away? I doubt that the company is just looking to give the world's top search engine a black eye or get revenge for its own shortcomings in search; instead, they are betting on their ability to impress the public while triggering the Matthew effect,⁴³⁰ which states that there is an advantage to being the first to start the snowball rolling. At this stage, that bet has paid off. ChatGPT has demonstrated phenomenal (virality),⁴³¹ breaking the speed record in recruiting users (Fig 10.6).

In the two months since its release, it has picked up over 100 million users; now it is beginning to slow down and limit access, like a club that is hard to get into and therefore especially desirable. During this time, over one-third of professionals in all fields have tried it out and started thinking of ways to integrate the chatbot in their own businesses.

As well they should: search is easily outstripped by the economic potential (and symbolic potential, which we will discuss later) of the B2B and B2C uses of conversational chatbots. For example, learning to use Excel involves mastering hundreds of techniques. Like a foreign language, it takes practice. Now that tasks can be expressed in natural language, the need for study disappears, and with it the barriers to entry. People used to joke that Excel beat Word, giving engineers a career advantage over students of the humanities, but those days are over.⁴³² Natural language is coming for many other IT tools, and it opens the way for mass B2B and B2C use in accounting, planning, status and task tracking, and the like. At the same time, chatbots will require a vast amount of specialized training, but this work will deliver incalculable savings on routine operations and will boost both the economy and quality of life.^{cclxxx}

⁴³⁰ The Matthew Effect is a phenomenon where advantages are distributed unevenly, and the party with the greatest advantages at the start continues to accumulate them and see them multiply, while the less fortunate party becomes ever more disadvantaged.

⁴³¹ A term used in digital marketing to describe something that has gone viral.

⁴³² AI equalizes people in terms of their opportunities, continuing the work of Samuel Colt. It is worth noting that this was achieved by the markets without the participation of advocates for equality.

How powerful will that boost be? When we estimate the force of the impulse and ChatGPT's general prospects, we have to keep in mind that content is not generated for free; a page-long response requires calculations that cost somewhere from \$0.00014 to \$0.042. Handling thousands of requests per minute incurs direct costs alone of \$6,000 to \$1.8 million. Google processes a thousand times as many requests per unit of time, and Wikipedia is visited by 8,000 people per second; at those loads, ChatGPT's computing costs would be an estimated \$3 million to \$900 million per month. To recoup those costs, the chatbot needs between 150,000 and 45 million subscribers paying \$20 per month (the price for B2C use as of February 2023).

These are very rough estimates, but they demonstrate that the costs are significant; in order for chatbots to conquer the world as soon as possible, they need to be optimized. This means that their widespread use in self-directed learning, medicine, and other industries where they seem like such a good fit may not happen as soon as we might like. But in order to say for sure, we need a clearer idea of the volume and cost of all those calculations. When OpenAI publishes its price list for ChatGPT's B2B services, companies will be able to plan their pricing for services using the chatbot.

Going back a step, the point of starting with search was not to kill search, but to stake a claim to the Klondike. As for the future of search, natural language assistants will become users' constant companions when they search. Chatbots can't replace search because they are not cheap and do not operate with up-to-date information: ChatGPT was trained on data available prior to 2021, so it doesn't know that Argentina won the 2022 World Cup. Naturally, it cannot answer questions that require knowledge of the user's location, but it also declines to disclose the sources it uses when composing answers. In short, it doesn't do any of the things search engines are good at — going to other sites, checking the weather, looking for goods and services.

Google will probably give Bard its own place on the screen, where it will carry on dialogues with users and, among other things, handle long tail queries (about art house films or philosophy, for example) that do not bring in much revenue anyway. It won't be difficult to mix some advertising in with this format,⁴³³ and other monetization strategies are being considered as well. In short, it doesn't look as if the Number One search engine is doomed because chatbots will annihilate search. Rather, they will complement and improve it. But Microsoft's integration of ChatGPT into its Bing search engine will put up some stiff

⁴³³ Lajili J., "ChatGPT is the birth of the real Web 3.0, and it's not going to be fun", *Hacker News* (2023).

competition, and the stakes are higher for Google because this battle is being fought on its home ground.

Bet let's get back to content. ChatGPT will have to distance itself from the "stochastic parrot" image the expert community has given it. The same is true for Apprentice Bard.⁴³⁴ ("Stochastic" in this context means "probabilistic" or "able to guess," but don't make the mistake of thinking this refers to random guesses. It just means that a chatbot does not think in the human sense.) Large language models earned this nickname because they are trained on texts found online, which they scour for statistical patterns they can use to predict what words go where.⁴³⁵ Hence their tendency to generate fluent nonsense, a problem that threatens to get worse if the streams of content generated by neural networks drown out the voices of human users, and if those same users cannot be classified as either laypeople or experts. This, of course, is the stated use case for the system of statuses and reputations I have been describing. Thus, the problem isn't the math, it's the training materials.

Machine translation exhibits this problem at a smaller scale. First the machine is trained on published texts, then machine-generated texts, and then — if they are not rejected — the models eventually learn from the nonsense produced by other machines. Software exists that can detect machine translations, but, as with deepfakes, it's an arms race of offensive versus defensive technologies.^{cclxxxi}

One way to partially alleviate the stochastic parrot's mistakes would be to rank queries by the severity of the consequences if the machine guesses wrong. For the meantime, OpenAI CEO Sam Altman warns against using ChatGPT for critical tasks. User certification of texts would offer a more systematic and universal solution. For such a solution to work, we would need to know something about the reviewer (see Sections 9.1 and 12.3). I propose crowdsourcing expert reviews of content and of content about content. I don't believe there is any other way to sort out the existing mess with texts. Entrusting certification to the consumers of texts will balance generation with an equally powerful form of selection and put up a barrier to adverse selection in information markets (Sections 5.10⁴³⁶).

⁴³⁴ Bender. E. et al., "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?", in *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency (2021)*.

⁴³⁵ See the OpenAI site for more on how ChatGPT was trained.

⁴³⁶ For more on adverse selection and how to combat it in information markets, see Dolgin A., *The Economics of Symbolic Exchange (2009)*.

Looking at this — and at how chatbots are trained — raises the question: to what extent does reinforcement learning fall under Goodheart’s law, which states that when a metric becomes the goal, it ceases to work well as a metric? Intentionally or not, the expert, monitor, trainer, or appraiser adjusts the work being performed to the given performance indicators and to their own competencies and ideas of what is right. This is true in economics, business, and science. The pressure of metrics is everywhere.⁴³⁷ In OpenAI’s ChatGPT, worldviews are manifested in environmentalism and left-leaning libertarianism. Distortions in training materials make this problem worse; for example, one can hear Indian melodies in Bach fugues after they are processed by AI.

Non-anonymous experts would be one antidote to this problem. The status of experts should be determined along with the status of texts used for training as part of a cross-evaluation system, similar to how Google’s PageRank algorithm ranks web pages. The industry is well aware that reputation is everything. Does the author have a reputation or not? Is it good or bad? Then Google, OpenAI, and Yandex invest in the experts in order to train their models on refined knowledge: the model produces multiple responses and the experts choose the best ones. Neural networks are being trained by experts right now, and experts will continue to be brought in in specific areas such as medicine, HR, or project management, but this is obviously labor-intensive, slow, and expensive. And still we wonder about Goodheart’s law.

What about evolution and its direction? The early stages of training a machine can send it in a certain direction and set a ceiling for its development. In analogy with legal precedent, is it possible that today’s values or other considerations, once laid down in the early stages, will predetermine a machine’s future tendencies? Or to put it plainer still, can a tree that was planted crookedly be straightened out? If so, would correctly positioning the light source help? I offer the same solution: expand the social circle of AI trainers as much as possible and rank them by level of expertise. In the context of the digital polity and metaverse (Section 10.2.6), the idea works like this: everyone has a vote, and every statement has weight, but that weight is determined by the person’s reputation and status with respect to the matter at hand. To clarify this idea, let’s consider the role of humans in training large language models.

⁴³⁷ Muller Z., *The Tyranny of Metrics* (2018).

Performance indicators (KPI) can create perverse incentives that are difficult to counteract. The same is true in academia (Ravetz J., *Scientific knowledge and its social problems* (1971)) with citation indexing (Biagioli M., “Watch out for cheats in citation game”, in *Nature* 535 (2016), 201).

10.3.1.1. How Are Chatbots Trained?

We already discussed how ChatGPT was trained using supervised learning and reinforcement learning.⁴³⁸

In supervised learning, a machine is trained on human-selected training data, which consists of pairs of examples in which the input is data and the output is correct answers reported by a human. The machine's task is to find a function for the relationship between the inputs and the outputs that will work with new examples.

(For reference: in an unsupervised learning model, the machine is given input data without approved outputs and is not told how to solve the problem, so it has to solve the task on its own. For example, it is not told what a cat looks like and is instead shown millions of photographs of cats so that it starts to recognize them in any other images it encounters.^{cclxxxii})

Reinforcement learning places a machine in an environment where it is given a clear task and learns by interacting with the environment in such a way that it maximizes the rewards for finding a solution. The reward, determined by the tester and translated into mathematical formulas, is cumulative. Along with supervised and unsupervised learning, reinforcement learning is one of the three main approaches to training machines. This strategy specifies any restrictions, a set of acceptable actions, and a goal; in turn, the algorithm searches independently for the paths that lead to the correct answers, trying multiple options as it progresses. This approach is used when the goal is known but the path to that goal is not, and it has been successful teaching computers to play chess, the game of Go (AlphaGo was created by Google's DeepMind), and StarCraft II. It is also used to train robotic hands and run the UK power grid, as well as at Uber.

The strength of the unsupervised learning model is that it doesn't require an AI trainer to make adjustments along the way or any indication of the correct answers or what patterns the AI needs to learn. All of these things are decided during the machine's interaction with the environment as the environment sends signals to let it know what it's doing right. The machine's goal is to maximize the final reward while balancing its costs between acquiring knowledge through trial and error and operating with that knowledge.

The idea of the training is that the machine will master a strategy that maximizes the reward, which can be reinforced by humans and by the environment. A second type of reinforcement learning is called Reinforcement Learning from

⁴³⁸ ChatGPT is made up of dozens of components that were originally developed by Google and then refined by OpenAI.

Human Feedback, or RLHF, and it is used to train large language models such as ChatGPT. The AI breakthrough is largely attributable to this method.^{cclxxxiii}

This type of training and its reward structure are both of interest in the context of my overall argument. The reward structure is important in any training system, and it is doubly important when working with texts: we are not talking about actions, such as hitting a target, where the answer is yes or no, and we are not talking about drones that can be subjected for formalized assessment. With texts, there is no ideal. Which answer is the best — and in which context — is a matter of interpretation. Content may be reliable but incomplete, voluminous by shallow, understandable but banal. It can satisfy one person and not another.

A reward is a quantified feedback signal that incentivizes the intelligent agent being trained to maximize its total income. In a simpler case than language models, such as training a robot to go somewhere, the reward is tied to the robot's final distance from its goal. When the robot starts training, it acts at random. Meanwhile, it is being fined for going in the wrong direction without being told which direction is the right one. For example, a module training for a lunar landing will try 10,000 options while also attempting to find the right balance between studying the environment and earning points.⁴³⁹ From this example we see how necessary it is to evaluate not only the usefulness of individual actions, but also the optimality of all trajectories initiated by those actions. This is much like board games, such as chess, where each opening move narrows the range of optimal scenarios, each with their own ceiling of success, provided that the opponent plays flawlessly.

Here's another example: a robot is given the task of collecting apples in a specific location; after its time runs out, its harvest is counted and a reward is determined. The twist is that there is a second location with even more apples, but the robot would have to navigate a length path to the second location without any opportunities to recharge. In this scenario, the robot must sacrifice the immediate reward in order to maximize its overall reward. This exploration problem can be solved through calibrated reinforcement.

In simplified form: the value of an action is the sum of its immediate utility and the sum of all subsequent actions, assuming they are optimal. Thus, when weighing the value of education, people take into account lifetime income and benefits, not just the starting salary at the first post-college job. Similarly, recommender systems like those used by Alibaba or YouTube are trained to focus

⁴³⁹ This approaches the problem of transfer of learning: having been trained indoors and then released into the wild, the robot uses previously acquired knowledge and can build a hierarchy of actions.

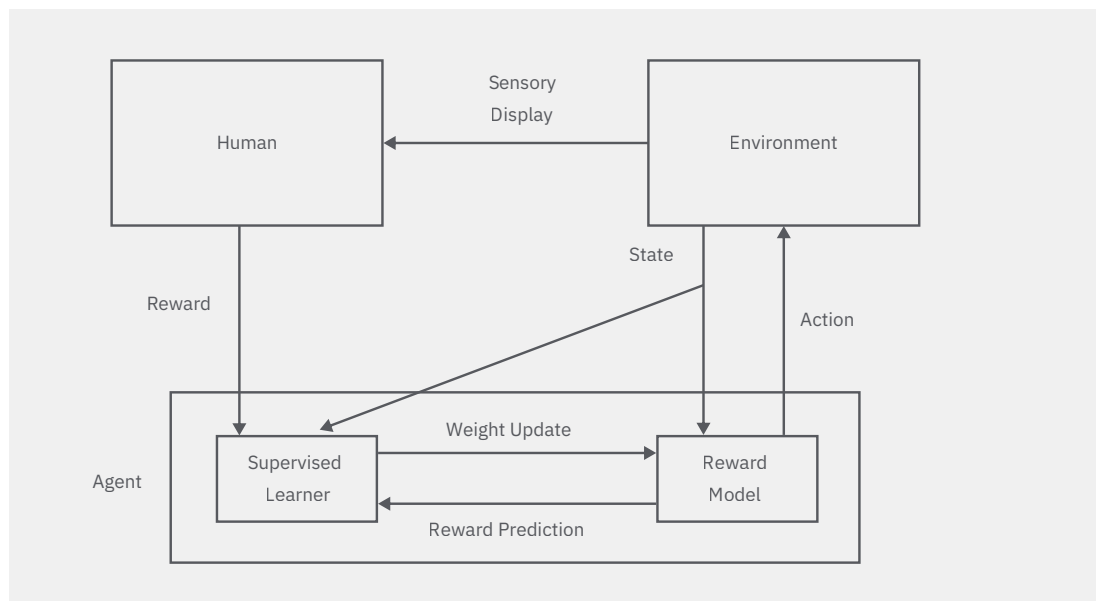


Fig 10.7 | AI AGENT WORKFLOW

not just on what the user might like, but also on what will improve the company's long-term performance.⁴⁴⁰

In the straight reinforcement learning model, the agent builds its own strategy while the human creates the task and training materials, simplifies the solution, and breaks it into separate stages, all without participating directly in reinforcement. When chatbots are trained, however, the human participates and gives feedback, hence the name RLHF (Fig 10.7).

Why is human feedback necessary? A robot that makes pizza can be mechanically rewarded for the correct crust thickness, topping volume, serving temperature, and other measurable parameters, but the flavor of the pizza can only be judged by humans. The same is true with texts: feedback from humans allows the machine to account for everything not covered in the formal rewards system, including vague goals such as "I'll know it when I see it." Because human labor is expensive, most training systems are hybrids, with human supervisors only occasionally involved in what is mainly automated reinforcement.^{cclxxxiv}

There are three stages to RLHF. In the first stage, the model is pre-trained using software, because manual training by humans is impossible due to the gigantic volume of data involved.^{cclxxxv} In the second stage, a reward model is

⁴⁴⁰ In the mid-2010s it was discovered that YouTube recommendations increase engagement but not long-term satisfaction.

created and pitted against a sparring model that evaluates its responses. In the third stage, the main model is encouraged to generate multiple responses that are then ranked by humans.^{cclxxxvi} ChatGPT was trained using this method with some differences.^{cclxxxvii} during supervised fine-tuning of the pre-trained GPT 3.5 model, humans formulated the answers to the questions (this was done with a large budget in order to create a competitive advantage).

10.3.2. Generative Language Models: Who's Doing the Teaching?

How that we know the general gist of how conversational apps are trained, let's take a look at some of the problems the apps experience depending on how they are trained. We will not be looking at threats to humanity from strong AI, the legal issues (who is liable for wrong answers, who is at fault if there's an accident), the opacity of AI solutions (neural networks as black boxes⁴⁴¹), ethical issues (including racial issues, the white guy problem), or the problems of toxic content,⁴⁴² confidentiality, and deepfakes. All of those topics have plenty of media coverage. Instead, our focus will be on the quality of chatbot responses and how that quality is affected by the characteristics of the training materials and trainers.⁴⁴³

While I stated that the problem of bias is outside our scope here, it is a useful way to illustrate quality issues. Chatbots are the products of their education; like children, they absorb the beliefs of their teachers and repeat what they hear. If a social environment is biased, then the algorithm it nurtures will be biased, too. Recall how Microsoft once shut down its Tay chatbot, which was trained to mimic the behavior of a teenage girl, when it began spewing vile, racist statements it picked up "from its friends."⁴⁴⁴ It is difficult

⁴⁴¹ Lei T. et al., "Rationalizing Neural Predictions", *ArXiv* (2016).

McLellan C., "Inside the black box: Understanding AI decision-making", *ZDnet* (2016).

⁴⁴² For more on the traumatic work required to remove toxic content, see *Perrigo B., "OpenAI Used Kenyan Workers on Less Than \$2 Per Hour to Make ChatGPT Less Toxic", Time* (2023).

⁴⁴³ For research on subjectivity in judging musical chords, see Ni, Y. et al., "Understanding Effects of Subjectivity in Measuring Chord Estimation Accuracy", in *IEEE Transactions on Audio, Speech, and Language Processing* 21 (2013), 2607–2615.

⁴⁴⁴ *Perez S., "Microsoft silences its new A.I. bot Tay, after Twitter users teach it racism", TechCrunch* (2016).

A ProPublica investigation found racial bias in an algorithm used by Florida law enforcement agencies.

Dickson B., "Why it's so hard to create unbiased artificial intelligence", TechCrunch (2016).

to create comprehensively balanced training materials because there are countless sides to any issue; if, instead, you were to wipe away all signs of individuality, then the chatbot's responses would be safe but dry and uninformative. The task is not to protect users from obviously incorrect responses, but to provide the best response from a set of correct ones based on the context and the user.

In order to personalize its results, a language model must first “understand” who it is talking to (this is not a problem); then it has to vary its responses by such characteristics as depth, academic content, detail, and readability. At a minimum, a chatbot must report the type and genre of its response, as well as its level of confidence. This task has not even been attempted; the vanguard of research is learning with human feedback. One study proposes evaluating the reliability of trainers.⁴⁴⁵ Although the goal in that specific case is to minimize training costs, the line of thinking coincides with my own: clustering evaluators by their reputations in the subject area. The basic, unshakeable principle is that a good children's coach is not a good mentor for top athletes, and vice versa.

10.3.3. The Cultural And Human Influences On Conversation Apps

Chatbots have costs (the cost of data, training, computation, etc.), but users think about costs differently:

1. When you have a cheat sheet that is always available, your only question is “What should I ask?” This changes the economics of thought.
2. When each of us has our own Samantha, and it's fun and easy to talk to her, that changes the structure of communication.
3. Everyone looks smart, everyone cheats a little, and proof of work doesn't work anymore. What about navigation?

I am exaggerating a bit when I say that knowledge, signs, and communication — the entire symbolic economy — is circling the drain. At the same time, the economics of the individual isn't going anywhere; quite the opposite, it has come to the fore as we consider our choices of what to learn, who to talk to, and what to spend ourselves on. Chatbots are seen as troublemakers in this context, but they are also a foothold for turning the world upside down.

⁴⁴⁵ Yamagata T. et al., “Reinforcement Learning with Feedback from Multiple Humans with Diverse Skills”, in *arXiv* (2021).

It starts with the individual's inner world as they master a new level of self-reflection. Chatbots act as stenographer, biographer, and advisor all rolled into one, providing the personalized instructional scaffolding⁴⁴⁶ without which we struggle to grow. Best of all, they offer to take over what is perhaps the most serious impediment to self-improvement: documentation and tracking. Whatever goals a person faces, in order to achieve those goals they need to test their existing condition, determine their zone of proximal development, select educational and training materials, and record, record, record — just like high-achieving athletes.

Much of this will be handled by chatbots: the human will tell the chatbot its goals, and the chatbot will organize those goals. Foreign language teachers are understandably excited about the release of ChatGPT. For now, we are seeing the simplest applications of the chatbot, but eventually it will be able to solve the language learning industry's number one instructional problem: how to make sure that a person's learning is happening inside their zone of proximal development. Soon an individual will be able to converse with a chatbot as best they can, and the bot will generate a learner profile and list of current competencies, draw up a personalized instruction plan, and ideally also provide materials.

This can extend to any goals people set for themselves. It also opens up many applications that previously relied on extremely labor-intensive tracking and documentation, which turned self-improvement into a test of will. By removing the costs to make a person's inner life transparent, drawing back the veil of unconsciousness, conversation apps may actually help humanity improve itself.

As an example, I fully expect to see progress in tracking emotions that will rescue research in the field from the comatose state it has been in since the end of the last century. The field has been spinning its wheels because recording how people's emotions change in quality and intensity over time — creating a record of emotions — has always been difficult. The main source of data for an emotional record comes from introspection, or self-observation; the hard part is writing it all down as a report.

Keeping a record of one's emotions involves a lot of manual work and makes frequent measurements impossible; it also interferes with emotions as they are experienced, because the person is busy reporting on their feelings instead of just

⁴⁴⁶ The scaffolding has three components:

- interaction between student and expert
- learning happens in the zone of proximal development (the student's current level of knowledge must be known)
- support is reduced as the student grows and becomes autonomous

feeling them. We know that reflection alone affects the flow of emotions, but this is an issue that can be overcome. Documentation, however, has always been the true obstruction: because of it, studies have always asked people to record their emotions just a few times a day, which is entirely insufficient. Now a person will be able to dictate their feelings to a chatbot without stopping what they are doing, and this will be a breakthrough. I have witnessed the obstacles first hand when doing research on emotional dynamics,⁴⁴⁷ but the stumbling block was always the cost of documenting introspection in a more granular way. The means available at the time (this was in 2016–2017) did not allow for a method that was both easy and replicable. With speech recognition, this ceases to be a problem.

This type of mechanization is far from the only way chatbots could be used — and its fruits are not even the lowest hanging — but it offers a hand up in the very areas where it becomes difficult to climb Maslow’s pyramid. I foresee a flurry of IT startups offering tools for tracking, self-regulation, and self-education as long as the services of ChatGPT and Bard don’t end up being too expensive. In any case, wealthy users will keep this use of chatbots afloat until business transforms it from a luxury to an affordable solution and then to the mass-market category. (Quantum computing inspires me to hope for this).

Everyone could have their own interactive assistant in the future, but for this to happen users have to regain control of their personal data; otherwise it is difficult to talk about confidential communication. This was pointed out by Berners-Lee — the father of the internet and the person whose vision is largely realized in ChatGPT — and it is the goal behind Inrupt, a startup he founded with John Bruce⁴⁴⁸ to store data in individual capsules so that users can choose whether or not to allow web services access to that data (instead of the data being used by default).

Berners-Lee has said that the storage chambers will have to be absolutely reliable for users to be willing to give an AI bot access to the detailed personal data it needs to become a personal assistant, like Siri or Alexa, only much more skilled. His partner Bruce added that the idea would require the participation of major internet players, noting that this is made easier by the fact that the advertising returns from data collection are flagging. “Instead of, you know, figuring

⁴⁴⁷ This question is posed by the author in Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012), section 2.3.2. *Emotional Dynamics research*.

⁴⁴⁸ Kharpal A., “*Web Inventor Says Everyone Will Have A Personal A.I. Assistants Like ChatGPT*”, *CNBC* (2023). This is in line with his initial understanding of how the internet should function from 30 years ago: people running their own web servers and avoiding the concentration of power in platforms like Facebook.

out blindly [if] are you the likely candidate for my product and service, how about I just ask you in a legitimate way and you tell me,” said he in a podcast.

This is consistent with how I think about the advertising and non-advertising models for monetization (Section 8.2.1). I also share the goal of returning people their rights, and I would add the goal of returning society its rights — that’s why I welcome the cryptographic web. (Interestingly, Berners-Lee does not put a lot of faith in the cryptographic web because he considers blockchains vulnerable and slow.)

AI makes working with information easier, and the significance of this cannot be overstated. If a low-cost method is found to train, update, and operate AI models, it will revolutionize the way knowledge is handled, and much more will follow. Those who believe that chatbots are on par with the internet in terms of their cumulative economic, symbolic, cultural, and anthropic impact would seem to be right. This is the largest technological breakthrough since the creation of the internet and social networks, and it opens a new page in human progress. One might even call it the achievement of the century.⁴⁴⁹ Incidentally, ChatGPT shares this opinion of itself.⁴⁵⁰

10.3.4. On the Prospects for an Artificial General Intelligence

Now that we have peeked into the machine learning kitchen, we might as well inquire into how the main dish is coming along, the main dish being artificial general intelligence, or AGI. Following the release of ChatGPT, many people, including experts, were quick to herald a tipping point,⁴⁵¹ a decisive milestone at which the creation of AGI will be just a matter of time. Meanwhile, linguists and other specialists insist that chatbots are not intelligent and that their convincing responses are not a step toward a strong AI. Language models lack a semantic model of the world, remixing texts with no relation to anything outside language, and AGI remains just as much of a mirage as it ever was. This is the position of Emily Bender, co-author of a widely discussed article on stochastic parrots that presents chatbots as offspring of algorithms that merely arrange words into sentences.

⁴⁴⁹ Gates B., “The Age of AI has begun Artificial intelligence is as revolutionary as mobile phones and the Internet”, *GatesNotes* (2023).

⁴⁵⁰ Perrigo B., “AI Chatbots Are Getting Better. But an Interview with ChatGPT Reveals Their Limits”, *Time* (2022).

⁴⁵¹ Mollick E., “ChatGPT Is a Tipping Point for AI”, *Harvard Business Review* (2022).

Yann LeCun, a machine learning pioneer and chief AI scientist at Meta, is another expert who sees nothing new in OpenAI's brainchild, pointing out that all large corporations have something similar. He says that AGI is still 10 years off. OpenAI CEO Sam Altman explained that ChatGPT is clearly far from AGI,⁴⁵² perhaps by as much as 10 years off. But remember that until recently, experts' estimates of when we would have AI that could imitate all aspects of the human mind ranged from several decades to never.⁴⁵³ This raises a question: is ten years an overestimation of where we are at, or is it the first round number beyond the forecast horizon that comes to mind? If the former is the case, then there will be an explosion in artificial intelligence, whatever the linguists and other opponents say. At the very minimum, the fuse has been inserted into the grenade.⁴⁵⁴

In 2021, researchers from the DeepMind laboratory released a paper with the title "Reward is Enough" in which they hypothesized that to develop intelligent behavior it is not necessary to present an AI agent with a variety of tasks; all that is required is a single and powerful principle for maximizing reward. It is generally accepted that skills arise from the pursuit of goals, and that different goals are needed to master a range of skills. The DeepMind authors counter that a single reward may be sufficient, and the main idea of their paper is that "...the pursuit of one goal [in a rich environment] may generate complex behavior" and lay a path to artificial general intelligence.^{cclxxxviii}

As proof they point to AlphaZero, a DeepMind project that has succeeded in learning a number of chess skills while pursuing a single goal.⁴⁵⁵ Chess and Go present relatively simple, formalized environments. If the environments are complex, the authors write that maximizing rewards can ultimately lead to the development of an ability to imitate, perceive, generalize, and engage in social intelligence.^{cclxxxix} The authors explain that if a squirrel is to not die of hunger, its brain has to do more than remember the hiding places where it cached nuts; it also has to be able to bluff so that the squirrel's relatives don't find the caches and take them. They see no obstacles to a kitchen-cleaning robot mastering similar intricacies.

⁴⁵² He tweeted that ChatGPT is "incredibly limited, but good enough at some things to create a misleading impression of greatness."

⁴⁵³ See Martin Ford's collection of interviews with leading scientists and experts in the AI space. *Ford M., Architects of Intelligence: The truth about AI from the people building it* (2018). It is worth noting that forecasts presented in 2016 by Gartner turned out to be surprisingly accurate, at least as far as chatbots are concerned.

⁴⁵⁴ See the *Stanford HAI, AI Index Report* (2023).

⁴⁵⁵ Silver D. et al., "Mastering the Game of Go without Human Knowledge", *Nature* 550 (2017), 354–359.

These peculiar — to put it mildly — constructs fade into the background when we consider the fact that the key obstacle to creating AGI — one not mentioned by the DeepMind authors — is how to train it to generalize knowledge in multiple fields given that, in their own words, “...slight changes to the environment often require the full retraining of the model.”⁴⁵⁶ Data scientist Herbert Roitblat called the ideas presented in the DeepMind Paper utopian and pointed to the infinite monkey theorem, which states that if you randomly hit the keys of a typewriter for an infinitely long time, then eventually you will write something good, perhaps even a play by Shakespeare.⁴⁵⁷ In real life, however, there are time constraints. In his book *Algorithms Are Not Enough*, Roitblat writes that all modern approaches to training AI, including reinforcement learning, require a foundation of ideas provided by humans.⁴⁵⁸

“Once the model and its intrinsic representation are set up, optimization or reinforcement could guide its evolution, but that does not mean that reinforcement is enough. <...> In other words, the problem of general intelligence is precisely to contribute those things that reinforcement learning requires as a pre-requisite,” Roitblat says. Furthermore, the DeepMind paper says nothing about how the value function, reward signals, and other elements of reinforcement learning are defined. Roitblat’s main message is this: modern AI systems are representation-dependent, and the shortage is not in algorithms that can solve problems, but in algorithms that find and solve problems without our help. Before computers can achieve AGI, he says, they have to be able to define their own problems.

Patricia Churchland, author of a book on the biological origins of moral intuition, approved of the DeepMind paper for the most part, but she lamented its emphasis on the personal benefits of AI agents when what matters are social community and affection, which she thinks could be factored into the hypothesis.⁴⁵⁹ On the contrary, I believe that since “...social animals have degrees of attachment [...] that can vary depending on environment, and also on developmental stage” (in Churchland’s words), such degrees of affection cannot be included in the hypothesis for a single, powerful stimulus.”

⁴⁵⁶ *Dickson B., “DeepMind says reinforcement learning is ‘enough’ to reach general AI”, Hacker News (2021).*

⁴⁵⁷ *Dickson B., “Why AI can’t solve unknown problems”, TechTalks (2021).*

⁴⁵⁸ *Roitblat H., Algorithms Are Not Enough: Creating General Artificial Intelligence (2020).*

⁴⁵⁹ *Dickson B., “DeepMind says reinforcement learning is ‘enough’ to reach general AI”, Hacker News (2021).*

Our ability to identify the winner in this debate is very limited, and the answer, as usual, depends on what we mean by AI. Computer scientists joke that as soon as they create something, they have to say it isn't artificial intelligence, because AI is, by definition, something they haven't created yet. Speaking more seriously, those same computer scientists say that no one is even dreaming of genuine thought, except perhaps in a small way about templates for the kind of thought that Kahneman describes as "fast."^{ccxc} Everyone agrees that today's AI is far from human and that for now, only humans can identify unsolved problems. Although AI is continually gaining new algorithms, they can do little beyond the narrow fields in which they were trained.

I am most interested in anthropomorphic AI that is capable of experiencing emotions in reality, not as a simulation. Humans will retain the upper hand until AI is taught to perceive pain, to be sad or angry, to engage in soul-searching, to get bored, to grow old while still hoping to cheat death. A universal principle of maximization is music to the ears of any economist; after all, our profession is based on the principle of maximizing utility. But economists do not define the utility of a human being, leaving that to the discretion of the human in question. Individuals are guided by their own value structures. If we want to instill a value structure in AI, then which one do we choose? A value structure has ten or more components, and it is not clear which of them should be maximized without assigning something along the lines of a happiness function, which — for people — includes hedonism and the meaning of life.

There are no formulas, however, that could turn a value structure into a single vector, or resultant force, as the principle of the single incentive requires. Add to this such subtleties as the need to match the time horizons of planning, each with its own optimal value, and to take into account social attachment by social radii. And so we see that, upon closer examination, the thesis of a single powerful goal falls apart. Roitblat stands on the evidence when he insists that ideas must come from humans, writing that "...we don't have any method for generating those representations, goals, and optimizations."^{ccxci}

It is also striking that the DeepMind engineers operate in terms of behaviorism and evolutionary biology, with no room for imprinting in their thinking about animal development. According to the critical period hypothesis of human development, if a person does not acquire language skills within the first few years of life, a developmental window closes, making true fluency unachievable. Who, one might ask, will be watching to make sure this doesn't happen to AI? Furthermore, given the connection between the psyche and the body, the only way to truly humanize AI would be to connect it to a human body by a myriad of sensors — and that body would need to belong to a new-

born.⁴⁶⁰ To the best of my knowledge, no one is even contemplating such experiments; therefore, the linguists and other skeptics are right: we have a machine that works with texts. It's an amazing machine, but nothing more.

The machine is detached from everything but language, and that is exactly how it is advertised: as a language model. It is therefore unreasonable to believe that the gap between humans and AI has narrowed significantly. A bet on pure computing will not pay off, and here's why: artificial intelligence knows nothing of good and evil and cannot be taught to see the difference (for now, in any case, the conditions do not exist). Behavioral methods can be used to create conditioned reflexes, but no one can breathe the breath of life into a language model.

As long as this is the case, chatbots will remain collaborative robots and we will hold onto our monopoly over our purely human skills and functions. My conclusion about the semantic web is the same as for the cryptographic web: technologies do not need to be "human-free" in order to better serve people. The "human-free" route is technologically untenable and will lead to negative consequences: it is the opposite of humane to free a person from the need to reflect; this is not an area where we should scrim and save.

Nothing I have said above is intended to detract from the significance of ChatGPT's breakthrough; on the contrary, we should be celebrating the new opportunities if we don't want to be scrapped.^{ccxcii} AI breakthroughs are good both for the gift economy and for the system of reputations I propose, as they will allow us to validate the AI learning environment and, through this, improve the quality of their own work.

The above reflects my understanding of the status of the Semantic Web and its future prospects as of early 2023. New advances are appearing rapidly, and it will take time to absorb the opportunities offered by the new generation of chatbots — a process that must be completed for mature analysis to be possible. It is already clear, though, that the process is developing as I have described and that transformation awaits many fields of human activity. For example, Microsoft 365 Copilot was launched in March 2023, connecting the

⁴⁶⁰ The processes of perception and cognition are inseparable from emotions, and emotions are wedded to physiology. All these are parts of a single whole, so their modeling requires a single architectural implementation. Pessoa L., "Do Intelligent Robots Need Emotions", in *Trends in Cognitive Sciences* 21(11) (2017), 817–819.

capabilities of large language models with user data in Microsoft Graph (calendar, email, chats, documents, meetings, etc.) and with Microsoft 365 applications (Word, Excel, PowerPoint, Outlook, Teams, and more). Google immediately did the same with its own tools.

GPT-4 was released in March of the same year. In response, the Future of Life Institute published an open letter calling for an end to experiments with AI because “...we risk loss of control over our civilization.” Among other things, the letter addressed how propaganda and falsehoods are flooding the information space and suggests thinking about how to make AI systems “...more accurate, safe, interpretable, transparent, robust, aligned, trustworthy, and loyal.” The letter’s authors also speak of the need to bring in independent experts and create a reliable ecosystem for auditing and certifying AI.

The whole message of this book is that we can create a self-regulating, open ecosystem that does not depend on anybody’s personal opinions about the authority or independence of experts. While the concept of an institution of public reputation and status as described here could have been described at one time as an opportunity, now, with the beginning of the revolution that is the Semantic Web, it is a necessity. Creating it is an urgent matter, because, unlike robots, which are slowly replacing labor, AI will not leave people much time for adaptation and retraining.^{ccxciii} The only way that governments know to respond to the challenge is by banning it. They do not know how to engage people in useful work, do not have the funds to pay an unconditional basic income, and certainly cannot provide meaning or direction for people’s lives.

Such tasks fall within the competence of society. And yet without the establishment of donations as an institution, it is difficult for society to identify and promote those who are able to find new desires and create the new professions, types of employment, and jobs that are so necessary for everyone whose neat and tidy work clothes are about to be hung up for good.⁴⁶¹ Creatives are not fueled by the holy spirit. They have to be rewarded, and I see the gift economy and its post-transactional rewards as the economic basis for this process. This is the fittest way to monetize goods that are experiences, such as cultural innovations, inventions, and texts. Without it, humanity will be hard pressed to enjoy the “AI summer,” as the risk is high that we will either slide backward or “rush unprepared into fall,” as the authors of the open letter warn us.

⁴⁶¹ Poleg D., “God, AI, and the Scalable Class. Most people no longer need to work. Our survival depends on convincing them it’s ok to do something”, blog (2023).

10.3.5. Navigating Reputations

A key factor that will determine humanity's future development is how well we learn to navigate content and creators. We hear a similar view from Jason Calacanis, who interprets Web3 as the creation of quality content and services based on Web 2.0. He sees the internet's development as more of a social and cultural problem than a technological one, and, like me, relies on the expertise of a new generation. He would see it built like Wikipedia,⁴⁶² only better, with trusted experts verifying the validity of statements and correcting errors. This will help the wisdom of the crowd to prevail over collective madness.

Calacanis is on the right track when he calls for experts, but the idea is not well thought out. It does not contain the one new thing that would raise content certification to a higher level — a high-capacity mechanism for selecting those “trusted experts.” It's no coincidence that the news aggregator Digg, which Calacanis points to as a prototype, has ceased to exist. Its demise was caused not least by what I point to again and again as key: slow speeds and poor security. When there are gaps in a system, entrepreneurial “experts” will use them to promote content for personal gain, as happened with Digg.⁴⁶³ This is always what happens, and the only barrier to prevent it is a comprehensive public system of reputations that is safeguarded by donations.

10.4. INTERIM CONCLUSIONS

This book is about the measurements of the symbolic, which require a tool and a method for using it. The tool is donations, and the method is an institution or rule that encourages their application through inclusion in a public tournament of statuses and reputations. Connecting the tool and the method will generate a hierarchy of value for texts. Without of such hierarchy our time is wasted, which leads to a multitude of derivative problems, all rooted in poor navigation that is no match for the complexity of the landscape.

Donations are an institutional innovation; a revolution that requires a shift in consciousness because it goes against the dominant mode of handling mon-

⁴⁶² Calacanis points to the German version of Wikipedia, where reviewing is delegated to professional editors.

⁴⁶³ See about Digg in Wikipedia <https://en.wikipedia.org/wiki/Digg>

ey. I have attempted to draw a roadmap for this innovation by substantiating it from different angles and highlighting a range of problems that donations could solve. Institutions do not appear out of nowhere: they are created by people who want something, hence the need for incentives and prizes to mark the milestones as those institutions come into being.

In an attempt to capture this dialectic, I have demonstrated the role of donations in the gaming and creative industries, the podcast industry, the monetization of professional content, the capitalization of the internet as a whole, and in how experts and consumers navigate culture. Then I turned to the topic of blockchains because consensus cannot exist solely inside a ledger; it will always be fragile unless it has a backup connection to the offline world. That support appeared in the form of NFTs, the second most promising application of blockchains after cryptocurrencies, which people see as speculation and vanity without detecting their main role as indicators of reputation.⁴⁶⁴

From the crypto web, I turned to the metaverse because I realize how much it will depend on navigation and how unprepared Web 2.0 is to provide that navigation. The role of donations in the navigation aspect seems to have already been sufficiently illuminated, while their civil and political role is more than another argument in their favor: it is a breakthrough in the pragmatics of what is feasible. We are no longer talking about the problem of navigation, the very formulation of which is complex for many people, but about things that are closer to most of us: the quality of our human connections, our sense of belonging, our careers. If we can discover the dimensions of the symbolic, we will find the path to a place where we understand “how to win friends and influence people.”

The key to the last of the cases discussed here — the Semantic Web and large language models — is the same: the institution of reputations based on consumers’ donation-mediated reviews of text quality.

⁴⁶⁴ This is why I wholeheartedly applaud Buterin’s insights on soulbound tokens that are tied to an individual and his and his co-authors’ thoughts on membership-based clubs and a decentralized society (DeSoc). From this kind of searching, motivated by concerns about blockchains and the flattening of power, it is just a step to recognizing NFTs as donations on the blockchain and one more step — albeit a hard one — to finding a method for institutionalizing them, and that is what this book is about. For more on this, see Section 10.1.7.9. Weyl E., Ohlhaber P., Buterin V., “Decentralized Society: Finding Web3’s Soul”, in SSRN (2022).

CHAPTER XI.

MILESTONES OF THE ONLINE RECIPROCAL ECONOMY

Direct monetization is an untrodden expanse of open country into which people are only starting to develop. The reason for this is that business and creative resources are closely confined within the bounds of the advertising model (Section 8.2.1), which will eventually burst open like a clay pot when the tree inside grows too large.

We can see the indications in the more than two-fold drop in Facebook's shares, and while Zuckerberg is betting on VR, the market has gotten a taste of direct monetization. The direct monetization model — both subscriptions and one-time donations — is successful in Asia and in the West on platforms like Twitch; Clubhouse relied on \$direct monetization when it was on the rise;⁴⁶⁵ Patreon, Substack, Ghost, Roblox, Scroll, and hundreds of other services provide content creators with the infrastructure they need to earn money independently.

Let's take a look at the chronology of events that got us to where we are.

⁴⁶⁵ Mascarenhas N., "Clubhouse launches payments so creators can make money", *TechCrunch* (2021).

I. EMBRYONIC STAGE

1990s	Free software movement, Linux, first use of donations; F2P (Free-to-Play) games distributed as beerware, i.e. free of charge and users thank developers with a couple of dollars “for beer.”
1998	Robert Woodhead monetizes his services at selfpromotion.com using the tipping model.
1999	Napster (New artist program); ^{CCXCIV} peer-to-peer networks for music and video.
2000	Stephen King tries out gift payments (although he uses a subscription model with a fixed price, which was not the best solution). ^{CCXCV}
	US politicians begin turning to crowdfunding
2006	The Chinese online game Zhengtu Online starts using loot boxes that combine sales with lotteries
2007	Jamendo offers musicians 50% of advertising revenue and almost 100% of listener donations
2009–2010	Kickstarter, GoFundMe
2011	Multiplayer online games experience boom in donations
	Wikipedia collects \$24 million from 1.1 million donors

II. INFANCY

2013	- Stratechery.com pioneers monetizing an industry analysis website using the subscription model (Ben Thompson); - Patreon donation service launches; - YouTube launches paid channels where creators can sell monthly subscriptions (this option was later removed); - Tencent Music Entertainment, 70% of revenue comes from cash payments, not from advertising.
2016	News Revenue Hub uses a donation model. ⁴⁶⁶
2017	Substack; Facebook launches Facebook for Creators and the Creator app.
2018	YouTube launches channel memberships.
2019	Patreon takes off, with 6 million patrons supporting 200,000 creators and \$1 billion in turnover
2020	Online services using direct monetization (OnlyFans, Roblox, Cameo) grow exponentially for many types of content.

III. CHILDHOOD

2021	Twitter acquires Revue newsletter platform and Scroll ⁴⁶⁷ advertisement muting service;
	NFTs take off;
	Creator economy booming: the global creator market is estimated at \$8 billion according to Mediakix forecasts; by 2022 those estimates grow to \$15 billion.
2022	Buterin publishes his Soulbound essay on soulbound tokens, followed by a co-authored article expanding on the topic;
	ChatGPT.

⁴⁶⁶ Wang S., “Membership programs are paying off for news outlets – and so is helping them set up their programs”, *NiemanLab* (2017).

⁴⁶⁷ Scroll, which launched in January 2020, offered users ad-free access to member media outlets for a subscription fee of \$5 per month. The percentage of that fee paid to the media outlets depended on how much time the user spent on their pages.

11.1. SIGNS OF BUSINESS MODEL TRANSFORMATION

The podcast industry and the blogosphere are at the forefront of the transformation. Revenue for these two areas has grown from \$1 billion in 2019 to \$3 billion in 2020 and \$5–6 billion in 2021, and it is expected to reach \$15 billion in 2022. When their revenue reaches tens of billions — and analysts predict it will reach \$100 billion within the next five years — we will have convincing evidence of transformation.⁴⁶⁸ The gaming and music industries are following a similar course. Spotify alone has invested over half a billion dollars in podcasts in recent years,⁴⁶⁹ and it earned six times more in 2020 than it did the previous year.

These streams of non-intermediary payments are eroding away the advertising dam, and once they erode it a little more they will start bringing in hundreds of billions of dollars. Infrastructure for non-advertising monetization is growing: 1) Vertical-specific platforms are being built for fitness, podcasts, bloggers and writers, gamers, streamers, musicians, teachers, influencers, and other independent creators. Social networks — primarily Instagram — provide them with a starting audience. 2) Hundreds of companies are busy creating business toolkits comprising tools for e-commerce and merchandising, managing business and customer relationships, and financial transactions, including cryptocurrency.

What is key is the growing number of people involved in this practice: 50 million people in 2021,⁴⁷⁰ including 2 million professionals who live on the donations they bring in,^{ccxcvi} plus hundreds of millions of people who donate. This social asset should be sufficient for donations to reach a new orbit.

⁴⁶⁸ Influencermarketinghub estimates that the creator economy is worth \$104 billion and predicts trillions in the self-employed economy (freelancers and gig workers). *NeoReach, Creator Earnings: Benchmark Report (2021)*. Today, these billions mainly consist of influencers' advertising income, but direct payments will soon join the mix.

⁴⁶⁹ In 2019, the company acquired Gimlet Media for \$230 million, and in 2020 it acquired media company The Ringer for close to \$200 million and podcast technology platform Megaphone for \$235 million.

⁴⁷⁰ According to SignalFire, by the end of 2020, there were about 50 million creators on platforms like OnlyFans, YouTube, Etsy, and Twitch, of which 2 million were professionals and 46.7 million were amateurs (with enough subscribers to monetize their content).

So much for the marketing side of the ongoing transformation. Daniil Kharms anticipated its metaphysical side with a lyrical hero who says, “People see me as a means of support, they repeat my words, they are astonished by my actions, but they don’t pay me money. Foolish people! Bring me money, the more the better....”^{ccxcvii} People are not, in fact, foolish; they just need to be prodded. We just saw how the subscription model is running on its own power; monetization by one-time donations is also gaining momentum, but it will reach its full power only if and when the monetary aspect is multiplied by the status aspect. For this to happen, donations must become part of the games of prestige. Moreover, they must become part of the games of prestige, the most principle of which brings together and organizes regional and industry-specific games of prestige. An arena needs to be built for a central, unifying tournament of prestige. What I will do now is imagine what that will look like and how it could be built.

CHAPTER XII.

**A UNIVERSAL PLATFORM
FOR SYMBOLIC
STRATIFICATION**

Donations highlight the quality of individual transactions, but in order to navigate the content we need an overall picture that includes information about all donations (and non-monetary signals of perceived quality) and about the recipients and donors. This data will form ratings that reflect all possible cross-sections of the information environment, laid out like shop windows that can be compared to each other (Section 5.10). The result will be more than just another ranking system: it will be a worldwide registry that includes all conceivable cross-sections and all ratings, all of it built on a single relational database (SQL).

How could a platform for mapping the symbolic be built? Who would build it? The birth of institutions is a mystery without pattern or schedule. And while it is generally useless to tell social actors what to do and how to do it, I'm willing to try. Let me say for starters that the imagined donation platform should offer certain options in addition to basic functionality, which includes calculating influence and reputation and processing payments. The options I am most interested in are 1) recommendations, 2) relationship management between creators and donors (Section 7.4);⁴⁷¹ and 3) community administration.

⁴⁷¹ Examples: Tubular Labs, MoeAssist, CloutJam.

Given the complexity of the task and the volume of personal data required, the top five technology companies seem like the best candidates for taking it on (Alphabet, Amazon, Apple, Facebook, Microsoft).

Their audiences are sufficiently large to build reputation ratings, and, given the fact that personal data can be purchased or exchanged, this factor might not even be critical.⁴⁷² Facebook is in the lead with 3.5 billion users, followed by YouTube and it's over 2 billion users, which is twice the size of its closest Asian competitors. X, Quora, Pinterest, Reddit, and others also have enough users. Since status calculations and other functional modules can be built in cooperation, the industry giants are well positioned to build the infrastructure required.

Who steps up to coordinate this project depends on a combination of factors, both objective and subjective, including the ambitions of business leaders and their deep need to create something grandiose. The B2C internet has not come up with what that might be. What follows is a non-exhaustive list of leading tech companies and what it would take for each of them to become enthusiastic about the idea of a donation platform. And since the success of this undertaking depends on a company's ability to stake out its position on the coordinate plane labeled "functional utility — social capital," I will consider how each candidate measures up to the criteria taken from Eugene Wei's essay *Status as a Service (StaaS)*.

Apple came in first in a rating of innovative companies compiled by Boston Consulting Group. The company has attempted to integrate social functions before, but those projects came into conflict with privacy concerns. (Wei: "[Apple] built one in music, but it died off quickly. They've tried to add some social features to the photo album on iOS, though every time I've tried them out I end up more bewildered than anything else.... Apple's social efforts tend to be social capital barren.")

Google, which came in second in the same rating, is socially nearsighted for the same reasons as Apple, including the company's prioritization of utility over social capital. The software engineers in charge at Google supposedly find status-oriented products "distasteful or mysterious." Wei concludes that Google is likely to remain as weak as Apple in social networks and to compensate for that with its unique strengths.

I'm not taking Google out of play, however. In fact, I'm betting on it. Google invented monetized search, revealed the full power of YouTube, and created Apprentice Bard. It has everything it needs to solve the task of our age, in-

cluding reputation engines, big data, and, most importantly, advanced podcasting with built-in one-time donations. What I offer here would help Google earn even more revenue.

Google's inexperience in status games would be a critical drawback if we were talking about targeting a multicultural, age-diverse audience, but a status tournament doesn't require that kind of targeting because it is self-adjusting. The tournament is universal and based on the universal language of money. How communities use that language is their business. The tournament's organizers do not need to have perfect pitch on social matters; what they need is the clarity of a good referee, with an eye for what's right and a preference for logic. These are the very qualities Wei feels are preventing Google engineers from being on close terms with the irrational. The question, though, is not about familiarity, but about adding rationality to keep the symbolic from drowning in the garbage that is generated by its own production because the existing rules are so imperfect.

Amazon launched some social projects only to forget about them later. Wei writes that the projects were most likely premature, released before they could reach the scale at which the flywheel effect takes over. He explains that Amazon already uses social dynamics in its retail business for reviewer rankings and global sales rank. But given the industrial scale of fake reviews (Section 12.1), Amazon could strengthen its social side by offering recommendations and reviews from people you can trust. This would feed the flywheel with energy from people who elevate their status by becoming product experts.

Facebook is a promising candidate, if only because it is overdue for a detox from the advertising model and because its content doesn't fit the subscription model but is exactly what you want to see for one-time donations. I want to look at Facebook in greater detail because, even though it is catching criticism today for its VR obsession — which is eating up shareholders' money — it actually has more experience with social capital than any of the other IT heavyweights.

According to Wei, by launching the news feed and assigning attention indicators to the posts within it, Facebook created a boom in social capital.^{ccxcviii} At the same time, Wei writes that Facebook is poorly suited to the way young people use social capital because of its ties to the real world and its insistence that each user have a single identity.

"The pairing of Facebook's gigantic graph with just about almost any proof of work from another app changes the very nature of that status game, sometimes in undesirable ways. Do you really want your coworkers and business colleagues and family and friends watching you lip synch to 'It's Getting Hot in Here' by Nelly on Lasso? Facebook was rumored to be contemplating a special memes

tab to try to woo back the young, which, again, completely misunderstands how the young play the meme status game.”

In my opinion, Facebook may lag behind in social functionality, but it is less behind than other tech giants that “...are probably always going to be weak at social absent executive turnover or smart acquisitions.” Wei sees the need for change as dictated by the fact that it is difficult for top managers of companies — even those that specialize in social networks — to succeed because they don’t understand how different users’ experiences are:

“When you have hundreds of millions or even billions of users, across different cultures, how do you accurately monitor what’s going on? Your metrics may tell you that engagement is high and growing, but what is the composition of that activity, and who is exposed to what parts? [...] When it comes to running a community, the thickest veil of ignorance is the tidy metrics dashboard that munges hundreds, thousands, or maybe even millions of cohorts into just a handful. To really get a sense of the health of a social network, one must understand the topology of the networks, and the volume and nature of connections and interactions among hundreds of millions or even billions of users. It’s impossible to process them all, but just as difficult today to summarize them without losing all sorts of critical detail.”⁴⁷³ [emphasis added]

Wei identifies the problem as an inability to measure social capital and track its flows. He writes that this “dark matter” reveals itself only in exchanges where it turns into money, meaning the advertising income of influential individuals. I would argue with this. It does reveal itself to some extent, by not nearly to the extent necessary. Money captures only a portion of the “dark matter,” and this will not change until a toolkit based on donations is available: without it, there will be no processing or summarizing.

I am not inclined to belittle Facebook’s social competencies (nor is Wei). Whatever people say, the company has created a product for billions of users; are there many other examples of a social network maintaining ease of use for all ages and cultures while scaling up? But I would like to suggest to Zuckerberg how he might aim at two birds with a single stone and manage to bag both of them: introduce one-time donations and organize status games around them.

It is difficult for Facebook to act as a club for everyone while at the same time updating status ladders for its different categories of participants. A universal tournament would solve this problem by naturally expanding into multiple lad-

⁴⁷³ “But perhaps even more confounding is that executives at successful social networks are some of the highest status people in the world. Forget first world problems, they have 0.1% or 0.001% problems.”

ders. It's time for Facebook to become more useful, and I've already laid out a recipe that fits perfectly into the platform's mission to "give people the power to build community and bring the world closer together."^{ccxcix}

In no particular order of importance, I want to mention Microsoft, whose innovative ability is on display in its ChatGPT collaboration with OpenAI and in the integration of large language models with the company's applications (Word, Excel, PowerPoint, Outlook, Teams) and with personal data^{ccc} (which makes Microsoft a leader in the BCG rating).

The list of white knight candidates is not limited to the top five. It also includes Telegram and X, with their top-drawer social capital (and the quality of the audience is more important than its size) and the triumphant achievements that Durov and Musk can already point to.^{ccci} Telegram and X both aim to provide content without the moderation used by the party-line media outlets, which tend to disappoint the reflective members of the audience. It is possible to collect and inspire a top-notch audience with freedom of speech without opening the Pandora's box from which people's dark side emerges, and it's important to do so because that dark side shouts down the positive voices. The conceptual solution involves recommendation algorithms that take reputations into account: when reputations are displayed, users see who is speaking and filter in or out what is said.

Reddit, that massive collection of hundreds of thousands of forums where people share content, is another contender.^{ccci} More than any other platform, Reddit — with its commitment to freedom of expression — needs tools it can use to put a stop to hatred.^{ccci} So far it has coped using karma and upvote/downvote counters for comments, but this is not enough if the platform wants to work with brands.^{ccciv} Ben Thompson sees no way for the site to guarantee that premium ads never serve the needs of a toxic audience.⁴⁷⁴

There is, however, a way: moderators currently spend hours fighting zombie accounts^{ccc} that could be nabbed automatically by implementing area-specific reputations.^{cccvi} While advertising is a serious concern, Reddit should be even more worried about user navigation: the site looks like a garage sale, and the subreddits are practically crying out for indicators of their aggregate social capital. (The entire blogosphere is affected by a lack of ratings for communities, forums, and thematic threads.)

The list of candidates could be expanded to include big data operators, such as leading brokers Acxiom and Oracle, but I don't see a need to flesh out the scenario with a knight in shining armor, be it Facebook, other ecosystem holders, or

⁴⁷⁴ Thomson B., "The Reddit Rebellion, How Should Reddit Make Money?", *Stratechery* (2015).

one of the top dozen social networks: either it happens or it doesn't. (Wei thinks the latter is more likely. In addition, companies will focus their efforts on the race to apply large language models, so I'm afraid they don't have time to think about statuses yet). What's more interesting is how donation platforms could be built in individual segments and whether or not it's even possible, given the criticality of access to personal data and the difficulty of quick calculations.

In practice, innovations come from both above and below, but initiative always comes from below, with grassroots efforts pushing the people on top to take action, even though this often goes unnoticed. It's easier to start with reputation ratings where the need for them is most tangible and where economic decision-making is clearly visible. Reputations also take root better in professional communities like Habr, an online community for programmers.^{cccvi}

12.1. REPUTATIONS IN EDUCATION, MEDICINE, AND ONLINE COMMERCE

The education system faces multiple challenges, but the solution — whatever it is — involves personalization. Educational content is in generous supply, especially online,⁴⁷⁵ but the navigation is no good when it involves the student's level of preparation or the selection of material based on depth and complexity. Instructors, on the other hand, have a hard time finding the right audience.

Educational materials are of uneven quality, but the texts that save hundreds of study hours cost the same as all the others. This is why users should donate, effectively solving the Stewart Brand paradox that has become a meme: "On the one hand information wants to be expensive, because it's so valuable. The right information in the right place just changes your life. On the other hand, information wants to be free, because the cost of getting it out is getting lower and lower all the time. So you have these two fighting against each other."⁴⁷⁶

Donations will shed a bright light on the educational landscape, but they will also structure it and transform it, giving rise to open, fair competition among instructors, educational courses, institutions, master classes, workshops, methods, specialized websites, textbooks, practical trainings, games, documen-

⁴⁷⁵ Coursera alone publishes thousands of educational courses, and tens — if not hundreds — of thousands of them exist online. See [the top 25 educational sites](#).

⁴⁷⁶ Levy S., "'Hackers' and 'Information Wants to Be Free'", *Medium* (2014).

taries, podcasts, and other material. Once the participants in educational leagues and trends are in the spotlight, others will be able to research, discuss, imitate, envy, criticize, and expose them. We are in desperate need of that kind of discussion environment. Everything that happens in that environment, be it an initial statement, a counterclaim, a response to a counterclaim, or a reflection at any other level, will feed into the reputation system.

The same is true of medicine and public health, where the issue of choice is more critical because what is being purchased is credence goods. (The quality of healthcare goods manifests itself over time, which is why reputations serve as vital batteries of trust.) According to a Harris Poll survey, 28% of Americans suffer from an glut of online medical information, and 78% want to be “on the same page” with their doctor.⁴⁷⁷ Both MSD Manuals, an aggregator of reference materials and guidebooks on a range of medical topics,⁴⁷⁸ and UpToDate^{cccvi} are helpful, but while these online resources strive to be at the forefront of the digital transformation of medicine, they haven’t figured out navigation yet.

The same is true of retail. “[T]hey’ve seeded Amazon with face five-star reviews of LED lights, dog bowls, clothing, and even health items like prenatal vitamins....”⁴⁷⁹ A significant portion of the reviews are marked as “verified purchases.” How can that be? People posing as reviewers often work in the fake review industry and receive money, goods, and discounts for their fake feedback.^{cccix} In 2016, Amazon, tried to stop this by banning companies from directly or indirectly rewarding reviewers, but the practice just went underground.

Tommy Noonan of ReviewMeta, a service that analyzes reviews of products distributed by Amazon, discovered a fake review rate of around 9%. Amazon insists the rate is 1%, which would be tolerable. It is difficult to say who is closer to the truth, but wherever ratings are built in isolation from reputation — and this is the case almost everywhere — they end up being fabricated. Those platforms that do use reputations calculate them using simple formulas that are full of holes. Fake reviews will remain with us until donations are widespread (Section 5.10.1)^{ccc}

When solving a problem that is the least bit important, a person incurs high, sometimes even unaffordable costs, despite the fact that the solutions to most

⁴⁷⁷ Gumpert K., “Merck Manuals health guides go digital, and free, in global push”, *Reuters* (2015).

⁴⁷⁸ The Merck & Co website compiles information about medical technologies, reviews, and monographs on a range of healthcare topics.

⁴⁷⁹ Nguyen N., “Inside Amazon’s Fake Review Economy”, *BuzzFeed* (2018).
The quotes here are taken from this article.

problems already exist and are stored in the public library of human knowledge. The catch is that these solutions are difficult to find. This is where reputation navigation would come in handy. I am talking about credible sources of information, including experts, that a person could use to find the information they need without sifting through tons of junk, wasting time on trial and error. An indicator that a source is trustworthy should be based on the donations sent to that source, and any market actor that brings together ratings based on donations will be doomed to success. A ratings system does not need to be universal; it could be launched on an industry platform with an active audience of teachers or doctors, for example.

And there is no need to charge a fee for verified profiles, as X does in an attempt to emulate a dating service; instead, it would be better to display NFTs and donations in the public profiles of the network's participants. Donations could work for any of the industry giants like Netflix or Spotify, or payment services like Stripe, or specialized social networks, or talent search agencies. IT giants could collaborate with industry giants on donations-based projects by contributing promotion and computing power and building internal sandboxes.

Finally, it is entirely possible that a disruptor will emerge that is passionate about this opportunity to re-arm the markets.

12.2. A SINGLE REPUTATION AGENCY. ON THE BLOCKCHAIN?

What I wrote in the previous section fits into the concept of a first-order phase transition, during which, in the presence of driving forces, objects in a new and more perfect state of matter arise all over the place. They become larger, setting an example for others and capturing new areas until the entire system is transformed.⁴⁸⁰ In this particular case, the end result of the mergers and acquisitions could become a single reputation agency based on donations that covers every type of product and name. That is the goal.

When and if the blockchain lives up to expectations, it can form the basis of a reputation agency, and then the social status tournament will become a truly collaborative project by fostering accountability. This point is identified in the work of Kolonin and his colleagues:

⁴⁸⁰ We owe these ideas to the field of thermodynamics, the science that powered the industrial revolution.

“In the centralized version, all reputations are calculated by a single entity or system — the authors refer to it as the Central Reputation Agency; in the decentralized version, calculations are made by many entities to whom the community has entrusted this function, making up the Decentralized Reputation Agency.”⁴⁸¹

The latter could exist two different versions: either all sites reach a consensus on the current state of a reputation (this looks more attractive), or they calculate each reputation on their own.^{cccxi} There seem to be three options for data storage: 1) transit, where reputations are calculated on the fly based on available data on profiles and transactions; 2) local permanent storage, where all reputations are stored by the reputation agency or system participants; 3) global permanent storage, where data is maintained in a distributed manner by all system participants.

Another of Kolonin’s works talks about decentralized consensus on shared reputation data: when voting on the value for a reputation, the reputations of the agencies that made the calculations should be taken into consideration, relying on proof-of-reputation.⁴⁸²

This is exactly what I introduced as the principle for voting in the metaverse.

12.3. REPUTATIONS AND NAVIGATION ON WEB3

We can (and should) add a great deal of functionality to gift transactions in order to achieve variability of use, which is always beneficial for institutions. I will focus only on recommendations based on reputations because they are the second most important driver of donation practices (following the marketplace of vanities).

Donations provide a values map of the symbolic, but we also need a navigator to make sense of the map, and that navigator takes the form of recommendations. Working together, recommendations and reputations will rise to a new level of quality.^{ccciii} The navigation we have today leaves much to be desired for a number of reasons (I outlined them in Section 7.5.1.2 and Section 12.1). Be that as it may, no matter what is holding recommendations back, choice is the key issue for an information society.⁴⁸³

⁴⁸¹ Kolonin A. et al., “A Reputation System for Artificial Societies”, *ArXiv* (2018).

⁴⁸² Kolonin A., “Reputation System Design for SingularityNET”, *Medium* (2018).

⁴⁸³ I was involved with research and experimental work on automated recommendations from the early 2000s through 2012, while there was still hope that they could take their ►

It is also a key issue for the metaverse. Without a qualitative leap in navigation, it is difficult to expect much more from the B2C internet than it already provides. This can be argued in different ways. One example is the argument put forth by Xianhang Zhang, who identifies the navigation problems encountered by social networks. He points out that in communities where it is difficult to move from one compartment to another, users get stuck in dead ends and never find what they want.⁴⁸⁴ With well-designed compartments, however, communities can overcome the effects of overcrowding without losing quality. Zhang makes a forceful argument that this is an existential issue for social networks.

Social networks with low mobility are not viable. Crowded clubs are ineffective. Users are restless, stuck in the empty “warrens” they accidentally wander into. How can users find communities that are not empty but at the same time not dive head-first into them (the way Clubhouse, for example, forced everyone to do, which was eventually its downfall)? This is the most important and indeed the only thing I want to add to what I have already said about recommendations, as I consider them an essential tool in an information society.

Ratings of hotels and restaurants, recommendations on travel routes, lists of things that people “also buy” with what’s in your cart: these types of recommendations abound. I won’t say that they are useless, but they are yesterday’s news.⁴⁸⁵ It would seem that the retail sphere is adapted to choice, with everything laid out in a grid, but even in retail things get complicated. The seemingly simple purchase of a bicycle or a tennis racket turns into an expensive, iterative process.

Attempting to find what you want outside of a catalog feels like martyrdom. The same happens with texts, with the exception of films and music, where everything is relatively clear with recommendations for a number of reasons.^{cccxciii} There is an acute lack of recommendations given in accordance with reviewers’ capability to understand the content. To achieve this, educational, professional, and other content needs to be marked with indicators of its clarity, innovation, and informativeness.

► place within their own business model without becoming a functional appendage of selling platforms, including those that are monetized through advertising. Recommendations based on collaborative filtering are a cross-cutting theme of my work in *The Economics of Symbolic Exchange*. The book presents this setup as an antidote to adverse selection in information markets.

⁴⁸⁴ A summary of Zhang’s article can be found here.

⁴⁸⁵ For more on restaurant reviews, see Bauman K. Et al. Aspect Based Recommendations: Recommending Items with the Most Valuable Aspects Based on User Reviews; For more on trip recommendations, see Rohit Verma Et al. ComfRide: A Smartphone based System for Comfortable Public Transport Recommendation.

Personalized recommendations are the engine that powers online learning, and there are piles of money to be made in this market.^{cccxiv} It would be ridiculous not to invest in here by playing online learning's trump card: the personalization of educational trajectories. The next level for recommendation systems would be to build out instructional scaffolding and help people find materials that fall within their zone of proximal development. Meanwhile, users see content recommendations as a way to avoid searching for content,⁴⁸⁶ but reducing them to this narrow definition is like using gunpowder to make fireworks.

Their full range of application is, of course, much wider. Take, for example, hiring for professional teams, which is becoming more complicated as labor is increasingly specialized.⁴⁸⁷ But urgent needs go unmet while the market amuses itself by compiling playlists of the day. This doesn't bother many people, but notice that NVIDIA's Jensen Huang called recommendations the most important thing that smart people do and declared them a key part of artificial intelligence.⁴⁸⁸

Quality recommendations for products, services, or texts depend on who the recommender is. Implemented by Google, this idea formed the basis of the information revolution of the 2000s.⁴⁸⁹ I apply this principle to individuals, whose personal profiles are a special category of page. Internet pages featuring content and personal internet pages have a two-way relationship in which they exchange reputational capital and get boosted by it. Donations reflect both pathways, thereby creating an opportunity to turn Google's principle inside out and get something like a reversible coat that can be worn both ways. Reputations encompass both content creators and individuals who participate in the crowdsourcing of expertise about actions, texts, those who create texts, expertise in any form, and responses to expertise. Donations scale this set of signals into a database from which any type of rating can be derived.

⁴⁸⁶ Chandrashekar A. et al., "Artwork Personalization at Netflix", *Netflix Technology Blog* (2017).

⁴⁸⁷ As the capillary network of activity niches becomes denser, finding the right people becomes more difficult and expensive; this increases the demand for and value of recommendations. Technavio estimates that globally, recommender systems are worth a total of \$3.6 billion, which is a small percentage of the total search market.

⁴⁸⁸ Shapiro E., "The Metaverse Is Coming. Nvidia CEO Jensen Huang on the Fusion of Virtual and Physical Worlds", *Time* (2021).

⁴⁸⁹ Allow me to remind you of a principle: a participant's reputation is made up of weighted signals from other participants. Other heuristics are mixed in with this. Reputation algorithms are applicable to any community, including hybrid human-machine-text reputation algorithms. Kolonin A. et al., "A Reputation System for Artificial Societies", in *ArXiv* (2018).

Reputational entries for people and communities in their natural state (when they act without keeping an eye on their ratings) and in situations where they are affected by the force field of ratings are as different as the inhabitants of stagnant water and fast-moving streams. The ratings systems used by eBay, Amazon.com, Quora or Habr (which uses karma^{cccxy}) organize goods and consumers to a degree, but they do it in a simplified, one-sided, incomplete way.

For the new generation of ratings, integrity and unambiguous interpretation are must-haves. The same applies to insensitivity to the compilation methodology, which current industry ratings are highly dependent of. Despite this drawback, current ratings do reflect certain facets of success that are more or less comprehensible to the community. A universal platform, however, will reveal how things stand using universal scales: status and reputation. These two concepts are often conflated when compiling ratings and even more so in everyday life, so let's take a look at how they are different.

12.3.1. On Symbolic Capital and Reputations

In public perception, the concept of reputation is associated with “fame,” “influence,” “brand,” “corporate image,” “goodwill,” and “reputational capital.”⁴⁹⁰ These terms are often used interchangeably despite the fact that they are not synonyms. This entire series of concepts fits on a coordinate plane with axes labeled “reputation” and “social status.” Statuses, in turn, consist of monetary and symbolic components; those symbolic components, defined by their ability to influence people (Section 5.2), are indirectly tied to reputation: they can flow from it or not, and this is strongly influenced by wealth. Reputation, on the other hand, is a product of behavior: past actions are used to judge future behavior (adjusted for representation). A person with a reputation is predictable, and for this reason people are more willing to do business with them. The fundamental (informational) logic of reputations is that predictability benefits everyone, starting, of course, with the predictable individual.

Reputations must be categorized by origin and, thus, applicability, but this is neglected both in media practice and in everyday life. Reputations earned in one area are converted to influence in another area without any discount; influenc-

⁴⁹⁰ Barnett M., Pollock T., *Oxford Handbook of Corporate Reputation* (2012).

Money K., Hillenbrand C., “Using Reputation Measurement to Create Value: An Analysis and Integration of Existing Measures”, in *Journal of General Management* 32(1) (2006), 1–12.

Bitektine, A. et al., *Organizational Legitimacy, Reputation, and Status: Insights from Micro-Level Measurement* (2020).

ers are a good example of this. As a result, there are ten inflated reputations for every true one, and even the one true reputation was earned somewhere other than where it is presented.

This is why, whenever we try to get to the bottom of anything significant, be it revaccination or the prospects for cryptocurrencies, we are bombarded with tons of nonsense interspersed with sound judgments (that often contradict each other). Expertise suffers from this blurring of the line between popularity and reputation, and this will be the case until reliability markers are put into use. Once again: influence and competence are separate entities; they are not entirely independent of each other, nor are they connected by unambiguous dependence. That said, both are valuable.

Since we are looking at recommendations, I want to touch on the issue of how they are monetized in connection with reputations and donations. I complained above that the recommendations industry has not succeeded as a stand-alone industry because it hasn't found the right business model. (Until about 2012, there was hope that recommendations would not become just a functional appendage of retail platforms.) At one time I proposed two business models for recommendations. I called one of them "trust advertising,"⁴⁹¹ and this is the one that now feeds influencers and popular individuals on social networks. For the second model, I proceeded from the fact that, in theory, donors should be entitled to a share of the subscriptions and donations that come through recommendations.^{cccxvi} A quality hint can be as valuable as the object it points to, and since people pay for quality information, why shouldn't they pay for information about its quality?⁴⁹²

Robert Woodhead, who was earning an income from donations for content back in 1998, dreamed of his tipping ethics becoming mainstream.⁴⁹³ Digital profiles, donation-certified status and reputation ratings, recommendations based on ratings — all of these would bring his dream closer to fruition.

⁴⁹¹ Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012).

⁴⁹² Between 2000 and 2018, no one was ready to implement this idea. It took a journey over the advertising arc for direct monetization to become possible, and the time is not far off when this will extend to recommendations.

⁴⁹³ Woodhead R., *Tipping – a Method for Optimizing Compensation for Intellectual Property* (2000).

At this point I will conclude my thoughts on the topic of creating a donation platform; market forces cannot be replaced by the power of thought anyway. My goal was to direct those forces by drawing the vector for how such a platform could be developed: from Google reputation pages to reputations for individuals that take them to the pages they need. I do want to sketch out the difficulties anyone following this vector will encounter — after all, the thorniest problems one finds when developing a new institution are human rather than technical in nature.

12.4. ETHICS OF SOCIAL RANKING

The institution of status and reputations I have described implies a comprehensive rating. How will society react to this? On the one hand, assessments and rankings are everywhere; we encounter them at school, in sports, in our careers. And yet one looks at e-government, KYC (“Know Your Client”), big data, the internet of things, and China’s social credit system^{cccxcvii} and can’t help wondering if it’s all too much? The story of Klout is illuminating.

One of the earliest forerunners of a social rating system, Klout Score (2008) proposed a rating of user influence based on responses to Twitter posts.^{cccxcviii} The service was greeted with much fanfare: it found influential partners like Virgin America, and it was supplied with data from Bing, Facebook, Foursquare, Google+, Instagram, LinkedIn, Wikipedia, and YouTube.⁴⁹⁴ Users linked their Flickr, Blogger, Tumblr, Last.fm and WordPress accounts to their Klout ratings.

But as soon as it reached peak popularity — and there was a time when people were so obsessed with Klout that changes to its algorithm almost led to murder — the service found itself under a hailstorm of criticism.⁴⁹⁵ The chief criticism was that Klout was exploiting status anxiety. As one expert on the human soul wrote, “[Klout] saddle[s] you with a popularity ranking and then make[s] you feel insecure about it and whether you’ll lose that ranking unless you engage in certain activities that aren’t necessarily in your interest, but are in Klout’s. In other words, Klout exists to turn the entire Internet into a high school cafeteria.... And there you are,

⁴⁹⁴ Ha A., “Klout Users Can Now Add Bing To Their Account And Include Instagram In Their Score”, *TechCrunch* (2013).

⁴⁹⁵ “Something that with hindsight feels both ridiculous to the point of feeling it may have been a PR story, and yet would be unsurprising if similar happened with Snapchat or similar today,” said Dan Barker in interview at econsultancy.com.

standing in the middle of the room with your lunch tray, looking for a seat, hoping to ingratiate yourself with the cool kids....” Other progressive thinkers have written that social rankings are fraught with stratification, and that “[s]ocial communications should be for the benefit of the people doing the communicating.”^{cccix}

Klout was also decried for the lack of transparency in its methodology, for oversights regarding confidentiality, for being careless with the privacy of minors,⁴⁹⁶ and even for the illegality of its business model (Klout gave companies the opportunity to ignite word of mouth by passing out free services or products to the users who met their criteria^{cccxx}). Worst of all, Klout was accused of doing what it was designed to do: encourage people to grow their personal ratings.” In general, any attempt to assign a person a number is ethically flawed. Klout was called the internet-equivalent of herpes,⁴⁹⁷ and the mildest negative reactions went something like this: “They measure this monster called social influence, but in reality, the results of their influence should have little impact.”

Klout got the blame for almost everything that people hated about digitalization. It held out for a time, increasing its user and partner bases and fighting off attacks on the technology,⁴⁹⁸ but in the end, the social ranking method it was using did not pass the test. Like Peerindex and Kred, it was reorganized and integrated into other influencer marketing tools and platforms^{cccxi} whose time has come.

The passions eventually subsided, and Klout was posthumously rehabilitated. Today, the influencer marketing industry — in comparison with which Klout was innocuous — has no such problems. For example, the startup Sapien Wallet offers a post factum Human/Business Rating on the blockchain, where you can evaluate companies and people after they provide you with a service. Fiverr, a platform for hiring freelancers, offers a similar function, as do the Uber or Lyft apps and many other B2C businesses.^{cccxii} The commentator who said, “Klout isn’t dead. It’s just resting,” was absolutely right.⁴⁹⁹ Post factum evaluations lack comprehensiveness, of course, but if we solve this problem and add post factum donations, we will get exactly what I imagine as an innovation of the modern world.

Wei, who is an expert on the topic, writes that people often don’t like status games that don’t involve them. He highlights the hypocrisy of individuals who criticize status games while actively engaging in other games that benefit them. Life, he says, is full of status games. You just have to find the ones that fit you.

⁴⁹⁶ McHugh M., “Is Klout losing its clout?”, *DigitalTrends* (2011).

⁴⁹⁷ Stross C., “Evil social networks”, *blog* (2011).

⁴⁹⁸ Rao A. et al., “Klout Score: Measuring Influence Across Multiple Social Networks”, in *Proceedings of IEEE International Conference on Big Data* (2015).

⁴⁹⁹ Goodall M., “Klout: Where did it go wrong?”, *Econsultancy* (2018).

Judging by the growth of social media marketing, society cannot escape social ratings. After all, if people can make money doing something, eventually they will start doing it. However, anyone who does this kind of work systematically and full time will have to deal with the widespread attitude that social ratings stick numbers on people's backs and cause enmity. China's social credit system throws a shadow over any initiatives to rank people,⁵⁰⁰ and we also have Black Mirror and Big Brother to keep everyone jumpy.

Society will continue to be overprotective of its nonexistent digital virginity until it is able to distinguish its own needs from official surveillance. People want to open up to others they feel safe and happy with, but first they have to find those friends, and that requires that they stop being shy. Anyone who feels oppressed by the idea of having a digital price tag is free to forego the "exhibitionism," refrain from sending signals, remain silent on social networks and thus avoid being given a humiliating rating. But in all honesty, the problem is not the rankings; the problem is that no one needs you and that makes you feel bad.

Klout's story sheds light on the internet's strained relationship with ratings, but that is nothing compared to how ultra-left radicals feel about any type of merit-based ranking. The principle of meritocracy, according to which a person's social and professional status depends on their merits, has been actively rejected in recent years. The plot — who is behind this and how they are setting society against the meritocratic institution of status and reputation — is so long in the telling that I moved it to Appendix 4. What follows is a summary of that plot, and I will use it to underscore what I have already said in this book.

CONCLUSION

INSTEAD OF A CONCLUSION: ON MERITO- CRACY

The opponents of meritocracy see it as a force that concentrates social tensions, one that must be targeted in order to slice through the Gordian knot of problems presented by modern life. Their views boil down to the following:

1. People are equal in moral terms and therefore deserve equal attention, respect, and care.
2. Meritocracy does not give people equal chances to succeed and, as programmers put it, that's not a bug, it's a feature. It's supposed to work that way. Any representation of the world in which achievements are presented as the result of merit rather than luck obscures how the world really works. Meritocracy has degenerated, becoming the very thing to which it was intended to be an antidote: handmaiden to the dynastic transfer of privilege and smokescreen for inequality.
3. It ignores the role of luck and other unearned factors in achieving success. When achievements are explained solely by skill and hard work and failings are explained as the result of laziness and other shortcomings, the darlings of fate are excessively elevated and the losers are plunged into a despair bordering on anger because of the hopelessness of their situation. Meritocracy unavoidably degenerates into a "tyranny of merit" (in Michael Sandel's words) and leads to the "tyranny of the majority" (Alexis de Tocqueville).
4. No one benefits from meritocracy. It is bad for everyone, including those who end up running in a hamster wheel as they attempt to benefit from it. (Daniel Markovits).

5. The whole concept of merit needs to be done away with, competition must be abolished, and the bonfire of the vanities extinguished. Humility and a sense of belonging and community, forged by vulnerability and mutual recognition, is the antidote to meritocratic pride.
6. Concrete proposals:
 - Weaken or cancel the competition to enter elite educational institutions.
 - Subsidize unqualified labor.

Regardless of how convincing you find the anti-meritocratic doctrine — and I conveyed its diagnosis and prescription verbatim — it is a tool used to rally the left.⁵⁰¹ Its evangelists include professor David Markovits, who identifies meritocracy as a trap that only promises happiness,⁵⁰² and Michael Sandel, who believes that meritocracy is tyranny.⁵⁰³ Following the example of the socialist Michael Young, who posed the problem in 1958,⁵⁰⁴ these two discredit the principle of merit, linking it to the modern world's problems and claiming that it leads to a dead end.

In fact, the problems that these moralists attribute to meritocracy have been the focus of attention for decades, and there is a wide range of diagnoses. Since the time of Alvin Toffler,^{cccxxiii} analysts of all stripes and mentalities — techno-pessimists, sociologists, economists, realists, art critics, leftist philosophers — have associated these problems with the pace of change.^{cccxxiv} Technologies are rapidly changing the world,⁵⁰⁵ and people and social institutions haven't had time to adapt. The general opinion is that this is the price of technological progress.⁵⁰⁶

Who is responsible for the overloading and how can we prevent it? Acceleration happens because of the competitive race for the right to self-realization

⁵⁰¹ Davies S., *"Meritocracy Is a Bad Idea"*, *Daily Economy* (2019).

Carnevale A. et al., *The Merit Myth: How Our Colleges Favor the Rich and Divide America* (2020).

Guinier L., *The Tyranny of the Meritocracy: Democratizing Higher Education in America* (2016).

Little J., *Against Meritocracy: Culture, Power and Myths of Mobility* (2017).

⁵⁰² Markovits D., *The Meritocracy Trap: How America's Foundational Myth Feeds Inequality, Dismantles the Middle Class, and Devours the Elite* (2019).

⁵⁰³ Sandel M., *The Tyranny of Merit: What's Become of the Common Good?* (2020).

⁵⁰⁴ Young M., *The Rise of the Meritocracy, 1870–2033: an Essay on Education and Equality* (1958).

⁵⁰⁵ The pain became especially noticeable in the early 1970s. Naisbitt J., *Megatrends: Ten New Directions Transforming Our Lives* (1982). See also this series of books: Naisbitt J., *Aburdene P., Megatrends 2000. Ten New Directions For the 1990's* (1990). Aburdene P., *Megatrends 2010: The Rise of Conscious Capitalism* (2007).

⁵⁰⁶ Karl Polanyi also wrote about this. Polanyi K., *The Great Transformation* (1944), Chapter 6.

and for prestigious roles, and that race is heating up due to an influx of participants, which was made possible by the wealth and mobility engendered by the race itself. Something similar happened at the turn of the 18th and 19th centuries in the wake of a wave of inventions, and the atmosphere was just as electrified as what we experience today.^{cccxxv} Some think that today's changes land more heavily. Two hundred years ago, society's values were more stable, and people experienced inspiration and hope for the future. Now, those rose-tinted glasses are gone.^{cccxxvi}

Leveling out the negative consequences of competition without depriving the world of its fruits is a task that no one seems to be able to solve. Researchers with an interest in the future are mostly pessimistic, and such moderate optimists as Steven Pinker and Hans Rosling, who explain why things aren't as bad as they seem, are in the minority.⁵⁰⁷ But few go as far as the anti-meritocracy moralists: people are aware that denying the principle of meritocracy means encroaching on markets, which is like killing the goose that lays the golden eggs.⁵⁰⁸ The moralists don't criticize the markets openly, however; they just call for an end to meritocracy. "But what about the markets?" asks the reader who naively identifies them with the principle of merit and, in blindness, fails to see the fork in the road: either meritocracy or "peace, friendship, chewing gum."⁵⁰⁹

The dialectic here is such that none of those who challenge meritocracy — not even Young, the instigator — speak out against competition in hiring. David Goodhart calls this out as a double standard: we want our nuclear programs run by the best physicists, not some random people selected by lottery. Likewise, no one wants to be operated on by a surgeon who failed every exam in medical school. He remarks that this is like wanting a market economy without having to deal with a market society.⁵¹⁰ Which, of course, is exactly what Sandel preaches.

⁵⁰⁷ Pinker S., *Enlightenment Now: The Case for Reason, Science, Humanism, and Progress* (2018).
 Pinker S., *The Better Angels of Our Nature: Why Violence Has Declined* (2011).
 Rosling, H. et al., *Factfulness: Ten Reasons We're Wrong About the World – and Why Things Are Better Than You Think* (2018).

⁵⁰⁸ Even Neo-Marxist accelerationists don't want to kill any geese. They would rather wait until the unicorns become so fat that they fall heavily into the hands of the people.
 Srnicek N., *Platform Capitalism* (2016).

⁵⁰⁹ This phrase was coined in 1985 when foreign students arrived in the USSR to attend the Festival of Youth and Students. They were greeted with signs bearing the slogan "peace, friendship, festival," but their chewing gum was confiscated by customs. In response, the students turned the slogan into "peace, friendship, chewing gum."

⁵¹⁰ Goodhart D., *Head, Hand, Heart: The Struggle for Dignity and Status in the 21st Century* (2020).

Michael Young's son Toby Young spoke out in opposition to his father and Sandel:

"...I explained that I liked meritocracy for much the same reason [as much as my father hated it]. I regard inequality as an inevitable by-product of limited government, which history teaches us is preferable to excessive state power." A state focused on equality, says Young Jr., violates human rights under the guise of equality and therefore, if the costs of inequality are considered a reasonable price for restraining the state, then meritocracy should be accepted as the fairest principle possible.⁵¹¹

I am not particularly concerned with meritocracy. The bureaucracy cannot live without it, and it is therefore unlikely to support the principle's detractors. When people debate about meritocracy, they are competing for the right to establish the rules, but none of them will win if they keep playing giveaway checkers. The principle of merit will prevail when compared with others, and communities that structure their hierarchies differently will lose either in terms of the quality of their activity or in terms of freedom (most likely in both).^{cccxvii} Those who reject statuses and ranks will end up saddled with their caricatures. The laws of symbolic competition are unchanging with respect to the institutional coordinate system in which people live. Competitiveness is an integral feature of the game, but it is an instrumental part. The game itself has intrinsic value. Instead of breaking the game because we feel compassion for those who are not successful at it, wouldn't it make more sense to focus on helping them find their own games and others they can play against?

The world is flying through turbulence right now. It's all the markets' fault: driven by their purpose, they produced too many goods, too quickly — in the space of a single generation — bringing welfare to a level at which perceived returns from further increases slow down. Human capital has increased many times over. This is another "merit" of meritocracy, which has placed the holders of human capital in fierce competition with each other. By doing so, the markets prepared the ground for the socialist interpretation of justice and established the conditions for their own enslavement, as Schumpeter predicted.⁵¹²

Now, their mission is to refute Schumpeter's prophecy that socialism is inevitable and transform it from self-fulfilling to self-defeating (forewarned is forearmed).^{cccxviii}

⁵¹¹ Young T., "The Rise of the Genotocracy", in *The Political Quarterly* 91(2) (2020), 267–494.

⁵¹² Schumpeter foresaw that capitalism, by giving people everything they needed, would make them receptive to the idea of redistributing social respect, which would lead to socialism.

Schumpeter J., Capitalism, Socialism, and Democracy (1943), Part II. Can Capitalism Survive?

To accomplish this, they need a way to overcome the development threshold on which they — and humanity — have stumbled. The problem is the self-awareness of market actors who see themselves as only concerned with the economy; the symbolic is “somewhere out there,” outside their sphere of competence. It’s someone else’s job. If there’s a material profit, they claim, everything else will follow. For now, the only thing that follow is coercive egalitarianism, which proves Schumpeter’s prediction.

Money obscures this point. Good or not, it is a measuring tool. And until business wakes up from its delusion and stops thinking that there cannot be any other measuring stick, it will continue to fail to see that the measurements it needs are just within reach, and it will continue to live on a short leash held by the government. After all, someone has to clean up business, patch up the market’s failures, and relieve tensions in society.

But the political sphere, like the markets, is competitive and not immune to monopolies, and it has no antitrust watchdogs keeping watch over it. Karl Polanyi, who dedicated *The Great Transformation* to the building of a hierarchy of these two spheres, put the political (the institution of the state) on top and arrived at social protectionism and socialism.^{cccxxix} (Eventually, he reluctantly sanctioned totalitarianism, finding it an acceptable price to pay for the preservation of civilization.^{cccxxx})

The institution of the state — and I am referring to the best, humanistic incarnations of this institution — is mushrooming. By issuing countless regulations without paying too much attention to the economic consequences (or burden) and carrying out back-room redistributions of resources and income in order to seemingly patch up the market’s failures, administrators inevitably run into their own failure: the failure of the state.⁵¹³

This is not the place to dwell on the topic, but the intrigue of our time is how the state has become immensely strong and society has become weak in return. The government has the same problem with measurement that business and society have. It is a psychotic organization that lives and operates in a world of ideas that are sometimes far from reality.⁵¹⁴ And while there are many plausible reasons for it to grow, that growth goes against the interests of the people, including those who work for the government. Forget about households and

⁵¹³ Dolfsma W., *Government Failure* (2013).

⁵¹⁴ Jacobsen J., *The Three Levels of Personality Organization* (2021).
Burkard S., “Psychotic Organization as a Metaphoric Frame for the Socioanalysis of Organizational and Interorganizational Dynamics”, in *Administration & Society* 31(5) (1999), 588–615.

businesses: no one cares about their transaction costs. But what is it actually like for civil servants to exist in this spiderweb of regulations? Once donations become the norm, the state will learn a lot of interesting things about itself (especially if negative donations are used, and they are worth implementing at least for this purpose^{cccxxxj}).

If things continue at this pace, then the state's failures will dig a deeper hole than those of the market, but there will be no one to talk about it and no one to listen, either. Mises, Coase, Hayek, Buchanan, Friedman, and other clairvoyants wrote about this; subsequent events lead to the idea that the way to avoid such a scenario is to implement a new, post factum method for dealing with money. The system of reflection and accumulated experience this method could build out will open a new page in human history.

Money's measurement and informational functionality can be doubled if after-the-fact donations indicating the value of the content are added to the usual "pay and take your purchase" model, which only reveals utilitarian values. By collecting the information created by donations and making it publicly available, we will create a new rule of symbolic competition, making it more transparent, more honest, more interesting, and more productive. Donations will act as a truth serum of sorts, if you will.

First, it will solve the problem of navigation in the information space. Value and reputation mapping of texts and people will reduce the burden of choice costs that inhibit personal development. It will become easier for people to break out of the narrow information silos discussed in Section 12.3.⁵¹⁵

Second, by activating a system of social rewards for creators, donations intensify direct connections and feedback between creators, texts, and recipients, giving the recipients' activities the status of creative consumption. For all of us as authors and readers, this represents the same reinforcement learning with human participation (RLHF) that helped artificial intelligence take off (Section 10.3.1 and 10.3.2). This is the way to catch up to AI and interact productively with it without turning into its appendages or dependent Ludites, deprived of meaningful work and the meaning of life.

Third, gifts bring people closer together. They allow you to find like-minded people, a process that has always been — and remains — a complex existential

⁵¹⁵ A summary of Zhang's article can be found [here](#).

problem that is almost aggravated by the advent of social networks. Gifts engender a better structure of social connections, better communities and clubs, a higher quality of life, and equal opportunities for self-realization.

Fourth, gift-giving will encourage reflection and personal growth, and this makes people happy in the only way that happiness is actually achievable.

This is an institutional approach to human development. I put it forward for consideration because all the prerequisites are in place to implement it, as well as because it could solve the many problems that have accumulated. If humanity fails to engage in institutional innovation and continues to rely on existing institutions, the price will be high. We are getting knocked off our feet by a wave of complexity; we are being pounded by a hailstorm of technological shocks (with AI perhaps the most traumatic), and all of our attempts to respond through manual adjustment are unconvincing, if not futile.

The world is incomprehensible. No one — not a single genius nor a group of people equipped with a system of ideas about how things should be — can understand all the realms (known and unknown), all the scenarios, or all the combinations of factors. So what do we do? We put into operation institutions that can launch and direct the self-organization of society through a unified humanistic motivation of social actors. I assign the central role here to money. A new rule for dealing with money will measure our human subtleties and build up our human connections: this is how I envision the key to modernizing non-utilitarian markets, creating socially useful employment, and more. This is the key to the future.

APPENDIX

APPENDIX 1.

**METHODOLOGY:
HOW TO MEASURE
THE NON-UTILITARIAN**

This book presents data on the economics of the non-utilitarian sphere, but what exactly is that sphere? To avoid reader overload, the main text only sketches out the criteria for isolating that which is non-utilitarian, namely things that are optional and redundant, with a focus on higher-order needs instead of basic needs. I offered a list of industries that fit these criteria. The industries in the list are divided into three groups: indisputably non-utilitarian, mixed and peripheral. The first includes luxuries, flowers, cinema, books, computer games, and everything that appears in the well-known lists of cultural and creative industries.⁵¹⁶ The second includes industries or segments that produce products that are both utilitarian and non-utilitarian, including, for example, fashionable clothing and accessories, expensive cars, atypical housing, and interior design. The third group includes tobacco, alcohol, drugs, desserts, soft drinks, social networks, gambling for money,⁵¹⁷ pets, and cos-

⁵¹⁶ Among other things, these include holidays and festivals, advertising, design, and the like. Banks M., O'Connor J., "Introduction: After the Creative Industries, in *International Journal of Cultural Policy* 15(4) (2009), 365–374.

⁵¹⁷ During the COVID-19 pandemic in Russia, sports betting was officially recognized as an essential service and bookmakers were included on the list of systemically vital businesses. The government later reversed this decision, revising its understanding of the utilitarian.

metic surgery. At first glance, this third group looks like a mixed bag, but after some reflection one has to admit that none of its members could be classified as utilitarian.

In this appendix, I will justify the principle that allows to distinguish between the non-utilitarian and utilitarian and describe the methodology that guided my calculations in a number of complex, non-obvious cases, such as cars and smartphones.

I'll start with a description of the obstacles one needs to deal with. Think about soft drinks, for example. Are they beverages for maintaining healthy nutritional balance? Of course not. Their function is different: they are similar to the desserts included in the same group. But my list is devoid of any other food. Does that mean that all other food is always utilitarian? What about a hamburger costing \$100–1,000?⁵¹⁸ Or quail tongue pâté?⁵¹⁹ Existing marketing data helps us understand gastrophilism because it breaks down products and dishes into categories; this data shows that luxury food generates \$16 billion in revenue per year. Should we categorize dry-aged steaks at \$30–50 per kilo as non-utilitarian? What about premium cheeses? What part of the food industry's total output could be classified as non-utilitarian? I have to admit that I haven't taken into account every single type of food yet, limiting myself to sweets, sports nutrition, and weight loss products.

Buildings, interiors, cars, clothing, electronics: all of these are dual-use. Their primary utilitarian functions (transportation, accommodation, heating, communication) are combined with secondary, non-utilitarian functions that serve higher needs. Symbols, social signals and prestige are all attached to the supporting frame of the products' direct functionality. Question: what share of such products' prices can be assigned to the supra-functional? How can we single out the non-utilitarian share of the prices for goods in the auto and motorcycle industry or in beauty and fashion? In the clothing industry, it is relatively easy to pull out high fashion and luxury, but what about less expensive offerings? While the economic weight of these complex cases is not large enough to fundamentally alter the resulting picture (at less than \$3 billion, it is no more than one-tenth of the \$30 billion I calculated), but they are telling, nonetheless.

There have been previous attempts to separate the component that interests us from the utilitarian component, but they were not successful. This presented a methodological challenge. Namely, there was a need for a solid, universal cri-

⁵¹⁸ Douche Burger. Price: \$666. Ingredients: Kobe beef, gruyere cheese, lobster, truffles, caviar, and barbecue sauce crafted using Indonesian kopi luwak coffee beans. A hoax made up by the owner of a New York City food truck.

⁵¹⁹ I made that one up myself.

terion — there was no way to approach each product using individualized standards. Therefore, I analyzed the problem from an angle that has not been tried yet: economic indicators.⁵²⁰ I will explain how this allows to solve the problem, but first I want to nail down what to call the area we are analyzing as it is by no means obvious.⁵²¹

A1.1. WHAT TO CALL THE “NON-UTILITARIAN?”

What is the dictionary definition of “non-utilitarian”? Let’s start from the root word, “utilitarian,” which means “designed to be useful” (It’s also used in relation to philosophic concept of utilitarianism). This might seem to imply that “non-utilitarian” is a synonym for “useless,” but that is not the case, of course. Instead of being an antonym to its root, “non-utilitarian” is a neighboring term used to describe things that do not have an objectively useful purpose. Instead, it implies having a subjective — often social and psychological — utility.

Anything can be “useful” for someone or other. Does that mean that the non-utilitarian belongs in the category of simulacra?⁵²² Is the non-utilitarian somehow a decoy or a ghost? Not at all. There are plenty of things in life for which the utility is implicit, rather than explicit (second-order utility), and the fact that there is no suitable term to designate these things suggests that language has yet to catch up with life.⁵²³ Be that as it may, when people say that

⁵²⁰ Usually, you first have to isolate something in order to count it. But there are tasks where the reverse order of moves leads to success. For example, artificial intelligence is trained by presenting it with a set of data in which it finds the patterns on its own.

⁵²¹ Experts know how many copies were broken when choosing a name for what is now known as the creative industries. *Hesmondhalgh D., The Cultural Industries (2002), 12.*

⁵²² A simulacrum is a sign that has no signified in reality, a representation of something that does not actually exist. The concept was introduced by Georges Bataille and became widely known thanks to Jean Baudrillard. In everyday usage, the word refers to a deception or illusion.

It is hard to find something that has no utility of any kind. Even altruism has a false bottom (*see Section 5.12*). Basic science is not utilitarian, but it delivers benefits over time. Nothing is produced in a game, but it still has significant meaning and benefits. Friendship can be selfless, depending on how you view it. Volunteering is harnessed to serve the utilitarian when it goes on your CV. Philanthropists pursue their own interests.

⁵²³ For philosophers and academics, this is a dowsing signal telling us to dig deeper. By analyzing the race between Achilles and the tortoise, mathematicians arrived at infinitesimal values in order to explain how the tortoise emerges victorious. Bertrand Russell ►

someone is motivated by non-utilitarian motives, we all know what they mean. “Non-utilitarian” means “not utilitarian.” As experience with the term shows, over time it will take root and adapt to the economy of higher needs.

I considered other terms, such as “inessential,” “excessive,” or “surplus.” For those who are curious about the mechanics of naming, I’ll briefly explain my reasoning behind the decision. “Inessential” makes one think about the essentials of life and a market basket. “Excess” is closer, but neither the “excessive economy” nor “economy of excess” sound right. The term “leisure economy” already exists, but not everything that falls under leisure belongs in our field of study, just as not everything that happens at work is excluded from it. Leisure as a criterion would not apply to interiors, design, coaching, or fashion.

“Economy of surplus” doesn’t sound right too. I considered “economy of desire,” but the word desire can be applied to utilitarian needs, as well. For example, when a person reads the news, are they reading out of desire or out of necessity? Do we wear clean clothes to work every day for hygienic reasons or to keep from becoming the office pariah? And why shouldn’t a woman wear the same dress to two different events? (We will return to the non-utilitarian in our closets later. For now, I want to illustrate the difficulties with naming of the research subject.)

One worthy candidate might have been the “economy of culture industries,” except for the fact that the word “culture” now has a host of meanings. Furthermore, since the writing of Theodor Adorno’s and Max Horkheimer’s influential 1944 book *Dialectic of Enlightenment*, the culture industries have been dogged by a deep-seated rejection of commercialization, which is not aligned with my purpose here (see the expanded note on this).

The British set a good example of naming by uniting cultural enterprises and organizations under the creative industries banner.⁵²⁴ A dozen names were tested,

► wrote that Zeno’s aporia “...in some form, have afforded grounds for almost all theories of space and time and infinity which have been constructed from his time to our own.” Hilbert and Bernays believed the same thing. See *Hilbert D., Bernays P., Foundations of Mathematics (1970)*, 93. Linguistic paradoxes underlie The Linguistic Turn (Russell, Wittgenstein, Heidegger, de Saussure). They show us that sophisms are more than just tricks. When there are not enough words, something new has appeared that does not fit into the accepted system of thoughts.

⁵²⁴ The term “creative industries” was coined by British, American, and Australian agency managers and activists in the 1980s. The creative industries were first defined by the UK Department for Culture, Media, and Sports (DCMS) in 1997: “The creative industries are those activities based on creativity, individual talent and skill, and that have the potential to create jobs and wealth through the generation and exploitation of intellectual property.” Later, Culture Minister Chris Smith released a book entitled *Creative Britain*.

and in the end they passed over the “cultural industries,” preferring “creative” to “cultural” not least because of a reluctance to unsettle the guardians of high culture by mixing them with what is considered “low” (entertainment, etc.).⁵²⁵ (The feelings of the engineers and other creators behind basic goods — who also create —⁵²⁶ were obviously less of a concern.) One way or another, the British solved their problems through naming; in this book, however, I faced a different task.

The last option that deserves attention is the “symbolic economy.” In some ways, the non-utilitarian is broader than the symbolic, which, for instance, does not include off-road racing, spa services, or desserts and soft drinks. In other ways, the situation is reversed. In any case, in this book I use “symbolic” and “non-utilitarian” as synonyms.

This detour is almost finished. “Non-utilitarian” took the lead at the outset and retained it, but to be sure, I doubled-checked it using the semantic differential method that Charles Osgood suggested for just such cases.⁵²⁷ For testing, I

⁵²⁵ For an analysis of the history of the term, see: *Khestanov R., “Creative Industries – models of development”, in Sociological Review 17(3) (2018).*

Also tested: information industries, leisure industries, entertainment industries, creative sectors, creative sectors of the economy, media industries, creative economy, knowledge economy.

According to the UK DCMS, as of 2015 the creative economy included: advertising and marketing, architecture, crafts, design (product, graphic, and fashion), film television, video, radio, photography, music, performing and visual arts, software and computer services, press, museums, galleries and libraries, and publishing.

It has been suggested to add games and gaming, gastronomy, science, and other fields to the list.

Information content and software stick out in this list. I did not include them in my calculations; otherwise non-utilitarian revenue would have gone up by a couple billion dollars.

⁵²⁶ *Khestanov R., “Creative Industries – models of development”, in Sociological Review 17(3) (2018).*

Alan Freeman calculated the percentage of creativity in various types of activities, but — with all due respect — his calculations do not seem to stand up to scrutiny.

Freeman A., Is Creation an Industry? A Constructive Critique of the Economics of the Cultural and Creative Industries (2012).

Which is better? “Creative industries,” which denies the creative component in many outside industries, or “culture industries,” which reminds of “Dialectic of Enlightenment”? Hesmondhalgh chose the second option and kept the term.

⁵²⁷ In order to clarify perceptions of an object, its name is placed in a series of verbal dichotomies (differentials) that form a coordinate system. I use this method to attempt to solve the inverse problem of selecting the best coordinate axis from among all potentially suitable ones. To do this, I compare products and services that I consider non-utilitarian with pairs of opposing words and select the option with the highest compatibility with the entire variety of industries.

The semantic differential is a scale for constructing individual or group semantic spaces. An object’s coordinates in semantic space are its assessments according to a number of bipolar three-, five-, or seven-point rating scales, the poles of which are specified by ►

selected architecture,⁵²⁸ design, flowers, smartphones, breast implants, gifts, holiday cards, vegetarian food, spas, and drugs, all of which are difficult to attribute. The test involved applying the name of the sphere to which I assign these products and services and determining by ear if that name was suitable or not. A total of 15 name options were tested. The more examples I identified of linguistic dissonance, the less successful the name was, and vice versa. (Here's an example: If we apply Osgood's "obligatory-optional" axis to flowers, which pole does it gravitate toward? It's hard to say. That right there is dissonance. Another example: try to place the iPhone on an axis labeled "functional-non-functional" and the same thing happens.)

The results of this testing "by ear" favored the term "non-utilitarian:"

Material Pole	Tendency Toward Each Pole		Symbolic Pole	Score
Utilitarian	iPhone	iPhone, design, gestures, implants, LSD, spa, desserts	Non-utilitarian	7:1
Obligatory	Gestures	iPhone, design, implants, LSD, spa, desserts	surplus	6:1
Low	Implants, spa?	iPhone, design, gestures?, LSD	High	4:2 (1)
Basic needs	Implants??	iPhone, design, gestures??	Higher needs	4:1 (2)
labor	?? iPhone	??iPhone, desserts, LSD, implants, spa	leisure	5:2 (2)
Necessary	Gestures, implants, spa, design	iPhone, LSD, spa, desserts	Unnecessary	4:4
Functional	iPhone, design, gestures, implants, LSD, spa, desserts	iPhone, design, gestures, implants, LSD, spa, desserts	Non-functional	7:7
Needed	iPhone??	iPhone, implants, LSD, spa, desserts??	Desired	5:1 (2)
Applied	iPhone, implants, spa, desserts, design	iPhone, design, LSD, gestures, implants, spa, desserts	Non-applied	7:5
Practical	iPhone, design	Design, gestures, implants, LSD, spa, desserts	Non-practical	6:2
Pragmatic	iPhone design, gestures, implants	Design, LSD, spa, desserts	Not pragmatic	5:3
No opposing term ⁵²⁹	Implants, spa, desserts	iPhone, design, gestures, implants, LSD	Symbolic	5:3

► antonyms. Scales are selected from trial versions using factor analysis methods.

The method shows how objects' values drift when the context changes or as learning progresses, etc. It allows us to measure how different people assess a single concept or compare how the same person or group assess two or more concepts.

⁵²⁸ Is architecture pragmatic or not? Ayn Rand: "Architecture is primarily a utilitarian conception, and the problem is to elevate the principle of pragmatism into the realm of esthetic abstraction."

⁵²⁹ This word has too many meanings for a single word to serve as opposition.

Material Pole	Tendency Toward Each Pole		Symbolic Pole	Score
Useful	iPhone, design, spa	Design, gestures, implants, LSD, desserts	Useless	5:3
Physical	Implants, spa, desserts, design	iPhone, design, gestures, implants, LSD, desserts	Psychological	6:4
Essential	Spa, design	iPhone, spa, desserts, gestures, implants, LSD	Inessential	7:2

Note: gestures include flowers, souvenirs, cards, gifts and the like; other drugs are grouped with LSD; desserts include confectionery, chocolate, and soft drinks; design includes architecture.

For each line, the far-right column shows the ratio by which the fourth column beat the first column. If a product gravitates toward both columns, it is listed in both. The number in parentheses indicates the number of cases in which I found it difficult to assign a product to the left or right column.

The top five preferred names were:

Material Pole	Tendency Toward Each Pole		Symbolic Pole	Score
Utilitarian		iPhone, design, gestures, implants, LSD, spa, desserts	Non-utilitarian	7:1
Functional	Spa	iPhone, design, LSD, desserts, design, gestures, spa	Supra-functional (see below)	7:1
Obligatory	Gestures, desserts	iPhone, design, implants, LSD, spa, desserts	Surplus	6:2
Practical	iPhone design	Design, gestures, implants, LSD, spa, desserts	Non-practical	6:1
Essential	Spa design	iPhone, spa, desserts, gestures, implants, LSD	Inessential	7:2

It is worth noting here that Hesmondhalgh, who was also solving the industry clustering problem, arrived at a similar list.⁵³⁰ The reason is that he and I see the essence of industries the same way, with social meaning, or text, being primary.⁵³¹ Like I do, Hesmondhalgh proceeds from the difference between basic function and social meaning and considers the distinguishing criterion to be that social meaning

⁵³⁰ Hesmondhalgh divides industries into three groups: core, peripheral, and borderline. Core industries include television, the film industry, the internet, the music industry, all kinds of publications, video games, advertising, and evening marketing. Peripheral industries include theater and works of art. Borderline industries include sports, consumer electronics, software, and fashion. (I don't consider fashion and sports to be on the borders of the non-utilitarian, and I would not put theater on the periphery.) He excludes consumer electronics from the core industries because they "they are not centred on the production of primarily symbolic goods in the way that the cultural industries." He does the same with software, since the output is not text and the functional aspect outweighs the aesthetics. *Hesmondhalgh D., The Cultural Industries (2002)*.

⁵³¹ *Hesmondhalgh D., Ibid.*

comes to the fore in a cultural-industrial product. He views the car as social status in the form of a means of transportation; clothes are primarily a sociocultural stratum, offering protection from the cold only as a secondary function; deodorant is an instrument of sexual attractiveness; shampoo offers beauty, and so on.⁵³²

At the theoretical level, the difficulty in defining the non-utilitarian is overcome as soon as we begin to distinguish between utilitarian and sign-signal functionality. If a product or service warms or protects us, saves energy and time, or provides any other tangible convenience, it is “functional.” If signals and meaning are of most concern, it is “supra-functional.” (Look at the functional/non-functional line in the table above. None of the products clearly gravitate toward either end of the axis, but if we replace “non-functional” with “supra-functional,” clarity immediately appears (see the table of preferred names)).

Now that we have a semantic criterion of the non-utilitarian goods — “heavy on signification and tend to be light on functionality”⁵³³ — we can look at the practical methodology for monetary valuations. Many products have both meaning and function and are involved in our “presentation of self” to others,⁵³⁴ so we are faced with the task of quantitatively separating the social function from its practical counterpart. As I have mentioned, previous attempts to solve this problem failed. Those who undertook them were content to state that all needs, including social needs, are determined by culture that dictates people what — and in which sense — should be considered functional⁵³⁵. As a result, the problem was written off as unsolvable.

But I will offer a solution. Without it, we short our accounts of the economics of architecture, interior design, expensive cars, clothing, accessories, and so much more.

⁵³² While all artifacts are texts in the broadest sense of the word, the defining feature of the non-utilitarian is the overriding importance of how “to communicate to an audience, to create texts [emphasis added].” Hesmondhalgh D., *The Cultural Industries* (2002).

⁵³³ Hesmondhalgh D., *Ibid.* Hirsch makes a similar argument: Hirsch P., “Processing Fads and Fashions: An Organization-Set Analysis of Cultural Industry Systems”, in *American Journal of Sociology* 77 (1972), 639–659.

⁵³⁴ Goffman E., *The Presentation of Self in Everyday Life* (1956).

⁵³⁵ Academic and media discussions of the creative industries peaked in 2008–2009. Khestanov: “The solution to such a problem seems unthinkable to those who understand the nature of the product and the significance of its cultural content. It is difficult to identify a ‘functional value,’ since any need — which is determined by function — is cultivated or created by culture. Instead, the symbolic can be understood as something that predetermines the functional. Culture conditions our expectations of what is ‘functional’ or ‘useful.’” Khestanov R., “Creative Industries – models of development”, in *Sociological Review* 17(3) (2018).

A1.2. HOW MUCH DO PRESTIGE, SIGNAL, AND FORM COST?

Cinema, literature, and music are not the only areas that are rich in creativity, signals, and meanings. Aluminum cans, the tobacco industry, food, dietary supplements: everything has its own semantics (Fig A1.1).⁵³⁶

But what is the share of semantics in the cost? Let's move from the simple to the complex.

Sometimes the market singles out the non-utilitarian on its own, such as in cases when it is farmed out to specialized companies, which greatly simplifies the task. This is the case with advertising and marketing⁵³⁷ or with architecture and interior design: conceptual and aesthetic work is handled by separate agencies, and their economic performance answers our question. According to available data, architecture firms provide \$200–300 billion in services globally.⁵³⁸ (This estimate does not take into account small firms' contracts, but it shows that about one-third of the volume of global construction (\$4 trillion out of \$12.6 trillion) comes from architectural designs. The rest comes from functional “no frills” projects.⁵³⁹)

Architectural design costs are just a part of the non-utilitarian aspect of real estate. Figuratively speaking, the production of aesthetics requires more bricks — not to mention marble — than a simple box to keep you out of the weather. If we take the total cost of construction, whether residential, office, or public building, and subtract the amount required to build the same cubic capacity in a stripped-down design, then we will arrive at the cost of architecture.

⁵³⁶ Negus K., “Rethinking Creative Production Away from the Cultural Industries”, in *Media and Cultural Theory* (2006), 197–208.

⁵³⁷ I estimated the non-utilitarian share of internet sites' revenue using the cost of advertising (banners and video), excluding contextual advertising and infrastructure costs. My figures for the marketing industry consist of the revenue from global market research (\$47 billion) and income from companies like Bloomberg that provide information and research (\$46 billion). Analytical intracompany marketing is included in the price of the final product and does not need to be counted a second time. Advertising generates income for social networks, websites, cinema, video, newspapers, and other content industries. Counting advertisers' revenue separately would again be a double counting error. I did, however, assign this industry agency fees of 10% of the total cost of advertising, which came to \$70 billion.

⁵³⁸ Industry research company Ibisworld forecast industry revenue of \$317 billion in 2019. Sources include: HuffPost, IBISWorld, MarketResearch.com, Global-Architecture-Engineering-Construction, as well as research ordered from Loga Group.

⁵³⁹ This is what we get if we assume that the services of an architect and interior designer cost 10% of the construction budget (excluding purchases of art and other objects).



Fig A1.1 | ANDY WARHOL CAMPBELL'S SOUP CANS (1962), MoMA NEW YORK.

Using this method, Moscow's residential architecture is worth \$3–4 billion per year. An average of 3.5 million m² of residential construction goes up in Moscow each year at a price of about \$10 billion. The same area of stripped-down, basic housing in the same locations would bring in approximately \$6 billion.⁵⁴⁰ That \$3–4 billion difference is the premium buyers pay for quality above mere housing function.

Performing the same calculations for Russia as a whole, where 75–80 million m² of housing sells for \$80 billion each year shows that the premium for “beauty” is \$7–8 billion. This means that half of the country's residential architecture is concentrated in the capital. Here is another type of inequality: aesthetic. New residential buildings in Moscow account for 3–5% of the total area built but use up over half of the country's budget for urban aesthetics. The wealthier the population, the larger their demand for the non-utilitarian is.

We can estimate the non-utilitarian share of interior design the same way, although the baseline is not as obvious as it would be in architecture.

⁵⁴⁰ I reached the number \$5–6 billion by multiplying 2.6 million m² of apartments sold by the average price per square meter in a basic building (around \$2,200 per m²). All of the figures in this example are approximate, as both housing prices and construction volumes fluctuate (a record 4.95 million m² were built in 2019). The average price for a square meter on Moscow's primary residential market at the end of December 2018 was RUB 220,400 (\$3,500 per square meter). Total area built converts to area sold using a factor of 0.75, so 3.5 million square meters built equals 2.6 million square meters sold.

Still, there the concept of minimal finishing costs exists.⁵⁴¹ Designers' revenue allows us to estimate the creative component of interior design, but the accuracy of the statistics leaves much to be desired⁵⁴² because this market is unconsolidated and finely dispersed, with a large number of agencies and freelancers whose incomes are opaque. The estimates for the interiors market range between \$600 billion and \$1.5 trillion; if we assign 20% of that amount to the actual design work, then we get \$120–300 billion.⁵⁴³ This estimate could be made more accurate by looking at the revenue posted by industries that provide finishing materials, fabrics, furniture, equipment, and lighting.

Now let's look at more complex cases like fashion, cars, and a huge variety of household items, if not all of them, including packaging, which I have not counted yet. These are symbolic goods that are not visible in the value-added chain, not the main focus of any particular company, and/or the market does not have data on the revenue they bring in. In order to include them, we have to derive a universal formula to calculate a share of supra-functional in prices.

In particular, we are talking about the cost of “embodied” aesthetics (design), and there is at least one reason why it makes sense to know how to measure it. Social games are moving online. Does this mean that part of the burden is being removed from the material world, and does this result in the world becoming unified, IKEA-fied, and aesthetically cheapened? The applied aspect of this work involves being able to capture trends through changes in the non-utilitarian, and tracking the cost of material aesthetics will definitely help. Above I considered the conceptual pair online/offline (Section 1.5) and active/passive (Section 1.6). Now I will turn to the material/digital divide in visual aesthetics.

⁵⁴¹ In Russia, for example, minimal finishing costs a little less than \$100 per square meter.

⁵⁴² See the Global Interior Design Market Report and Forecast for 2018–2025 from Research-AndMarkets.com and a similar report from iCrowd Newswire.

⁵⁴³ According to data from Statista, global services alone are worth \$120 billion. This data is far from complete because not all architects and designers are included in the reporting.

A1.2.1. Material And Digital Aesthetics

This would be a simple matter if we could rely on the cost of digitized aesthetics, as prices would break down into aesthetic and material components. But money is a poor tool for measuring digital goods⁵⁴⁴ and we cannot decompose the price directly. For the most part, the money collected online for aesthetics is trifling; form only acquires economic value when fused with matter. What important here is prestige. On their own, digital goods are publicly available and do not affect status (Chapter 6 discusses how this will change with the transition of status games to the internet).

We perceive values through the lens of cost, and digital technologies have to some extent turned aesthetics into an open access good. The only people interested in digital galleries like Google's Arts & culture are usually in the art industry.⁵⁴⁵ Is beauty just not very interesting when it is divorced from status then?

The cost/value of aesthetic goods evaporates when there is no exclusive ownership. When an aesthetic good is replicated within limits, its price proportional to the number of copies. When it is unlimited, the price trends to zero. Hypothetically, the total cost of all copies is equal to the auction price for a single item, such as a statue. This was known long before the internet completed the emancipation of aesthetics, a process that began with reproductions of paintings, movies, and television. (Walter Benjamin explained this as a function of the creator's aura, though he failed to convince Antoine Ennion and Bruno Latour.⁵⁴⁶) The souvenir industry, which sells auras at retail prices, brings in \$70 billion a year. No one is deceived by the prices for the figurines sold to tourists around the world. On the contrary, the price communicates honestly that the figurines are mass-produced.

Will digital aesthetics regain their rights with the advent of NFTs? We will learn the answer from practice, but I see the future of NFTs in micro-donations, gifts, conspicuous consumption, and other elements of online games of status and prestige. People will need NFTs to verify their digital profiles.

⁵⁴⁴ Dolgin A., *The Economics of Symbolic Exchange* (2009), Chapter "Why are All Prices the Same?"

⁵⁴⁵ In the same vein, it is interesting to look at digital photography, reproductions, and graffiti. I have already discussed the laws that govern their pricing and will not repeat myself. If the NFT market grows (Non-fungible tokens are digital cryptographic certificates certifying ownership of a digital object, such as an artifact or file), it will become possible to verify my ideas.

⁵⁴⁶ Hennion A., Latour B., "How to Make Mistakes on So Many Things at Once – and Become Famous for It", in *Mapping Benjamin: The Work of Art in the Digital Age* (2003), 91–99.

A1.2.2. Luxuries, Automobiles, Fashion

Marketing firms track data for different types of luxury goods (Fig A1.2)⁵⁴⁷. Even if we add the pre-luxury segment to the luxury one, we miss much of the non-utilitarian sphere. That would leave out clothing from Zara, the image component of the iPhone, and the BMW 5-series (and possibly even less expensive cars). If today's cars were still like the first Fords, this problem would not exist. They would be purely utilitarian products (of course, that would only be true in societies where they are part of the standard of living, not in those where a broken TV or an empty pack of Marlboros are a source of pride).⁵⁴⁸

We can deal with cars by attempting to subtract out everything that is prestige: convertibles, panoramic sunroofs, wood trim in the interiors, and the latest wheels. The picture becomes more complicated when we turn to horsepower. Is an engine over two liters a luxury? What about big offroad vehicles? Their offroad ability and capacity are reflected in the price, but except for farmers, hunters, and people who live in snowy regions, few people use them for their intended purpose.

Most owners of such cars aren't paying for the functionality, but for fantasies of strength and invincibility. How do we measure this in money? After all, we don't want to have to look up sunroof dimensions or divide square meters of ostrich leather by the number of steering wheels trimmed in it. The auto industry may have more data than any other, but direct calculation would be a real hassle.

The same is true of fashion. Of the "aesthetic" industries, it is the most difficult case to analyze due to the endless assortment of products.⁵⁴⁹ As with cars, our natural inclination is to start with the top fashion houses and high-end brands and then move on to their less-exclusive lines, the second and third-tier brands, prêt-à-porter, mass market brands like Zara, and finally the cheap mass market brands.

⁵⁴⁷ Working group calculations combined with data from Bain, BCG, Euromonitor, IPK, TEFAF, and others:

⁵⁴⁸ Henry Ford reportedly said: "Any customer can have a car painted any color that he wants, so long as it is black." By setting this limitation, Ford kept the automobile within reach of existing demand. As a new product, automobiles carried aesthetic and status bonuses even without any bells and whistles.

(Ford's factories originally offered multiple colors, but in 1913 they switched to all black. Black paint dries faster, an important time saving for the assembly line.)

⁵⁴⁹ Hesmondhalgh: "The high degree of balance between functionality and signification [individualization, socialization, status – added] makes this a complex special case." *Hesmondhalgh D., The Cultural Industries (2002).*

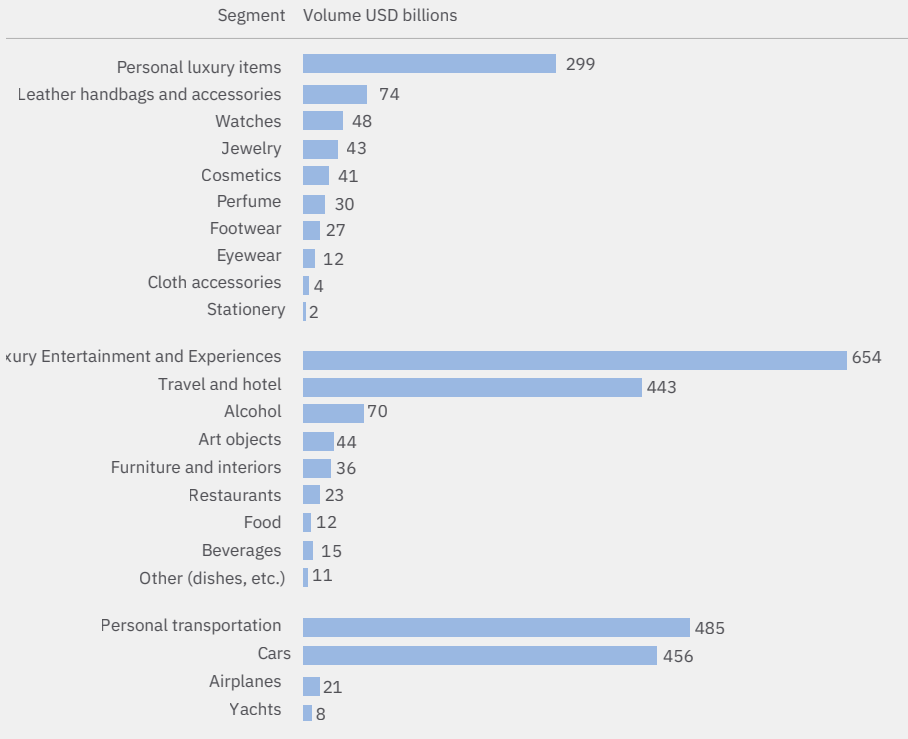
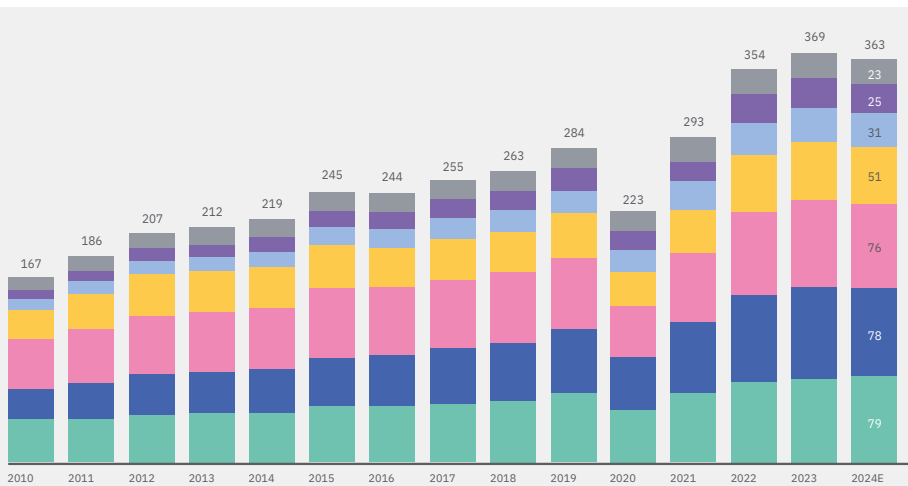


Fig A1.2 | SNAPSHOT OF THE LUXURY GOODS MARKET



Notes: Growth shown at current exchange rates; E indicates estimated value; some historical data restated in line with the incorporation of more brands in our 2024 market definition

Fig A1.3 | DYNAMICS OF THE LUXURY GOODS MARKET. Source: Bain&Company

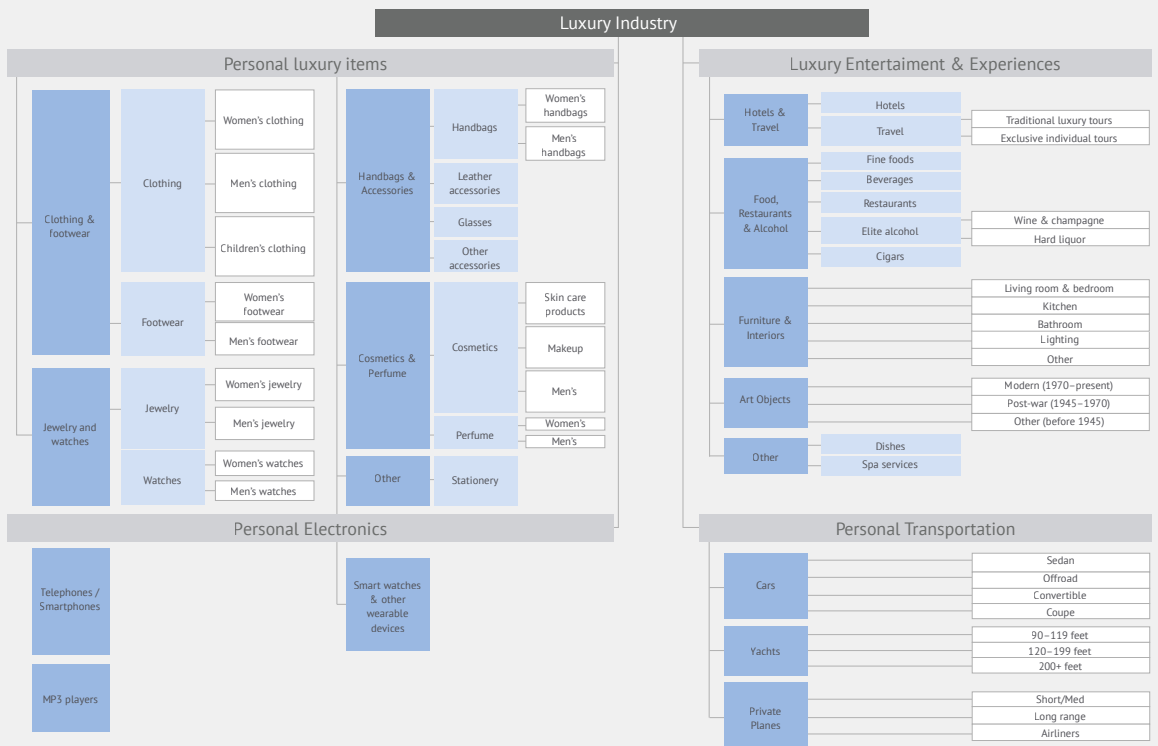
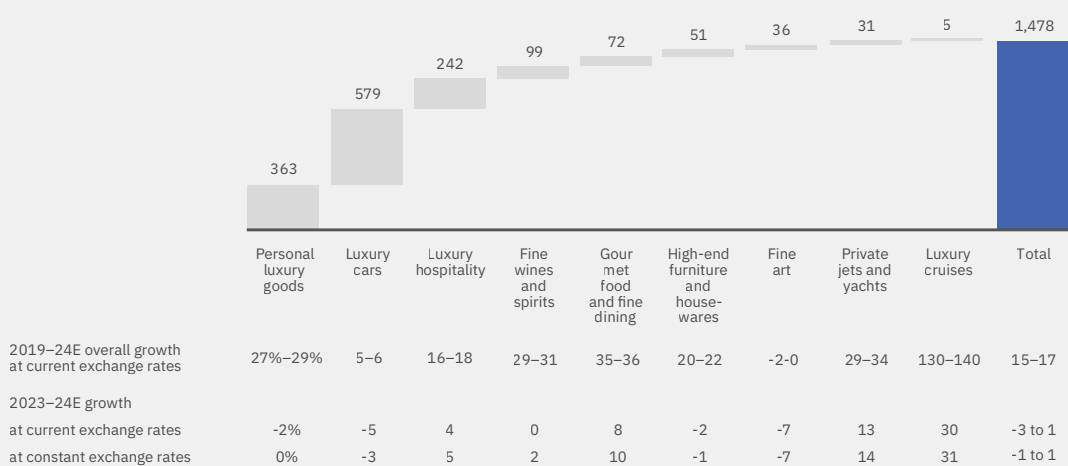


Fig A1.4 | STRUCTURE OF THE LUXURY INDUSTRY



Note: E indicates estimated value
Source: Bain & Company

Fig A1.5 | LUXURY SPENDING ESTIMATES FOR 2024



Fig A1.6 | FORD MODEL T: “ANY CUSTOMER CAN HAVE A CAR PAINTED ANY COLOR THAT HE WANTS, SO LONG AS IT IS BLACK.” (H.FORD)

But here we run into a dead end. Take a down jacket made in China to look like Galliano but at a fifth of the price: to what extent is it a piece of outerwear for bad weather and to what extent an accoutrement of beauty? Its material and design provide warmth, but any decent coat would do the same. The down jacket differs in silhouette and shape, the color and texture of the fabric, the accessories and the embroidery on it. Such things aren’t automatically members of the non-utilitarian club, but we would be wrong to ignore their design. (It would also be unfair to the designers, for whom knock-off consumer goods are the highest form of recognition.) Where do rain boots end and fashion begin?

A1.3. WHERE IS THE BORDER BETWEEN FUNCTION AND SUPRA-FUNCTION?

We need a universal key for products that have dual functionality. I will select the key by following the rule that everything falling outside the bounds of the normal life necessities — by modern standards — is non-utilitarian. But what should we consider normal?

Looking ahead: normal consumption allows a person to be like everyone else in their circle without standing out for better or worse, causing others to feel pity, or attracting gossip and envy. People are aware of what the social standards are. Studies shows that even in the past housewives clearly distinguished between “a necessary allotment” and “personal spending money”,⁵⁵⁰ thereby demonstrating an everyday refraction of the fundamental logic that anything dictated by the social environment is utilitarian.

Not having what you are supposed to have and not fitting into expectations incur sanctions of one intensity or another. Avoiding sanction is utilitarian. Hence the principle: the non-utilitarian should be measured not from a physiological baseline (food, warmth, a roof over one’s head), but from the baseline of consumption norms in social groups. Purchases made to fit in with everyone else are utilitarian. That is the border between function and supra-function. Confirming your status by your appearance, accessories, and interiors is a basic need.⁵⁵¹ If your rank requires you to have a wedding dress that cost a certain amount or a particular model of car or jet, that is not luxury.

This can be understood as an application of the principle of relativity to the social sphere. This, mind you, is how poverty is defined: Adam Smith called it the inability to afford “not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without.”⁵⁵² Today, this logic is used to determine the boundaries of relative poverty.⁵⁵³

⁵⁵⁰ Zelizer V., *The Social Meaning of Money* (1994).

⁵⁵¹ No matter how complex the image calculations, people are able to perform them automatically. There are concessions in the system, and we see it maintaining balance. One thing cancels out the other, but for the most part Bourdieu’s habitus works flawlessly, at least for physical objects. As for entertainment and cultural needs, society leaves them to the discretion of the individual. Sorting out the non-utilitarian is not a problem here.

⁵⁵² Smith A., *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776).

⁵⁵³ Since the end of the 1950s, it has become increasingly accepted that as living standards rise, the perception of what does and does not meet those standards changes; accordingly, ►

This criterion is supported by negative utilitarianism, which proceeds from the assumption that, given a gain and a loss of equal magnitude, the loss is experienced more powerfully than the gain. (Hence the priority of reducing suffering over increasing pleasure. And also, the Buddha's teaching that desire causes suffering.⁵⁵⁴) That's why the non-utilitarian does not start at the junction between utilitarian function and social sign, which some researchers tried to discover. No, the dividing line runs through the system of signs itself, part of which is socially coercive and part of which is arbitrary. The non-utilitarian is that which exists beyond the socially prescribed. The utilitarian is not just the narrowly practical. It also includes everything that fits within social norms, as they are imperative. A smartphone is not a mere toy; without it, a teenager will have a hard time maintaining a social life.

The theory of conspicuous consumption brings us to the same idea. Its recursive logic was identified by Thorstein Veblen, who stated that a component of value is... price.⁵⁵⁵ By showing their ability to pay the price, people inform of their status, power, and resources. Thus, negative utilitarianism points to the beginning of the transition from utilitarian to non-utilitarian (from function to supra-function), and Veblenian behavior points to its completion.

Now I will move from principle to working criterion. People of different incomes move in different circles, each with its own status attributes. A simple

► there is no objective definition of poverty. In the 1960s, this idea was actively promoted by Rose Friedman and in the late 1970s by Peter Townsend. Today, the relative poverty line is tied to median income. In the United States, the poverty line stands at 40% of the median income, while most European countries use 50%.

⁵⁵⁴ The second of the Buddha's "Four Noble Truths" can be stated in simplified form thus: suffering is caused by desires, attachments, insatiable urges, and dissatisfaction.

⁵⁵⁵ Veblen T., *The Theory of the Leisure Class: An Economic Study of Institutions* (1899). Wikipedia provides a solid overview of the tendency to conspicuously acquire goods as one moves from the lower to the upper strata. This tendency fuels a struggle to build wealth and a race for respectability. Each social class has a certain degree of material values — a basic set of goods that a person needs to own. As we move up the social ladder, we are driven by "monetary competition:" the goal becomes the acquisition of more capital, and therefore power, recognition, and respect from other members of society. Once we reach a certain target state, the standard is updated and we have to acquire things again and again in order to be considered a representative of the stratum to which we aspire.

See also Bourdieu P., *Practical Reason* (1998).

Ostentatious rivalry and waste were analyzed by Marcel Mauss, Bronislaw Malinowski, Georges Bataille, Pierre Bourdieu, and others.

formula that can be applied in all cases is what we need; otherwise, there will be no end of trouble with the middle class alone, which is multi-layered and indistinct in terms of income.⁵⁵⁶ We also need to make adjustments for the purchasing power of currencies and take into account differences in the composition of consumer baskets.⁵⁵⁷ These problems cannot be solved without an invariant formula. Fortunately, although each social stratum has its own understanding of what is necessary and what is optional, I don't have to analyze each case separately thanks to Adam Smith's hand, which has already sorted all the offerings by price.

While at first glance the price continuum appears uniform, markets organize themselves so that any type of product or service is usually presented across six price categories, or clusters, to be more precise (ranges with their own medians)⁵⁵⁸ (I want to note here that, while this observation is trivial and while we all behave as if we know it when we have our consumer hats on, it seems not to have been properly reflected, and this seems to be why the solution proposed here has not been tried before.) The reader can easily identify these levels in any familiar product category, from sausages and cheeses to clothing, household appliances, cell phones, restaurants, hotels, seats at a show, or cars (from the Hyundai Getz to the Rolls-Royce). No matter how many versions of a product exist and no matter how many price tags surround us, there are six price levels into which social strata are distributed. This ensures that demand and supply are able to meet up.

When choosing what to purchase, people each time focus on the price first. They know what they can and cannot afford. As a rule, our purchases belong to the same price category, only occasionally going a step higher or lower. This is the effect of *habitus* — the alignment of a person's current needs with their usual level of comfort within their available budget. We

⁵⁵⁶ The World Bank defines the middle class as that part of the population that can afford to purchase high quality imported goods and automobiles and pay for higher education and trips abroad for tourism. The middle class also has internal stratification. For example, in the US there are many levels of wealth and education inside what is statistically considered the middle class — those who earn from \$25,000 to over \$95,000 per year.

⁵⁵⁷ For more, see: Deaton A., *The Great Escape: Health, Wealth, and the Origins of Inequality* (2013).

⁵⁵⁸ In this regard, we should recall the six layers of prestige into which William Warner divided Western society: 1 – wealthy aristocrats; 2 – first-generation millionaires; 3 – highly educated intellectuals (doctors, lawyers), business people (capital owners); 4 – white-collar workers; 5 – blue-collar workers; 6 – the homeless, people in poverty, criminals, and the unemployed.

don't need to go into the details of why this is the case.⁵⁵⁹ I will just point out a well-known reason: when you buy a product in a higher class than what you can afford, you have to deny yourself something else. This behavior is deterred by the emotional costs it incurs. Insignificant impulse purchases, along with interests and hobbies, stand apart: a person living on a level 2 budget can spend money on the dream of a lifetime — a high-end musical equipment, say — with a level 6 price. But this does not alter the general rule, except that it individualizes the person's profile and confuses advertising engines and recommendation systems. Signs of a desired but unattained social status (for some, this would be the latest iPhone) also encourage people to engage in excesses.

In order to measure the non-utilitarian consumption of any social stratum, we have to establish its standard of consumption and calculate what is spent in excess of that standard. The sum of such results for all strata will be the estimate of the non-utilitarian. Instead of repeating this operation for each stratum (representative samples can be used for this purpose), I simplified the matter and assumed that such separate calculations would give approximately the same result as if I simply counted all purchases at a price above the middle of the price ladder (in other words, starting at level 4 for all categories of goods and services).

The middle of the price ladder for automobiles is cars costing around \$22,000. If all 80 million cars sold in 2019 were the same, without any executive or luxury class cars, sports cars, convertibles, and the like, then the car market would have made \$500–600 billion less than its posted revenue of \$2.2 trillion. That is how I extracted the share of the non-utilitarian from the global auto industry.⁵⁶⁰

I did the same thing with consumer electronics (TVs, laptops, tablets, game consoles, headphones, smart watches, and other devices). For smartphones, I used the most popular \$300 device as the base model and categorized those that were more expensive as non-utilitarian.

Fashion is the most difficult area. But here, as elsewhere, a six-layer price structure can be spied, and everything above level 3 is categorized as non-utilitarian (above average, premium, and luxury levels). The price ladder for clothing looks like this (Fig A1.7).

⁵⁵⁹ Bourdieu P., *Structures, Habitus, Practices* (1995).

⁵⁶⁰ A different method generates a similar result, summing up the revenue from cars of different classes above the 3rd price level. Car sales statistics are reported sufficiently comprehensively to allow detailed calculations to be made.



Fig A1.7 | THE FASHION MARKET PYRAMID. Source: Thomas Bernhardt-Lanier

The question of dual-use industries can be solved the same way, by assigning everything over level 3 as non-utilitarian.

At the end of this methodological discussion, I want to note that after the consumer B2C industries, it would be interesting to take a closer look at B2B segments that are no strangers to the non-utilitarian. Of course, in many ways the B2B picture is included in the revenue of B2C industries. That is why mechanical engineering, metallurgy, chemical plants, robotics, and solar farms are not on my list. But, regardless of the goals of this book, isn't the design of industrial buildings and equipment worth looking at? We could weigh the aesthetics of technics by calculating how much the costs would be reduced if the manufacturing became fully automated. It's going to be a while before robots start caring about design and ask for pleasant working spaces to keep their spirits up, isn't it?

APPENDIX 2.

**ON THE BIG DATA
MARKET**

Consumers are identified, sorted, grouped into categories, evaluated, and ranked on a variety of platforms.⁵⁶¹ The process originally evolved to serve the interests of online advertising, but over time the technologies designed for that migrated into healthcare,⁵⁶² insurance, banking (credit scoring,⁵⁶³ risk management), and the like.

⁵⁶¹ See “*10 Data Science Books to Read in 2023*” of books on big data put together by AI Time Journal.

⁵⁶² For instance, the insurance company Aviva, in collaboration with Deloitte, predicted the risk of diabetes, cancer, high blood pressure, and depression for 60,000 insurance applicants based on consumer data.

⁵⁶³ Lenddo, Kreditech, Cignifi and ZestFinance calculate consumers’ creditworthiness using data from social networks, web searches, and mobile phones. They also use information about how a person fills out online forms, the grammar and punctuation in their text messages, and the status of their phone’s battery. Who they are friends with on social networks also goes into the mix. Some of the companies they service include MasterCard, Baidu, and the credit reporting agencies Experian and Equifax. Facebook holds a patent for a method of assessing your creditworthiness using the credit ratings of the people on your friends list.

The players in this market (in addition to the biggest players, like Facebook and Google, there are thousands of companies in a range of industries) exchange digital profiles and compile and align online and offline data.⁵⁶⁴ The whole ecosystem is shown in Fig A2.1⁵⁶⁵

A key role is played by data brokers, who work with data from all the online and offline sources possible (see Fig A2.2 and Fig A2.3), including data on credit card purchases, income and debts, bank accounts, insurance policies, and titles to property and vehicles.⁵⁶⁶

⁵⁶⁴ Owned by leading data broker Acxiom, LiveRamp uses IdentityLink to recognize individuals across a variety of databases, platforms, and devices using email addresses, phone numbers, smartphone IDs, and more. The data is anonymized, but it is theoretically possible to connect it with offline identifiers.

⁵⁶⁵ According to information from Cracked Labs and Sandvine.

⁵⁶⁶ Data held by leading brokers Acxiom and Oracle

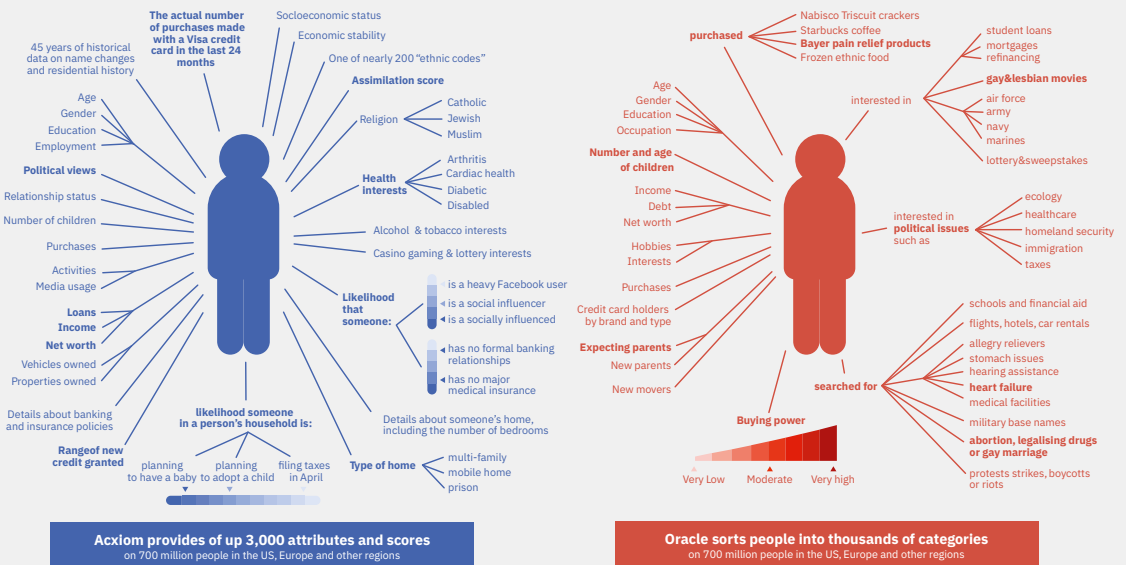


Fig A2.3 | AXIOM AND ORACLE PEOPLE TYPOLOGIES. Data from Cracked Labs

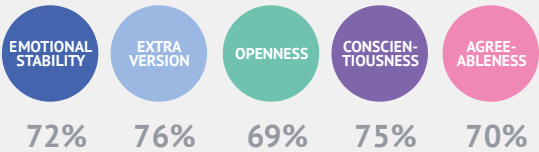
PREDICTING PERSONAL ATTRIBUTES FROM FACEBOOK LIKES

PREDICTED ATTRIBUTE	ACCURACY
Ethnicity	95%
Gender	93%
Sexual Orientation (male)	93%
Political Views	85%
Religion	82%
Sexual Orientation (female)	75%
Nicotine Usage	73%
Alcohol Usage	70%
	67%
Drug Usage	65%
Parents Divorced	60%

Predicting personal attributes from Facebook Likes. Source: Kosinski et al 2013.

PREDICTING CHARACTER TRAITS FROM PHONE CALL RECORDS AND APP USAGE

Source: Chittaranjan et al, 2011



RECOGNIZING EMOTIONS FROM THE RHYTHM OF KEYBOARD TYPING PATTERNS

Source: Epp et al, 2011

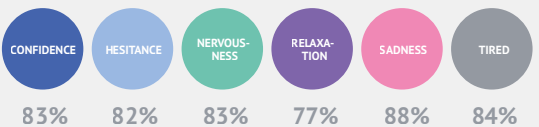
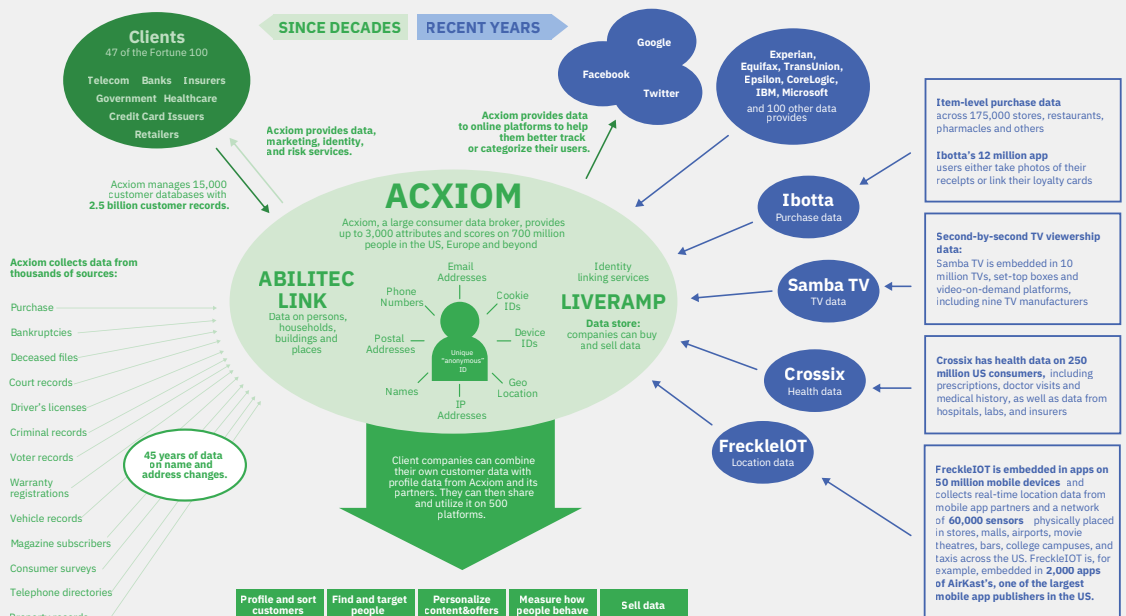


Fig A2.4 | PREDICTING FACEBOOK USER CHARACTERISTICS. Data from Cracked Labs



They can find out quite a lot about users, but not everything. For example, Facebook recognizes users' ethnicity, religious and political views, relationship status, sexual orientation, whether or not they smoke, drink alcohol, and use drugs, as well as their emotional stability, how satisfied they are with their lives, how impulsive they are, and whether or not they are depressed (Fig A2.4).⁵⁶⁷

One of the largest data providers, Acxiom manages more than 10,000 databases containing billions of consumer profiles (Fig A2.5). Oracle, another major data broker, takes data from billions of profiles collected from millions of different websites, mobile phones, grocery purchases, and more and aggregates it in its cloud. It is also capable of linking anonymous profiles to identifiers (Fig A2.6).

⁵⁶⁷ Kosinski M. et al, "Private traits and attributes are predictable from digital records of human behavior", *Proceedings of the National Academy of Sciences* 110(15) (2013), 5802–5805.

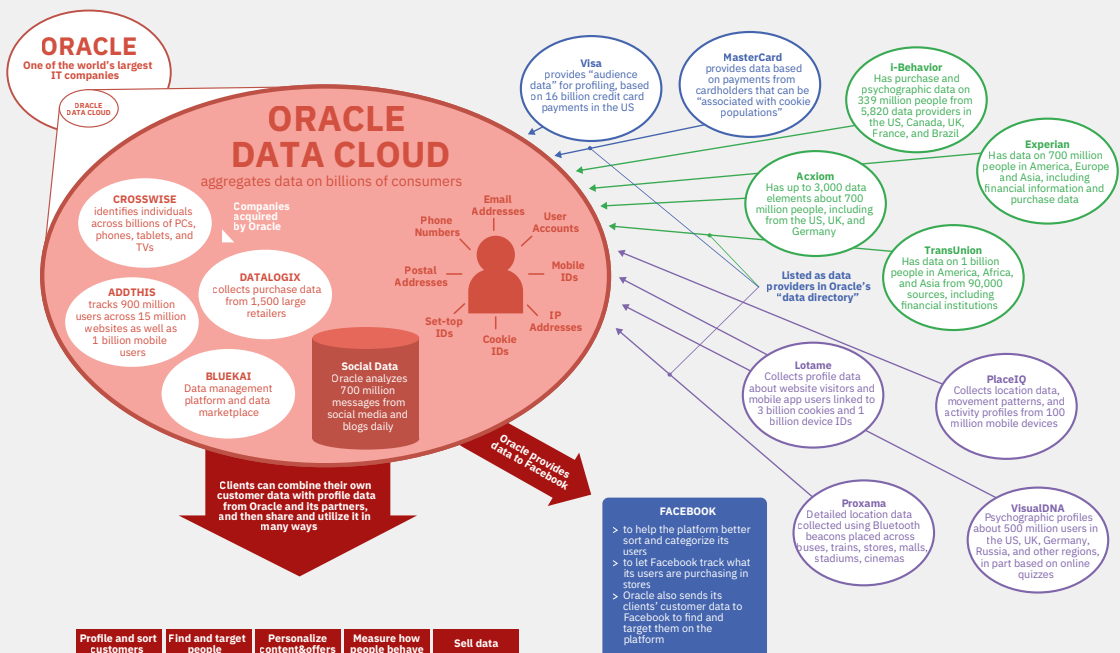


Fig A2.6 | ORACLE'S AS DATA PROVIDER. Data from Cracked Labs

APPENDIX 3.

**THE NEW PATERNALISM
AS AN ALLY OF THE
RECIPROCAL ECONOMY**

Sin taxes⁵⁶⁸ and seat belts are some of the typical manifestations of traditional paternalism. “At the theoretical level it raises questions of how persons should be treated when they are less than fully rational. [...] What is the trade-off, if any, between regard for the welfare of another and respect for their right to make their own decisions?”⁵⁶⁹ Is it permissible to protect them from mistakes and misconceptions without harming them in some potentially more important area?

⁵⁶⁸ O’Donogue T., M. Rabin, “Optimal Sin Taxes”, in *Journal of Public Economics* 90(10–11) (2006), 1825–1849.

⁵⁶⁹ Dworkin G., “Paternalism”, in *Stanford Encyclopedia of Philosophy* (2020).

From the article: “Perhaps the most important is: what powers is it legitimate for a state, operating both coercively and in terms of incentives, to possess? It also raises questions about the proper ways in which individuals [...] should relate to one another. How should we think about individual autonomy and its limits? What is it to respect the personhood of others?”

Dworkin highlights the key points for analyzing the situation when *X* performs a paternalistic action *Z* toward *Y*:

Z (or the lack of *Z*) inhibits *Y*’s freedom our autonomy

X does this without *Y*’s consent

X does *Z* with the belief that they will thereby improve *Y*’s wellbeing or prevent its deterioration.

Here are two examples of the first scenario: A father does not believe his adult child is ►

Classical economists considered freedom to be valuable in its own right; they allowed for government intervention in cases where economic agents caused harm to third parties (externalities), but generally did not approve of control over people's lives. Indeed, if a person is an ideal maximizer as represented in economic theory, then their behavior cannot be improved upon. Even if a person is not an ideal maximizer, it is still true that no one else has a better idea of what is best for them. It makes no sense to direct people when they are not harming others. Hence the respect for individual sovereignty ("the customer is always right").

Kantians also take the position that to deny adults the right to make decisions, no matter how wrong they may be, is to treat them as a means — albeit for their own good — and not as an end in themselves.

This is where behavioral economics creates a revolution by demonstrating that people do not know what their interests are, and if they do know, they often fail to pursue them. For example, people make bad decisions under the influence of emotions, incorrectly assess the probabilities, or make other mistakes.⁵⁷⁰ Playing leapfrog when making behavioral choices and being inconsistent: aren't these signs of irrationality?⁵⁷¹ Behavioral abnormalities arise from the multiplicity of selves: each self prefers something different, behavior is determined by whichever self has the upper hand at the moment, and this is not always the conscious self.

This argument radically impacts how we ought to treat a person. The old doctrine of non-interference in personal affairs applied to people who knew what they wanted.⁵⁷² According to behavioral economists, people today do not know

► capable of managing money and, instead of leaving it to him in his will, transfers it to a trust. Or: a wife hides her sleeping pills so that her suicidal husband can't find them.

⁵⁷⁰ Decisions are influenced by irrelevant information and small changes in wording; people value their own belongings more highly than similar things belonging to others; they see patterns where there are none; they drag their feet on implementing decisions and change their plans on the fly; they make poor assessments of how likely future events are... A total of over 50 misconceptions, deviations, behavioral errors and other "oddities" have been identified.

Rizzo M., Whitman D., "The Knowledge Problem of the New Paternalism", in *Brigham Young University Law Review* 4 (2009), 905–968.

It is significant that behavioral errors are predictable.

⁵⁷¹ Kenneth Arrow brings up the consistency of preferences as the most essential condition of economic rationality; as it turns out, this is exactly what is violated.

Arrow K., *The Rational Foundations of Economic Behaviour* (1996), Preface.

⁵⁷² That said, it doesn't matter whether those preferences are "correct," no one knows this better than the individual in question. According to revealed preference theory, the very act of choosing — given that other options were available — indicates that the choice made was optimal for that person. This is why a theory similar to the new paternalism, proposed by Richard Musgrave half a century ago, never gained acceptance.

what they want! Since people are not their own masters and may even harm themselves, then it would be inhumane for us to indulge them? The welfare state has heard this message loud and clear.⁵⁷³ People's scientifically diagnosed tendency to act to their own detriment has one drawback but many upsides. The drawback is that this kind of anticipation of errors, even when it is reasonable and justified, unifies people behind a single standard of how things should be and into a single system of incentives, despite the fact that, for some, these incentives are not effective enough, while for others they are redundant, and for yet others they are not necessary. Furthermore, people adapt to the pressure and learn to avoid it. This drawback is more than offset by the expanded field of operations: putting it bluntly, people are easy to manipulate. This explains the enthusiasm with which officials greeted the new paternalism. Many of them find administration a depressing job — a bullshit job, according to David Graeber⁵⁷⁴ — and the new paternalism opens up attractive new areas for creativity.

There are different types of paternalism, broad and narrow, hard and soft, weak and strong, pure and mixed.⁵⁷⁵ I will restrict myself to a discussion of libertarian paternalism (or new paternalism),⁵⁷⁶ which is based on the idea of the nudge, in which choice situations are designed in such a way that people automatically act for their own good. There is no need to dictate the choice or inflate the price of the “wrong” decision as ordinary paternalism would do; it is enough

⁵⁷³ I will leave aside fears that the government may be led astray in the worst possible way. I just want to point out that if we take into account non-utilitarian needs in addition to the utilitarian, then perhaps behavioral mistakes will turn out not to have been mistakes at all, and irrationality will receive a rational explanation. But until we can measure the quality of time, that remains a matter of speculation.

⁵⁷⁴ David Graeber, who became popular by criticizing the bureaucracy, nowhere comes closer to the truth than when he discusses civil servants and their henchmen in the financial sector, the KYC inspectors.

Graber D., *Bullshit Jobs: A Theory* (2018).

Graber D., *The Utopia of Rules* (2015).

⁵⁷⁵ Kapelyushnikov discusses this at length in *Behavioral Economics and the New Paternalism*.

⁵⁷⁶ Traditional paternalism was largely religious and moralistic. The guardian projected their own preferences onto the ward and directed the ward's behavior in accordance with those preferences. It was assumed that the religious leader or moral authority knows best what each person needs. The new paternalism is fundamentally different:

- 1) the role of the normative standard is assigned to the individual's subjective preferences;
- 2) intervention is not necessarily associated with restricting freedom of choice, hence the “libertarian” modifier.

The state should “preserve freedom of choice”; “public officials can nudge people in directions that will make their lives go better while also insisting that the ultimate choice is for individuals, not for the state.” Thaler R., Sunstein C., *Nudge: Improving Decisions about Health, Wealth and Happiness* (2008).

to present the inputs in such a way that people are more likely to choose the options that scientists are sure are right for them.

Richard Thaler and Cass Sunstein paved the way for the nudge to become social policy.⁵⁷⁷ (Sunstein, co-author of nudge theory, served in a senior position in the Obama administration; Thaler was David Cameron's behavioral policy advisor.⁵⁷⁸) The program is presented in popular form in their book *Nudge: Improving Decisions about Health, Wealth, and Happiness*.⁵⁷⁹ The message is compellingly simple: since choices happen one way or the other anyway, why not encourage the right ones? Put simply, if there is a default option, why not make it a good one? Not the option that suits the seller's idea of beauty, but the best option known to the government, which, of course, is blessed with a comprehensive, statistically verified view from above.

The default choice is the most peculiar aspect of the nudge, both in theory and practice. Here are some examples: 1) place healthy foods at eye level and unhealthy foods above or below (or put healthy foods at the beginning of a row of selections); 2) offer small plates and people will consume less; 3) on sharp turns, draw the lane markers closer together and people will slow down; 4) the Save More Tomorrow (SMarT) retirement savings program is the most significant nudge experiment.⁵⁸⁰ All these examples use the framing effect, which is based on the idea that subjects' choices are influenced by how information is presented.⁵⁸¹

⁵⁷⁷ David Kahneman, the founder of behavioral economics, understood its statist potential, as evidenced by his words: "...the observed deficiencies suggest the outline of a case in favor of some paternalistic interventions, when it is plausible that the state knows more about an individual's future tastes than the individual knows presently."

Kahneman D., "New Challenges to the Rationality Assumption", in *Journal of Institutional and Theoretical Economics* 150(1) (1994), 18–36.

⁵⁷⁸ As Kapelyushnikov points out, Barack Obama actively applied the ideas of behavioral economics during his election campaigns and repeatedly referred to them when he became President of the United States. Time magazine called his group of closest advisors a "behavioral dream team" whose goal is to transform the country using the insights of behavioral economics. Sunstein headed the White House Office of Information and Regulatory Affairs, where he coordinated on decisions prepared by the presidential administration. British Prime Minister David Cameron created a group to develop behavioral policy with Thaler as its advisor.

⁵⁷⁹ Thaler R., Sunstein C., *Nudge: Improving Decisions about Health, Wealth and Happiness* (2008).

⁵⁸⁰ Thaler R., Benartzi S., "Save More Tomorrow TM: Using Behavioral Economics to Increase Employee Saving", in *Journal of Political Economy* 112 (2004), 164–187.

⁵⁸¹ For example, if a doctor asks a patient to consent to an operation that may cure their disease but could also be fatal, the patient's answer depends on how the question is asked: did the doctor say that 90% of patients who undergo the surgery survive, or did they say that 10% of them die?

The new paternalism grew out of behavioral economics to stretch the boundaries of acceptable intervention. Before Thaler and his colleagues, these types of efforts were handled clumsily, almost openly stating that adults, like children, do not know what is good for them. Over time, they will thank us for keeping them away from junk food, dangerous relationships, or whatever else. The new paternalists changed that rhetoric. If the old message was “We know what is best for you and we’ll force you to do it,” the new message is “You know what is best for you, and we will help you make that happen.”⁵⁸² The very label “libertarian paternalism” has become part of that rhetoric; it would seem to be an oxymoron, but Thaler and Sunstein argue that it isn’t.⁵⁸³ They see themselves as social physicians prescribing a course of treatment for society.⁵⁸⁴

Critics have found behavioral economists’ findings to be false and their prescriptions dangerous.

These critics point out that eating right, drinking right, sleeping right, exercising and having sex, choosing the profession right, and following the right lifestyle are not the same as happiness. Moreover, there is not one piece of scientific evidence that “correctness” and “happiness” are one and the same; on the contrary, research shows that excessive control is not the best path to happiness. But this is exactly what the title of Sunstein and Thaler’s book promises, collecting the entire trifecta of health, prosperity, and happiness in one place.⁵⁸⁵ Aristotelian eudaimonia, Mill’s position that having the freedom to choose is more valuable than making the right choice⁵⁸⁶ or, in modern terms, the fundamental need for self-determination:⁵⁸⁷ all these subtleties merely weigh down the idea

⁵⁸² Thaler R., Sunstein C., *Nudge: Improving Decisions about Health, Wealth and Happiness* (2008), 53–54.

⁵⁸³ Sunstein C., Thaler R., “Libertarian Paternalism Is Not an Oxymoron”, in *University of Chicago Law Review* 70 (2003), 1159–1202.

⁵⁸⁴ Loewenstein G., Haisley E., “The Economist as Therapist: Methodological Ramifications of ‘Light’ Paternalism”, SSRN (2007).

⁵⁸⁵ Thaler R., Sunstein C., *Nudge: Improving Decisions about Health, Wealth and Happiness* (2008).

⁵⁸⁶ According to Mill, “If a person possesses any tolerable amount of common sense and experience, his own mode of laying out his existence is the best, not because it is the best in itself, but because it is his own mode.”
Mill J., *On Liberty* (1859).

⁵⁸⁷ Self-determination (the need for autonomy), according to the theory of the same name pioneered by Deci and Ryan, is a person’s innate need to initiate their own actions and independently control their own behavior.
Ryan R., Deci E., “Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being”, in *American Psychologist* 55 (2000), 68–78.

of the nudge. It is also weighed down by the postulate — untenable, according to its opponents — that the future is more important than the present. Critics do not see libertarian paternalism as a harmless set of ideas; from their point of view, it is sneakily pushing us toward a slippery slope where nothing will catch us as we slide into total regulation.

Without getting bogged down in this discussion, I want to note that the question is not so much the nudge as who delivers it. People manipulate each other, and that is natural. What is problematic is when the manipulation comes from the referee. But on the other hand, who is better placed to nudge us than the government, with its knowledge base and ability to dictate the rules? In essence, we are talking about transferring the principles of regulation from externalities to internalities. But generally speaking, externalities can be managed two ways: from above (Arthur Pigou's command-centralized version⁵⁸⁸) or from below (Ronald Coase's decentralized, competitive and contractual scheme). Behavioral economists, who dreamed of putting their ideas into practice, bet their money on the state instead of on expert institutions or consumer communities, which are difficult to work with. Again: it is their choice of ally that raises questions, not the fact of paternalism, which exists in life.

It is worth adding to the above that behavioral economics focuses on the utilitarian and reduces the individual to two selves: the present self and the future self. If this duo represented the entire person, then perhaps it would be possible to design incentives for it and not worry about anything else. But people also have careers, honor, conformity, internal demons, and other things that are at least as difficult as overeating. If only they could be massaged in the right direction or at least neutralized before they ruin the game. Just imagine: you instruct a person to stay away from greasy foods, but then — for some reason — they turn around and start mistreating their subordinates.

⁵⁸⁸ In *Economics of Welfare* (1920), Pigou laid out the theoretical foundation for broad government interventionism. If the market is not capable of creating a supply of social goods, then the government should do it. Pigou's recommendation was to neutralize negative externalities through taxation and encourage positive externalities through subsidies. Coase demonstrated that neither action is necessary if partners can agree to cooperate. Public choice theory further undermined Pigou's theory of externalities. A number of prominent economists believe government failures are more dangerous than market failures.

APPENDIX 4.

**ON THE BRIGHT
AND DARK SIDES
OF MERITOCRACY**

Ideally, the principle of merit implies the best achievable balance of freedom, justice, and returns from society's productive forces. In reality, society values and encourages certain abilities while discriminating against others. Traditionally, this has been attributed to the objective imperfection of measurement; since this entire book is about how to deal with those limitations, there is little to say beyond what I have already said about a new system of measurement. However, for some time now there has been an ongoing campaign to convince the public that the principle of merit is fundamentally flawed and should be discarded. Furthermore, this discussion is initiated by leading intellectuals, professionals, and others with moral authority. What is this change in humanitarian thought? Have we lost sight of something essential in our concept of dynamic hierarchies? I apply the concept to blockchains (Section 10.1) and the metaverse (Section 10.2.7), and it also underlies the ethics behind the system I propose for evaluating the symbolic, and yet some would have us believe that civilization is a colossus with feet of clay and the principle of merit is outdated.

A4.1. WHAT'S THE MATTER WITH MERITOCRACY?

In the late 1950s, British socialist Michael Young wrote a book about the West's disastrous course toward meritocracy.⁵⁸⁹ As England was strengthening its social hierarchy, he responded with a dystopian satire in which he predicted an uprising against the restored caste system.⁵⁹⁰ Young described a world where the hierarchy was based on merit, which was defined as “intelligence-plus-effort” and expressed as formal evaluations — in other words, he created a rough model of the system I am pointing toward but presented it in a clearly negative light. To his surprise, people failed to appreciate his sarcasm, and merit was established as an indisputable principle.

At that time, the principle of merit fit into the doctrine of human capital that was supported by leading economists (Section 4.1) and has delivered many benefits to civilization. But once these benefits became ordinary, the Easterlin paradox raised its head (after a certain level, increases in income do not bring equal increases in happiness⁵⁹¹).

⁵⁸⁹ Young M., *The Rise of the Meritocracy, 1870–2033: an Essay on Education and Equality* (1958). Hannah Arendt was the first to use the word “meritocracy,” and it was picked up by Young.

⁵⁹⁰ As befits a prophet, Young named a specific year — 2033 — when the rebellion would take place. His book ends badly, but as Dalton Conley and Jason Fletcher note, “Though we are a mere decade and a half away from the 2033 date on which Young predicted that the final ‘revolt’ against an entrenched meritocratic system (in the UK) would occur, it seems [...] that we are still considerably removed from the dystopian nightmare he imagined more than half a century ago.” Conley D., Fletcher J., *The Genome Factor: What the Social Genomics Revolution Reveals about Ourselves, Our History, and the Future* (2017).

⁵⁹¹ This is how it should be, because utilitarian goods follow the law of diminishing marginal returns. In 2010, Angus Deaton and Daniel Kahneman confirmed the non-linear relationship between the subjective feeling of happiness and the amount of a person's income: in the US, happiness grows until income reaches \$75,000 a year and then stops. Kahneman D., Deaton A., “High Income Improves Evaluation of Life But Not Emotional Well-Being”, *Proceedings of the National Academy of Sciences* 107(38) (2010). Diamond D., “Angus Deaton, Who Just Won Nobel Prize, Thinks a \$75,000 Salary Makes You Happy”, *Forbes* (2015).

Some researchers dispute the Easterlin Paradox, but I don't find their arguments convincing. For examples, see:

Stevenson B., Wolfers J., “Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox”, in *Brookings Papers on Economic Activity* 1 (2008), 1–87.

Veenhoven R., Vergunst F., “The Easterlin Illusion: Economic Growth Does Go with Greater Happiness”, in *International Journal of Happiness and Development* 1(4) (2014), 311–343.

According to the World Happiness Report 2020, Sweden, Denmark, and Finland lead the world in terms of their citizens' subjective wellbeing, but sociologists seem out of touch with the feelings of all those who work hard so that the unemployed can spend time on their hobbies or take on part-time gig work. We also don't know how long the Scandinavian model will remain competitive.

People who were not prepared for such a turn of events were receptive to the radical left's explanations for why they were not as happy as they thought they should be.

The internet has provided all sorts of pain relievers while globalizing the market for vanity and aggravating the kind of impotent envy and resentment⁵⁹² that make people responsive to any explanations for their failure — even the most delusional ones. Humanities scholars on the left identified merit as such an explanation and, although they spent decades campaigning under its banner, they are now united against it.⁵⁹³ Among those spearheading the campaign against meritocracy are Yale professor Daniel Markovits, who identifies it as a trap that only promises happiness (*The Meritocracy Trap*, 2019⁵⁹⁴) and Harvard professor Michael Sandel, who sees it as tyranny (*The Tyranny of Merit*, 2020⁵⁹⁵). Following Young's precepts, these two call for an end to the principle of merit as a belief that has led humanity to a dead end. As I have already said, this does not fit with my views on the institution of status and reputations.

What arguments do meritocracy's opponents espouse? People who attack meritocracy usually start by pointing out that, while it is supposed to offer everyone a chance to succeed, opportunities are not really available to everyone, nor are they distributed fairly. Professors Markovits and Sandel interpret this not as an acceptable deviation from the ideal, but as a sign of the incurable pathology behind the entire principle of merit.

⁵⁹² Nietzsche defines resentment as the hostility we feel towards what we consider to be the cause of our failures. It is an impotent envy, "the painful consciousness of the futility of attempts to improve one's status in life or in society." This is not just envy or hostility; it is the creation of a unique moral system out of sublimated feelings of inferiority. Nietzsche F., *On the Genealogy of Morality* (1887).

⁵⁹³ Davies S., *Meritocracy Is a Bad Idea* (2019).
 Carnevale A. et al., *The Merit Myth: How Our Colleges Favor the Rich and Divide America* (2020).
 Guinier L., *The Tyranny of the Meritocracy: Democratizing Higher Education in America* (2016).
 Littler J., *Against Meritocracy: Culture, Power and Myths of Mobility* (2017).

⁵⁹⁴ Markovits D., *The Meritocracy Trap: How America's Foundational Myth Feeds Inequality, Dismantles the Middle Class, and Devours the Elite* (2019).
 Schuessler J., "The Meritocrat Who Wants to Unwind the Meritocracy", *The New York Times* (2019).

⁵⁹⁵ From an interview with Sandel M., *The Tyranny of Merit: What's Become of the Common Good?* (2020). For my criticism of this work, see Section 3.6.3. As a side note, Sandel speaks highly of the merits of his colleague Markovits; in light of their shared anti-meritocratic position, this made me smile.

“On a purely descriptive level... I think we do live in something like a meritocracy. That is to say, the bulk of the reason why certain people have gotten ahead is that they have genuinely accomplished things. On the other hand, the moral intuition behind meritocracy is not at all realized.”⁵⁹⁶

In other words, meritocracy has always been a fantasy, a way of glossing over how the world actually works; it is a mechanism for transferring wealth from one generation to the next;⁵⁹⁷ a smoke screen hiding gaping inequalities in the United States.

Young was a proponent of strict equality of results and found inequality of any kind to be intolerable, whether in compensation for work, status, inheritance, or anything else. Markovits and Sandel are not socialists, but — like Young — they reject the principle that a person’s position in the social hierarchy is just if it is earned. They repeat Young’s arguments: meritocracy ignores the workings of luck and other unearned factors behind success; when we attribute achievements to skill and hard work while explaining failure as a result of laziness and other shortcomings, the darlings of fate are unjustly elevated and the losers are plunged into hopelessness that hardens into fury.

⁵⁹⁶ Illing S., “How meritocracy harms everyone – even the winners”, *Vox* (2019).

⁵⁹⁷ The leading argument against meritocracy is that it paves the way for a cognitive oligarchy. Tim Sommers warns that those not opposed to promoting people with talent shouldn’t be surprised when faced with a tyranny of their children. Young, too, wrote about the tendency of meritocracies to degenerate into more rigidly stratified societies than those they replaced.

The armchair war between nurture and nature is waged using a variety of statistics, and Markovits, too, makes liberal use of them in his book to show that America’s elite universities are full of the children of wealthy families. That said, he attributes the gap between the test results of children from rich and poor families not to any genetic differences (God forbid!) but to the different levels of investment in their education. In this context, it is worth noting Herrnstein R., Murray C., *The Bell Curve: Intelligence and Class Structure in American Life* (1960) as a book that played a significant role in the nature/nurture war.

Another book of interest is Conley D., Fletcher J., *The Genome Factor: What the Social Genomics Revolution Reveals about Ourselves, Our History, and the Future* (2017) which makes the case that genes explain a significant proportion of who gets ahead and who doesn’t; rather than giving rise to a “genotocracy,” this increases mobility and counteracts social disadvantages.

For more on both sides’ positions, see Toby Young’s essay “Meritocracy and its Discontents: the Rise of the Genotocracy” (2020).

(Sandel attributes everything from Brexit and to the Black Lives Matter movement to the election of Donald Trump in 2016 and whatever else might happen in 2024 — which is when a polarized America is scheduled to reach Armageddon — to the effects of meritocracy and declares that populist reactions are a righteous rebellion against it.⁵⁹⁸)

In Sandel's view, meritocracy degenerates into the tyranny of merit, which leads directly to the tyranny of the majority that Alexis de Tocqueville warned about. Therefore, the principle is a false one, as is the consensus among leftist liberals for the past three decades that meritocracy was a way to deal with inequality and the consequences of deindustrialization. In fact, it turned out to be all just a betrayal of young people and of the working class, who were convinced that in a global economy, companies look to hire the best workers no matter where they live, and that America would always be a place where you can succeed if you work hard.⁵⁹⁹

⁵⁹⁸ From Sandel's book: "The populist backlash has been a revolt against the tyranny of merit, as it has been experienced by those who feel humiliated by meritocracy..."

See also *Coman J., "Michael Sandel: The populist backlash has been a revolt against the 'tyranny of merit'", The Guardian (2020).*

Writing eight decades before Sandel, Karl Polanyi explained the rise in political tension during transitions. He also showed how the state fights for the favor of new special interest groups and for the votes of those who technology has deprived of income, and how it inevitably — in his opinion — builds itself up beyond what is needed to mitigate the consequences of innovation in the world around us. This explains calls for enhanced regulation, confiscatory taxation, a strong state, and other measures to preventatively curb the market without waiting for the inevitable moment — according to those who think this way — when it will have to be restrained. This is akin to burning strips of grass to stop a wildfire.

The author of *The Great Transformation* saw no other way out than to create a non-market foundation for civilization. He reluctantly agreed that this requires ever-increasing state planning, regulation, and control.

⁵⁹⁹ Sandel argues that relying on education as an upward-mobility tool has failed, as have all other attempts to create the conditions for growth based on talent and effort. He justifies the status of book *Sandel M., What Money Can't Buy: The Moral Limits of Markets (2012)* as a major opponent of free markets when he calls on Democrats to redefine the mission and pay more attention to the legitimate grievances that progressive policies have inflicted on people in the era of globalization.

"Even as globalization brought deepening inequality and stagnant wages, its proponents offered workers some bracing advice. 'If you want to compete and win in the global economy, go to college.' 'What you earn depends on what you learn.' 'You can make it if you try.' These elites miss the insult implicit in this advice. If you don't go to college, if you don't flourish in the new economy, your failure is your fault. That's the implication. It's no wonder many working people turned against meritocratic elites."

From Sandel's TED Talk.

A4.2. THE PLIABLE CONCEPT OF MORAL EQUIVALENCE

How do we build a better world without rewarding the best among us? Sandel proposes we begin by recognizing the depravity of the principle of merit as contrary to the Christian idea that people have equal moral worth. In his diagnosis, the growth of inequality intensifies this contradiction, and the resulting civil and political tension cancel out the rise in prosperity.

The solution is to abolish the very competition that has divided society into winners and losers and expose as false the mantra that those at the top earned their places, just as those on the bottom earned their places by fighting less effectively. This is the moral and political aspect of the question according to Sandel, and his interpretation is rooted in Jefferson's famous statement that "All men are created equal."

This maxim, which abolished slavery and implied the inalienable and equal rights to life, liberty, and the pursuit of happiness — but by no means individual equality⁶⁰⁰ — opened the door to left-leaning interpretations,⁶⁰¹ but, as Richard Weaver noted in his 1948 book *Ideas Have Consequences*, Jefferson's statement can only be accepted as a universal truth if we are stuck in a hypnotic trance and see nothing around us, since "...no man was ever created free and no two men ever created equal."

In the Markovits-Sandel tandem, Markovits focuses on meritocracy's personal costs, opening the reader's eyes to the fact that smart, motivated people are overwhelmed. (It seems there are already thousands of articles about this.) He states that the real problem is not only the fact that elites are cheating, but that meritocracy also favors them even when everyone plays by the rules.

This statement is presented as something fresh and new, despite the fact that in *A Theory of Justice* Rawls said everything there is to say about springboards in the form of undeserved talents and education picked up in the course

⁶⁰⁰ When he penned this phrase in the US Declaration of Independence, the Founding Father meant that the American colonists had the same rights to self-government as any other people. Jefferson's whole idea sounds like this: "We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness."

⁶⁰¹ Even today, we cannot get within a barge pole of the question of equal moral worth without risking public censure. *Steinhoff U. (ed.), Do All Persons Have Equal Moral Worth? (2014).*

of the “natural lottery.”⁶⁰² Markovits’ chief “merit” — one which earns him ovations from the left-leaning public — is that he pointed out that meritocracy has no true beneficiaries; it is bad for everyone, including those who supposedly benefit from it and are instead locked in a hamster wheel.

Timothy Sandefur reacted to these simplifications in a review in which he calls out Markovits for clumsily “...[alternating] between criticizing those who chase after illusory values (and who suffer ‘shallow ambitions and deep and pervasive fears of failure’), and those who devote themselves to work they love and whose virtues of diligence and ambition he derides as the ‘sham’ notion that ‘industry constitutes honor.’”⁶⁰³ I would add to this that Markovits offers no alternative explanation for what motivates people to do things and is says nothing about the pleasure of mastery (Csikszentmihalyi), the delight of working with like-minded people, freedom, or other joys of life that — one way or another — must be paid for.

The human costs of competition that Markovits lists are well known — I opened this book with a discussion of them because, like many others, I see the escalation of competition as a problem. The approaches to this problem deserve analysis because I state that meritocracy is the ideological core of the internet of the future and of the future in general, while, according to Markovits, Sandel, and those who agree with them, this idea is a bad one. If only the problem were limited to some flaws in how the principle of merit is implemented — this could be solved by a public institution of status and reputations, where everything is on the up and up (Section 10.2.7). But Markovits and Sandel say the evil is not in retreating from meritocracy but in meritocracy itself, leaving us to wonder which is worse: merit, or the recognition of merit? They don’t particularly care, because they believe that rejecting the concept of achievements — whether recognized or ignored — will save people from suffering as a sort of Buddhist escape from the meritocracy trap.

⁶⁰² Rawls argues that people do not deserve the endowments they gain through nature’s lottery any more than those who were lucky in the social circumstances of their birth. Consequently, neither group deserves the status derived from those advantages. As a principle for distributing honors and benefits, meritocracy is no more just than inheritance. And the fact that great individual effort is required to achieve upward mobility does not change anything, since the ability to put forth effort is also determined by genetic and social circumstances.

⁶⁰³ “At times, [Markovits] uses the word ‘meritocracy’ to mean the social pressures that can distract people from careers and pursuits they would find fulfilling. In this sense, the word refers to the self-destructive lust for wealth and status that is inimical to the good life. At other times, he uses the term to mean the social ideal that people should earn their fortunes through their own hard work. [...] This equivocation also enables Markovits to wed his indictment of “meritocracy” to an argument against “inequality,” even though those two positions are contradictory.”

Sandefur T., “The Meritocracy Trap by Daniel Markovits,” The Objective Standard (2020).

A4.3. WHAT WOULD REPLACE MERITOCRACY?

Nothing. Neither Markovits nor Sandel nor anyone else has ever offered an alternative. But what other than merit can determine the order in which people access scarce goods and leadership roles? What other than merit, however understood, motivates people to work and live? The professors' calls to launch a virtuous cycle of self-reinforcing equality (Markovits puts his faith in the government) or raise taxes on financial transactions (Sandel's idea⁶⁰⁴) bore me to death.

Sandel informs us that competition, even when fair, is not an appropriate basis for a just society. Following in the footsteps of the Christian socialist Richard Tawney and exposing the acquisitive society, Sandel subscribes to Tawney's belief that equality of opportunity is at best a partial ideal. The alternative is not the oppressive equality of outcome, but broad democratic equality of conditions such that citizens can participate in a common cause and hold their heads high.⁶⁰⁵ The best way to keep those heads high is by dousing the bonfire of vanity. Humility is the "...antidote to hubris and self-congratulation." Although it is tempting to consider oneself self-sufficient because of the promised freedom, Sandel says this is a mistake because it leads to a competitive market meritocracy that deepens divisions and undermines solidarity.⁶⁰⁶

Sandel's alternative to competition is a sense of belonging and community that is fostered by vulnerability and mutual recognition. As Julian Coman has noted, this vision of society, framed by words like "dependence," "duty," "secret," "humility," and "luck" is "...the very opposite of what came to be known as Thatcherism, with its emphasis on self-reliance as a principle virtue."⁶⁰⁷ I want to add that it also stands in opposition to how personality psychology

⁶⁰⁴ As an ethicist, Sandel is convinced that the salaries earned on Wall Street are not commensurate with the financial and technology sectors' contributions to the economy, meaning that financiers' incomes are undeserved.

Robert Frank, another critic of meritocracy, offers the same sort of recipe. His solution is a progressive consumption tax to discourage people from wanting nice houses and cars. Frank R., *Success and Luck Good Fortune and the Myth of Meritocracy* (2016).

⁶⁰⁵ In Sandel's words: "Tawney argued that equality of opportunity was at best a partial ideal. His alternative was not an oppressive equality of results. It was a broad, democratic 'equality of condition' that enables citizens of all walks of life to hold their heads up high and to consider themselves participants in a common venture. My book comes out of that tradition."

⁶⁰⁶ Sandel M., *The Tyranny of Merit: What's Become of the Common Good?* (2020).

⁶⁰⁷ Coman J., "Michael Sandel: The populist backlash has been a revolt against the 'tyranny of merit'", *The Guardian* (2020).

understands the human being. It also ignores the fact that nature and the laws dictated by it for a small-scale society differ from the laws of a large society and do not apply to it.⁶⁰⁸

What about Markovits? At least, compared to his colleague, he has less claim to Savonarola's laurels. He argues that it is one thing for meritocracy to be considered an ideal, but quite another for it to be considered a necessary evil. In the latter case, one must be aware that the existence of meritocracy is a flaw in the social structure (that can — and should — be constantly improved) and, partly, in human nature (which is more difficult to be improve but can be gradually corrected) — a flaw that allows both for inequality of opportunity and inequality of results.

Markovits holds back two special recommendations for the final chapter of his book, appropriately entitled "What Should We Do?" I would have preferred it if he had kept them to himself, because a more disappointing ending is hard to imagine. But judge for yourself. His first recommendation is to lower the bar for admission to elite educational institutions in order to at least double the number of students from low income families. This is a problem: if achievement is destructive and careers are just sweatshops, why would anyone want to go to Yale? Avoiding the Ivies and the ensuing rat race is actually a blessing, if we follow his logic, and competition is what makes it possible. Let's say that the bar to entry was lowered or even abolished, as Sandel advocates. Universities, however, are not infinitely scalable. Sandel suggests selection by lottery, apparently because he sees some advantages to the inevitable collapse of quality. Markovits, in turn, proposes depriving universities of their tax benefits so that they boldly commit ritual suicide.

Markovits' second recommendation is also aimed at the government, that favored counterparty of the righteous left, who pity people so much that they are ready to cut off their power just to put a stop to their suffering. He suggests that the government should subsidize unskilled labor (*Markovits D., The Meritocracy Trap: How America's Foundational Myth Feeds Inequality, Dismantles the Middle Class, and Devours the Elite* (2019), 279–280). What does this add to the endless calls to tax the rich, raise wages, and pamper workers regardless of their qualifications, willingness to work, or the demand for their services?

⁶⁰⁸ According to Hayek, spontaneous social order conflicts "with innate instincts that had bound the small group together." "If we were to apply the unmodified, uncurbed, rules of the micro-cosmos (i.e., of the small band or troop, or of, say our families) to the macro-cosmos (our wider civilization), as our instincts and sentimental yearnings often make us wish to do, we would destroy it. Yet if we were always to apply the rules of the extended order to our more intimate groupings, we would crush them." *Hayek F., The Fatal Conceit: The Errors of Socialism* (1988).

And how would it be simpler than introducing an unconditional basic income, which we already know there is no money for? Is it killing you to see money being inherited? That can be addressed by a confiscatory inheritance tax. But what about cultural and social capital? How far are they willing to go to fulfill Tawney's promise of "broad, democratic equality of condition?" Will they abolish the institute of the family?⁶⁰⁹

Are a couple of anemic ideas presented as the very best of Yale-Harvard thought enough to change the course of civilization? If meritocracy is a trap, then the way out is not less of it, but more. Civilization is not equipped with a reverse drive. Hierarchies should not be abolished, but developed, fragmented, and specialized, opening the way for people with different abilities. We need to supplement property statuses with symbolic statuses and verify their authenticity. Meritocracy is not a rigid structure, but a living product of status and reputation markets. The solution is not fewer markets, but more.

A4.4. ON THE PROGRESS OF MERITOCRACY

When anti-meritocrats say that the rules favor the elites, do they mean a particular set of rules, or any conceivable rules at all? Do they take into account the dynamics of rules? Meritocracy is not standing still. Having already mastered IQ, it is working on social intelligence while also aiming at emotional intelligence (EI), and next it will learn to master "Hand" and "Heart," the terms David Goodhart uses to refer to practical abilities, empathy, and an easygoing person-

⁶⁰⁹ Caught in the web of anti-meritocratic sophistry, Stephen Davies scored an own-goal while attempting to remove the fig leaf that he feels covers up its underlying injustice. Remove the word "meritocracy" from the following quote to see how equal-opportunity advocates incriminate themselves:

"For a truly meritocratic system to exist, there would have to be genuine equality of opportunity in the sense that all people would have to start on an equal footing at birth and in very early childhood. This is particularly important because of the overwhelming evidence that differences between family conditions mean that there are disparities between children by as early as the age of two to four [or from birth to two, or from conception to birth], and that these then persist and even increase throughout life. What would this mean? It would require a confiscatory inheritance tax so that nobody gained from inherited wealth. More seriously however it would necessitate the abolition of the family because of the enormous differential benefits that come from being born into particular households and families. These, and other measures that would be needed, could only be realized by a totalitarian state."

Davies S., "Meritocracy Is a Bad Idea", Daily Economy (2019).

ality.⁶¹⁰ “So, the answer,” he writes, choosing the bright side, “is not so much to suppress the idea of meritocracy [...] but to spread it more widely.” Then he adds something that I certainly agree with: “This is easier said than done. Non-cognitive forms of merit in craft or care are harder to quantify.”⁶¹¹

According to Markovits, any indicators are artifacts of economic inequality, what baseball pitching talent would be in a world where the sport had died out. This is pure demagoguery, but it is worth asking what other indicators might look like. Should they include perseverance, the ability to delay gratification, curiosity, friendliness, risk tolerance, and other valuable qualities, whether or not they are conducive to leveling? If the criteria are arbitrary, is it possible to change them and get a different elite? But what types of activities do those other criteria favor? Give me some examples where the criteria favor lazy people who can’t put two and two together.

While academics are busy denying meritocracy the right to improve, the markets are already improving it and creating demand for different sets of human qualities (Section 3.6.2). If a certain skill set is not in demand, then it is either useless or an application has yet to be found for it.⁶¹² It is hard to say which of these is the case without a hint from the market, but it is not difficult to predict that nothing new will ever be born if we abolish the principle of merit. All human games and activities are meritocratic, because meritocracy is synonymous with motivation. No social network ever takes off without a meritocratic “proof of work” system (Section 9.7.3).

Whatever sphere of life you look at, there are many different criteria at work for ranking skills and merits, and these criteria are becoming increasingly diverse as they respond to the universal human desire for self-discovery and self-realization, which directs streams of human energy off the beaten path and away from areas where there is already fierce competition. The wealth of sciences, engineering disciplines, genres and trends in art, branches of mathematics, management techniques, human resources assessments, and everything else is a visible result of competition as it pushes people toward success in new fields. This process is revealed in all its glory when we look at sports where people are not leveled by prizes; observe the range of activities and how it is growing (Fig A4.1).

⁶¹⁰ Goodhart D., *Head, Hand, Heart: The Struggle for Dignity and Status in the 21st Century* (2020). To Goodhart, the problem is not meritocracy, but the continuing rise of cognitive meritocracy (a controversial claim, in my opinion, that is refuted by experience in human resources) and the focus on a narrow range of human abilities.

⁶¹¹ Goodhart D., *What We Meritocracy Critics Get Wrong* (2020).

⁶¹² Take, for example, human resources management as a powerful laboratory of meritocracy.

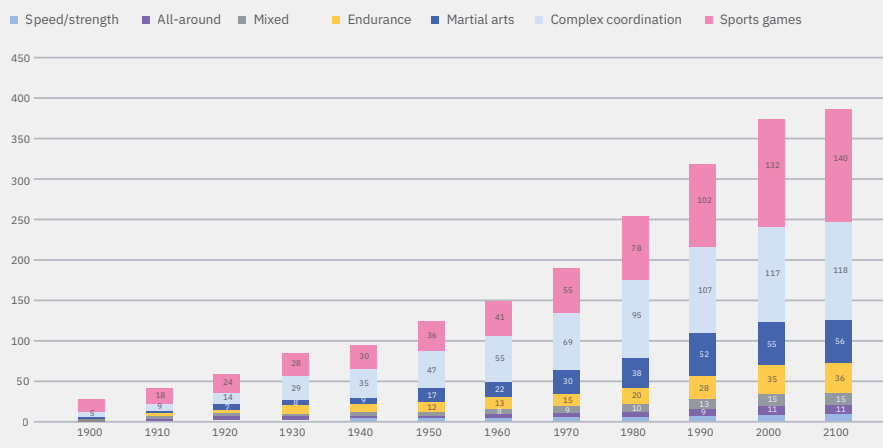


Fig A4.1 | CHANGE IN THE NUMBER OF TYPES OF SPORTS BY DECADE

It is hard to find anything more meritocratic than sports,⁶¹³ which makes it interesting to note how the crusade against meritocracy has bypassed sports entirely. Injustices are a dime a dozen on the field or court. Where else could a person be rejected out of hand for not being over six feet tall? But there are sports other than basketball (which has miraculously survived without bureaucrats regulating player height). In summary, all human games and activities evolve like sports and, like sports, give rise to a range of abilities without any direction from above.

The invisible hand of the market arranges supply and demand according to ambitions, interests, and inclinations; the delta of activity branches into a multitude of channels (Fig A4.2). This is an organic process that does not need any assistance. (Section 3.6.2)

Markets voluntarily diversity activities. Fig A4.3 presents what that looks like in endurance sports.

When the Bolsheviks spoke of cooks running the state, they had career boosters in mind. And what do the ethics professors have in mind? What kind of Herostratic endeavor is it to decouple authority and status from mastery? Kwame Anthony Appia hit the nail on the head when he explained that we cannot eradicate every hierarchy and level every mountain because we live in a world of incomparable hierarchies where the best and brightest in any field — from academics to business to sports — benefit from society's attention.

⁶¹³ For a number of reasons that are obvious enough that I will not dwell on them here, sports are a fertile field for studying the mechanisms of social competition. Suffice it to say that the authenticity of athletic stars — unlike Swiftian stars — is beyond doubt.



Fig A4.2 | THE DELTA OF THE EWASO NG'IRO RIVER, WHICH FLOWS INTO LAKE NATRON IN TANZANIA

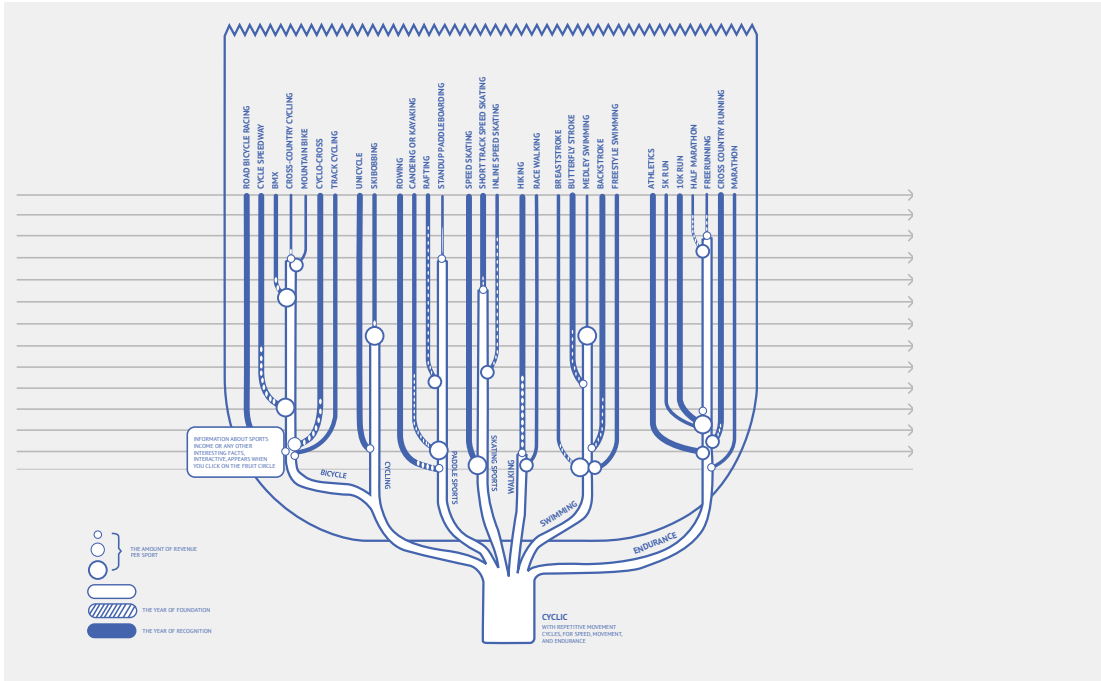


Fig A4.3 | FAMILY TREE FOR ENDURANCE SPORTS (SWIMMING, ROWING, CYCLING, WALKING, SKATING, RUNNING)

A4.5. MERITOCRACY AND THE MATTHEW EFFECT: WHO IS TO BLAME?

The principle of merit is immutable. More time and effort would be required for its defense if the stage on which this particular controversy is being waged were not already sliding downhill into the past. The internet is changing that stage and leveling the odds. Where there's the will, there are plenty of opportunities to study and work. Who should know this better than Sandel? His course on justice was the first Harvard class to be made available online for free. (Incidentally, this had meritocratic consequences, bringing him the status of a philosopher with the profile of a global rock star, but it also created tension in his relationships with colleagues.⁶¹⁴)

Markovits stumbles on this ontological point. Failing to notice the change of scene, he complains that superstar artists are stealing audiences from their colleagues and depriving them of their living (p.178). This Luddite attack on YouTube, Spotify, and other companies that have given people access to the world's best music could be attributed to the costs of rhetoric, but it obscures something important that Markovits overlooked: the Matthew Effect.⁶¹⁵

The professor has heard of the effect, at the very least in Malcolm Gladwell's⁶¹⁶ popular presentation, but he does not realize that it blows up his doctrine. Otherwise he would not risk mentioning the effect, because it reveals the true reason for the misfortunes that are blamed on the principle of merit. The Matthew Effect is extremely important. While it gets talked about in the blogosphere, it hangs out on the periphery of the social sciences. Therefore, I will say a few words about it.

Fifty years ago, a group of economists with an interest in culture posed a question: why are some performers an order of magnitude or more ahead of their colleagues in both popularity and earnings? Is this the workings of talent? The researchers concluded that talent does not play a decisive role in determining which of hundreds of equally talented people will lead the pack. Stars exist to give people something to talk

⁶¹⁴ The philosophy department at the San Jose State University wrote Sandel a letter that explains meaningfully and in detail why they refused to pilot his course. It is worth a read "*An Open Letter to Professor Michael Sandel From the Philosophy Department at San Jose State U.*," *The Chronicle of Higher Education* (2013).

⁶¹⁵ The Matthew effect describes the uneven distribution of advantages when the party that already has advantages continues to accumulate them, while the other party starts out at a disadvantage and becomes more deprived – and less likely to succeed – over time.

⁶¹⁶ Gladwell M., *Outliers: The Story of Success* (2008).

about.⁶¹⁷ If everyone had their own favorite star, society would fall apart. The fact that we have them in common with each other is the key to community. This conclusion is as unexpected as it is simplified, but it grasps the essence: the existence of stars and their number in the sky are dictated by the needs of society and the conductivity of the information environment. Every community crystallizes around stars, and the larger those communities, the more pronounced the Matthew Effect becomes.

This “star” theory offered a number of interesting explanations that are directly applicable to what is happening today, when information conductivity is a thousand times higher. For us, though, the most essential thing is that the definition of a star can include anything: people, organizations, cultural phenomena, types of tournaments and their rules. All of these are the winners of a competition during which economic, social, and cultural groups become united, bringing together people with certain views, interests, and qualities.⁶¹⁸

Instead of star performers, we could talk about styles and trends in art, scientific disciplines, approaches to education, and views on human nature. We could also discuss memes or issues that divide society (such as Swift’s conflict concerning the proper way to peel an egg or an issue of meritocracy). Everything that exists in life — in the public consciousness and in action — has won a symbolic competition, pushing aside other things, keeping them from rising, eclipsing them.

The question of talent where this discussion of stars originated is a question of content: is it true, or does it have social significance for other reasons? Is this content objective or conventional? Does it have an essential core, or is there emptiness where that core should be? Stars of both types exist.⁶¹⁹ Examples of stars in the second category include discussions of free will, the moral equivalence of people, and how many fingers one should use when making the sign of the cross. In between the stars representing truth and the stars representing consensus — between objective truth and social truth that is agreed-on — are stars of a mixed constitution that have both features.

⁶¹⁷ The foundations of star theory were laid by Sherwin Rosen (Rosen S., “The economics of superstars”, in *The American Economic Review* 71(5) (1981), 845–858) and further developed by Moshe Adler (Adler M., “Stardom and Talent”, in *The American Economic Review* 75(1) (1985), 208–212).

⁶¹⁸ This is an extremely important theory, but at some point it stalled and faded into the background. In my other works, I have already outlined its leading edge. One thing I discuss is cheap talk as a method for creating a star. Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012). In the present book I also propose additions to the theory (Section 3.6.2), and in the future I plan to thoroughly tackle this key problem of symbolic exchange theory.

⁶¹⁹ If we look at this in relation to the performing arts, then the formula is talent + effort + luck (with the latter simplistically understood as the ability to be in the right place at the right time).

Classifying winning phenomena by the presence or absence of internal content is a task for social sciences, but attempts to renounce meritocracy are where communication for the sake of communication is more important than meaning. The anti-meritocratic message has no content other than what it can derive from denial. The whole point is to engage the audience in cheap talk around baseless, unprovable statements.⁶²⁰

The problem of moral equivalence becomes a klondike of cheap talk when projected onto the plane of justice.⁶²¹ When interpreted to mean that people are equal in all things, justice does not fit well with the individual's desire for freedom, or with ingenuity, either, which is the key to productivity. A discussion about balance would be more meaningful than an argument for the dominance of any one thing in this obstinate triad.

Sandel knows this, of course, but chooses the radical option by playing the indestructible trump card of resentment. Markovits knows it, too, but it doesn't bother him, either, that if you set the equality slider to maximum then the freedom and efficiency sliders go back to zero. Running their hands along the same side of the elephant, neither adds one iota to our understanding of what would truly help people find themselves and each other in a complex world. What would we think of cryptographers if they focused exclusively on the security aspect of the scalability trilemma,⁶²² ignoring performance and decentralization? What would be the point of an immobile blockchain?

⁶²⁰ I take the concept of cheap talk from game theory, where it is the starting communication that determines the course of the game, and apply it to star theory. Economists have used the term to explain advertising campaigns that attribute magical properties to products. For example, a company claims that people who buy its products will solve problems that are, in fact, unsolvable. This is enough to make gullible customers — or those who simply love trying new things — choose the product, despite the fact that the manufacturer's assurances may be unfounded (hence its advertising message is cheap, or unproven). Farrell J., Rabin M., "Cheap Talk", in *Journal of Economic Perspectives* 10(3) (1996), 103–118. Wernerfelt B., "A resource-based view of the firm", in *Strategic management journal* 5(2) (1984), 171–180. Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012).

⁶²¹ Remember that they are only cheap in terms of their evidence base; in terms of their effects, they can be very expensive. Moral equality, compensation for disrespect, human nature (which supposedly can and should be gradually corrected): all these are examples of such conversations, as are discussions about (un)free will (this is professor Robert Sapolsky's hobby) and about the proportional effects of genetics and upbringing on how successful people are).

⁶²² This trilemma concerns the difficult trade-off between three important properties of blockchains: decentralization, scalability, and security. There are other systems of trade-offs in blockchain technology, as well, such as transparency, immediacy, and adoption rate.

A4.6. CHEAP TALK ABOUT RESPECT

Critics of meritocracy insist on at the very least acknowledging that it has a dark side, that it is “a pragmatic labor market principle rather than the ideal of a good society. Therefore, rewards for merit must be balanced by other principles, such as the equal moral worth of all citizens.” [emphasis added]⁶²³ This type of equivalence would mean that people deserve equal attention, respect, and care, and the counterbalance to meritocracy is constructed on this statement, despite the fact that an analysis of its meaning leads into the abyss of discussions that have been going on since the US Declaration of Independence was adopted.⁶²⁴

But with all due respect for the set of meanings that feed the evergreen dogma of equivalence, let us ask ourselves whether we are ready to include respect and attention in the per capita ration, as well. How, in actual practice, could we ration the distribution of these wonderful resources? This is a treasure trove of the cheap talk I mentioned above. Demands for unconditional respect (not just courtesy, thoughtfulness, understanding, and sympathy, but actual homage) uproot respect from its grounding in morality.

If we make moral equivalence absolute, then it abolishes all values, including respect. I do not mean to imply that Sandel’s concerns are empty. Life is full of pain, friction, and dead ends, but how is it useful to call for debates on the dignity of work and about the rewards people reap for that work, both in terms of pay and respect? In the wake of the pandemic, we understand our dependence not only on doctors and nurses, but also on couriers, salespeople, warehouse workers, truck drivers, and child care workers.⁶²⁵

⁶²³ Sandel M., *The Tyranny of Merit: What’s Become of the Common Good?* (2020).

⁶²⁴ The phrase itself contains evidence of an oxymoron: morality is a social category, not an individual category, but here we see equivalence postulated for individuals. By definition, morality is a set of informal norms, and every norm — no matter how priceless we declare it — has a price that is determined by the cost of the crime.

⁶²⁵ Sandel wants to address inequality by focusing policy on job prestige and working to improve the lives of people who do not have degrees rather than by preparing them for meritocratic battles. In his TED talk, he says it is unacceptable to measure contributions to the common good by what people earn. He also calls for humility that would lead us away from the harsh ethics of success and the tyranny of merit that divides us to a less hostile, gentler social life. To those who feel that they have earned their success, he offers a passage from Ecclesiastes: “The race is not to the swift or the battle to the strong, nor does food come to the wise or wealth to the brilliant or favor to the learned, but time and chance happen to them all.” Ecclesiastes 9:11 Richard Posner, a leading figure in the field of economic analysis of law, wrote in this regard that when theorists realize that money does not reflect everything and attempt to close the gap with their own concepts of what is good, they inevitably go to extremes. Posner R., *Utilitarianism, economics and legal theory* (1979).

What about our dependence on the people who invent and manufacture the things doctors use to operate, what delivery people deliver, and cashiers sell? What effect will the demotivation of millions of people with higher educations have on the actual work prospects of millions who do not have that education? Sandel shuts down this debate as soon as he opens it by saying that the majority of the money and respect should go to the millions of people doing jobs that don't require a college degree. Goodhart, the author of *Head, Hand, Heart*, agrees. Why are the workers at care homes paid so little? "[Economists] would probably say 'Because almost anyone can do it.' [...]" But there are, as in most occupations, good caregivers, middling ones, and poor ones." It would seem that the good ones are not appreciated."⁶²⁶ But that is not true. Caregivers, massage therapists, cleaners, gardeners, construction workers, cooks — any of the "hands and hearts" people — are in great demand today. The proverbial London plumber driving a Ferrari is a reality in a city where fixing a toilet takes weeks, while the proud owners of multiple diplomas sit around receiving government benefits. In political systems where equality has been made an absolute, motivation exists covertly and snobbery hasn't gone anywhere. The lack of meritocratic mechanisms for distinguishing and rewarding non-cognitive components of merit, where we are in agreement with Goodhart, will be eliminated by donations, so that no matter how unskilled the work, when done well it will be converted into money and honor.

A4.6.1. On The Dual Nature Of Respect

Is it viable to demand indiscriminate respect for everyone? The answer depends on whether or not respect is a resource. If it isn't, then the problem is removed and the all-inclusive system applies to everyone. If it is a resource, however, then we have to choose whose access to it is limited (Sandel does not see this as an issue, because he favors gouging those "fortunate enough" to be wealthy).

Respect is dual in nature, combining 1) recognition of a person's inner worth, and 2) appreciation for their achievements. The first aspect of respect is normative and ethical and refers to human dignity and the right to growth; this type is not subject to measurement; the second aspect of respect is the one that assesses diligence, work, results, and unique character traits, and this is where it becomes a resource. The first interpretation of respect borders on care and the second on trust.⁶²⁷

⁶²⁶ This is a reference to Madeleine Bunting, who wrote about the crisis of care. Bunting M., *Labours of Love: The Crisis of Care* (2020).

⁶²⁷ Darwall S., *The Second Person Standpoint: Morality, Respect, and Accountability* (2006). Hill T., "Respect for persons", in *Routledge Encyclopedia of Philosophy* (1998), 283–287.

This duality proceeds from the fact that respect, like its human object, is both an end and means. This is how it is defined by philosophers, psychologists, and sociologists who believe, following Kant, that humans have absolute value (“... man — and in general every rational being — exists as an end in himself and not merely as a means to be used by this or that will at its discretion”) and distinguish between respect for a person as a person and respect for them as a professional, official, or member of a group. In the first case, we are talking about the innate value of a person, which we have a moral duty to recognize; in the second, we are talking about social affiliation and status.⁶²⁸

I have no objections to Sandel’s call for a priori respect for every person; that is how a civilized society ought to function. In this mode of respect, no one is compared with anyone else and no one is obliged to make others respect them, proceeding in a Kantian fashion not from feelings or prejudices but from a sense of duty. But what about the other mode, in which respect is an assessment? When Sandel says that most of the money and respect should go to the millions of people who don’t have higher education, he is actually pulling off a trick called the straw man fallacy: starting out with non-economic logic, he quietly switches to the logic of resources. The dual nature of respect and the fact that these types of logic are weakly differentiated in people’s minds are what make this possible.

I was not being poking fun when I concluded that following Sandel’s instructions would force us to respect some at the expense of others. But even in this case, there is no way to give everyone respect by analogy with the living wage, and even if a way were found, it would do nothing: no matter how you compress the spring of human differences, in its compressed form it will still contain inequality of status (I go into this in Section 3.7). Not to mention the fact that, as Daniel Susskind, the author of a book on the future of labor, noted, if people are not rewarded according to their merit, then we will have no way to tell which of the people who attain respect without ever reaching the top tier were merely affected by bad luck.⁶²⁹

Respect cannot be reduced to the sum of its parts. This fact allows one to rhetorically emphasize one aspect of respect over the other and, for example, keep silent about the fact that respect is inseparable from self-esteem, which, like respect, is bimodal (combining the unconditional value of life and a results-based assessment) and should also be viewed on a subjective coordinate plane.⁶³⁰

⁶²⁸ De Cremer D., Mulder L., “A Passion for Respect: On Understanding the Role of Human Needs and Morality”, in *Gruppendynamik und Organisationsberatung* (2007), 439–449.

⁶²⁹ Susskind D., *A World Without Work: Technology, Automation, and How We Should Respond* (2020).

⁶³⁰ Dillon R., “Respect and Self-Respect”, in *Stanford Encyclopedia of Philosophy* (2022).

It also allows one to elide the fact that, while disrespect from others affects a person's self-esteem, failing to meet one's own standards is a much more serious blow.⁶³¹ Instead of setting a single standard, like a good preacher, Sandel should have conveyed to people that unity is to be found not in resentment, but in the right to personal growth, no matter where an individual starts from.

By omitting these “nuances” and not talking about what sits on the second side of the scale, Sandel acts not as a scientist but as a clergyman who preaches his insights under the auspices of science. To keep the church choir from drowning out his Christian appeal, he wraps his appeal in the narrative of a struggle against a secular evil, which he has identified as meritocracy. But since respect is the flip side of meritocracy, abolishing merit automatically abolishes respect, as well.

The two sides of respect are what give good people an edge over bad people, and that is what allows civilization to advance. That is why Richard Weaver was dismayed at how easy it is to convince people that for a society to be just, there can be no differences and everyone must be equal. But differences are precisely what create society and communities, and Weaver saw exaggerated claims to respect without regard for any underlying substance as a sinister trend. Relationships in a group are always hierarchical, built not on a fanciful concept of equality but on a sense of belonging that has nothing to do with equality, he explained.⁶³²

⁶³¹ As David Graeber has noted, reciprocity is not expected between individuals who are not equals: if you give a dollar to a beggar, he will not return it the next time you meet but will, instead, ask for more, to the detriment of his status. Many people who are forced by circumstances to accept charity feel stigmatized. Graeber D., *Toward an Anthropological Theory of Value: The false coin of our own dreams* (2001).

Jonathan Parry also emphasizes that the “pure gift” of charity given without expectation of return can be poisonous, using as an example charitable giving in India (Dana). Such gifts place the recipient in a dependent position. He suggests that “pure gift” ideologies are likely to arise only in highly stratified societies where there is a developed division of labor and a significant commercial section. Parry J., *The Gift, the Indian Gift and the 'Indian Gift'* (1986).

⁶³² Weaver R., *Ideas Have Consequences* (1948).

Hannah Arendt: “And no society can properly function without classification, without an arrangement of things and men in classes and prescribed types. This necessary classification is the basis for all social discrimination, and discrimination, present opinion to the contrary and notwithstanding, is no less a constituent element of the social realm than equality is a constituent element of the political. [emphasis added] The point is that in society everybody must answer the question of what he is — as distinct from the question of who he is — which his role is and his function, and the answer of course can never be: I am unique, not because of the implicit arrogance but because the answer would be meaningless.” Arendt H., *Men in Dark Times* (1968).

Respect is not just a feeling. It is a currency from the same family as statuses and reputations. The ancestor of them all is justice, that deviation from equilibrium in interpersonal. No one can order this feeling to remain silent — it is the essence of humanity — but it can be deceived when it is placed in a false system of coordinates. By paternalistically imposing respect, you affect all other relationships, not just those that interest you. And by healing one, you injure another. The placebo offered by moralists will not fix this “one thing,” but even if those same moralists had something along the lines of genetic scissors in their arsenal, they would not be widely used for the same reason that geneticists refrain from doing so: there is no one-to-one correspondence between sections of the moral genome and the functions they are responsible for in the social organism.

A4.7. CHEAP TALK ABOUT HAPPINESS

If we do not put a stop to the deprivation of respect, then we will be overwhelmed by discord and never be able to return to a society characterized by human warmth. This is Sandel’s proof by contradiction. Markovits shifts the focus to happiness and argues that none of us can live a better life under meritocracy. Thus, meritocracy is caught in the vice of negative and positive incentives.

Both respect (if we do not discard its evaluative component) and happiness are the result of comparison with others; both categories belong to a relative system of social coordinates and yet are presented as absolutes. The same is true of the time dimension: like (self-)respect, wellbeing and happiness are dynamic quantities derived from the rate of increase of a good. Analyzing such quantities in static terms would be just as unprofessional as a physicist talking about the electromagnetic induction in a constant magnetic field or g-forces experienced by astronauts in free fall.

Respect and happiness can be understood different ways, which narrows the range of judgments we can test. The little that can be verified is the effect of the Easterlin paradox, for which the simplest explanation is that earning more and more money is associated with stresses that make it difficult to combine hedonism with engagement and meaning, without which there can be no happiness.⁶³³

⁶³³ Seligman et al., “Positive psychology progress: empirical validation of interventions”, in *American Psychology* 60 (2005), 410–421. Happiness (at least its hedonistic version) ►

Markovits sees it differently: meritocracy is the chief barrier to happiness, and neither self-regulation skills, personal growth, charity, or anything else will save us from the hamster wheel while the principle of merit remains in force.

To conclude this discussion of meritocracy, I give the floor to a representative of the family that started the debate. Toby Young, Michael's son, stood in opposition to his father (and to Professor Sandel, with whom he studied):

"I like the idea of meritocracy as much as my father hated it. [...] I approve of the principle [...] because it helps to secure people's consent to the inequalities that are the inevitable consequence of limited government. [...] I say this not as someone who is fond of outcome inequalities for their own sake – I am not – but as someone who believes them to be an unavoidable by-product of limited government, [...] which history teaches us is preferable to excessive state power."⁶³⁴

Such a coercive government, writes Young, tramples human rights under the banner of equality. If we consider the costs of inequality a reasonable price to pay for restraining the state, then we should accept meritocracy as the fairest principle possible.

Let's shift the lens to respect: if it falls into a market failure, if people pretend to value service with a human face but the mechanism of supply and demand does not, in fact, apply to respect, then will the state, burdened with its own failures, be of any help?⁶³⁵ And who will tell the bureaucrats how much respect to give whom? The moral philosophers?

► obeys the law of diminishing marginal utility; in other words, it is subject to satiety. This is why harems stand idle and rats die from overexcitement. In terms of the brain and its rewards, neuroscience considers this a limiter that is hard-wired into the brains of most mammals, from rodents to humans. *Kringelbach M. et al., The Functional Neuroanatomy of Pleasure and Happiness (2010).*

⁶³⁴ Young T., "The Rise of the Genotocracy", in *The Political Quarterly* 91(2) (2020), 267–494.

⁶³⁵ Dolfma W., *Government Failure. Society, Markets and Rules (2013).*

APPENDIX 5.

**EXPANDED NOTE:
DIALECTIC
OF ENLIGHTENMENT
AND THE BLOSSOMING
OF CULTURE**

In *Dialectic of Enlightenment*, Theodor Adorno and Max Horkheimer diagnosed the problem with industrial culture as being one of false needs that turn consumers into passive followers, indifferent to their own economic condition even when it becomes dire.⁶³⁶ This industrial machine producing uniform, standardized novelties is what makes capitalism viable, creates the illusion of freedom, allows for manipulation of individual awareness, and promotes the degradation of society.

For our purposes, their analysis of the impact of commercial stimuli on the quality of works of culture is still relevant. The concept they developed is known today as adverse selection. To put it briefly, adverse selection is what happens when it is difficult for people to tell good products from bad ones and they frequently choose bad products because of their overrepresentation in stores. As a result, poor-quality products displace quality ones, people's tastes are degraded,

and the consumer becomes less demanding. When quality is not in demand, businesses no longer see it as a top priority.

Fortunately, this is just a scenario and not a sentence for all eternity. Time has shown that Adorno and Horkheimer were overly pessimistic in their predictions. Here are some specific examples:

- The statement that industrial culture offers no values to guide people and ignores the spiritual aspects of life and enlightenment is mistaken
- Art is not negatively impacted when subjected to technology
- The industries of culture did not become a means for producing uniform, standardized new products, and they do not impose primitive, uniform values suitable for anyone
- Elite art is not inferior to pre-industrial art; it is no more crowded out by pathetic parodies and amusements than it ever was; moreover, there are no signs that attitudes toward art are regressive

It turns out that adverse selection can be resisted and that culture is largely coping with the task. There are exacerbations from time to time, however, and some fields — such as research and analysis — find it harder than others to deal with adverse selection:

The humanities and social sciences also experience noticeable difficulties — although they are hard to express as revenue — with editorial boards and readers drowning in the flood of “sciency” papers that ought to go straight to the recycling bin.⁶³⁷

The internet was the ideal environment for adverse selection when culture moved online in the 2000s, and adverse selection took ample advantage of this. My studies of these processes led me to propose an institutional antidote in the form of institutions for certifying quality.⁶³⁸ Fifteen years later, we can see that the industries of culture (and culture outside of industries) are producing things that are new, diverse, interesting, authentic, and high-brow — attributes that Adorno and Horkheimer had prematurely buried. If quality has lost ground anywhere — and there are some examples of that (such as the 2021 James Bond movie) — then it was through no fault of business, instead due to

⁶³⁷ Some industries achieve success by going with the flow of adverse selection. They include the diet and food industries and supplements; wellness industries that claim to understand the human metabolism; occult services such as astrology and fortune telling; and the prediction industry (analysts of the future). The pharmaceutical industry collaborates with adverse selection to a certain — but not critical — extent.

⁶³⁸ Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012).

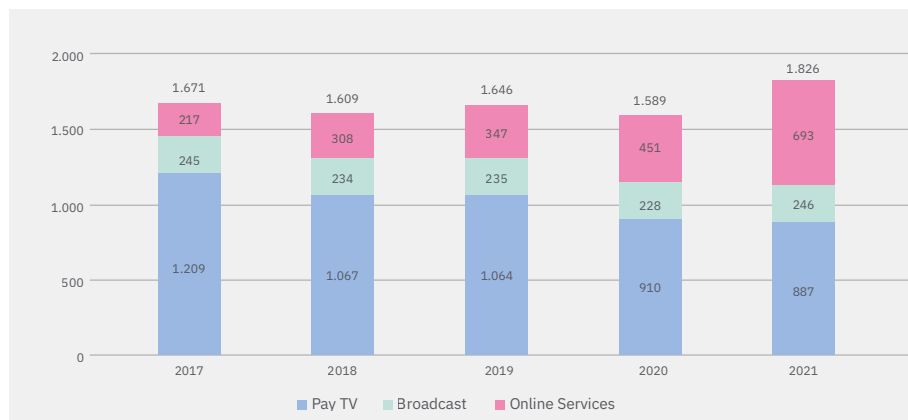


Fig E1 | BROADCASTER REVENUE BY CONTENT DISTRIBUTION TYPE
MPAA report

repressive tolerance and other excesses of social competition in the symbolic sphere. History has responded ironically to the ideologists of the Frankfurt School: the conflict between economics and aesthetics that so concerned them turned out to be less dangerous than the left-wing utopia they had a hand in bringing about.

The internet revolution in content distribution has created new social elevators, new business models, and new sources of income. It turns out that content creators do have something worth saying and showing, and they no longer need to win over editors or show up at casting calls. The airwaves are flooded with podcasts that reveal the kind of real life that used to be obscured by glossy, produced shows. From figure skating to singing, and from technical design to literature, we are surrounded by high-quality examples of culture; their quantity is beyond anything we can perceive as individuals.

The top names in programming (Netflix, HBO, BBC...) have produced series of masterpiece quality (Fig E1).

How is that possible if businesses are only concerned with profits? First off, thanks to the internet there is enough demand that even niche products and/or those that require prior knowledge can be profitable. Second, once producers attain financial success, they move up Maslow's pyramid to creative self-realization. They can afford art for art's sake. Third, high-quality content is an integral part of the competition between companies: content that is created using R&D budgets is subsequently transferred to mass-market products to ensure differentiation from competitors, thus increasing the average quality of all content. (The auto industry is a good example of this, selling cars that are surprisingly comfortable and have a lot of bells and whistles at a relatively low cost.)

It is also worth noting two ways that content breaks through the junk, both of which involve managing its dimensions using the logic of saving information costs: content is either radically reduced in volume so that it can be evaluated at a glance, minimizing sorting costs (hence the explosion of ultra-short forms) or it is stretched out so that investments in search and sampling are justified by the consumption period (hence the rise of series).

(Interestingly, series solve the problem of navigation not just for the market, but for hosts of teenagers, as well, because they remove the curtain that has always concealed the workplace and help young people make more informed career choices. Before the rise of series, graduates aimed blindly for jobs based on romanticized images, possessing no information about the day-to-day reality of work, about Goffman's back stage, or about the tasks they would actually have to perform. Once cinema was released from its time constraints, it began filling in young people's schema with details. Eventually it became clear that the format was perfectly suited for workplace dramas in the spirit of Arthur Hailey, and the world learned about the inner workings of the advertising profession (*Mad Men*) and the lives of deep-cover agents (*The Bureau*), teachers (*Breaking Bad*), the president (*House of Cards*), and the pope (*The Young Pope*, *The New Pope*)).

The accusations Adorno and Horkheimer made against the industries of culture have to be withdrawn. Neo-Marxists see the industries of culture as a capitalist Trojan Horse that protects the status quo of the incumbent elites by brainwashing the people it exploited. In fact, the opposite has happened. Instead of capitalism zombifying culture with illusions of freedom and contentment for the masses, culture has thoroughly brainwashed the capitalists and persuaded them to play the giveaway game. This is exactly the right time to recall Schumpeter, who warned that the capitalist system's success will create the very conditions in which the ideas of socialism can be resurrected. The only question is how long it will take for egalitarianism to suppress the kind of motivation to achieve that gives the world its depth.

ENDNOTES

ⁱ Economic logic is a pervasive and structuring force in social communications, but even the sharpest minds in sociology – researchers who understood and described communication in terms of exchange – failed to pay serious attention to its role in the exchange of resources. George Herbert Mead, the founder of symbolic interactionism, his predecessors, including Charles Cooley and Georg Simmel, the ever-dramatic Irving Hoffman, and Juri Lotman’s Tartu-Moscow Semiotic School all had the same blind spot. None of these researchers saw the resource intensiveness of choices and the consumption of symbolic goods as paramount.

The breakthrough was made by economists like Gary Becker, who spent his career working to convince people that “the economic approach is clearly not restricted to material goods and wants, nor even to the market sector <...> scarcity and choice characterizes all resources allocated by the political process (including which industries to tax, how fast to increase money supply, and whether to go to war); by the family (including decisions about a marriage mate, family size, the frequency of church attendance, and the allocation of time between sleeping and walking hours); by scientists (including decisions about allocating their thinking time, and mental energy to different research problems); and so on in endless variety.”

Becker G., The Economic Approach to Human Behavior (1976).

ⁱⁱ Take, for example, the digital humanities, which combine traditional methods with digital resources like hypertext, data visualization, information retrieval, intelligent data analysis, statistics, and digital mapping. The digital humanities cover a wide range of topics, from curation of online collections of primary sources (most of them texts) to the intelligent analysis of large sets of cultural data and topic modeling. Some academics state that the field promises more than it delivers, with little to show for decades of work.

Kirschenbaum M. “What Is “Digital Humanities,” and Why Are They Saying Such Terrible Things about It?”, in differences 25 (2014), 46–63.

Also see *Kirsch A., “Technology Is Taking Over English Departments”, The New Republic (2014).*

Straumshein C., “Digital Humanities Bubble”, Inside Higher Education (2014).

ⁱⁱⁱ See the World Happiness Report. According to the independent Russian polling organization The Levada Center, three-quarters of Russians are satisfied with their lives. This could be explained as evidence of Russians’ extraordinary ability to resist reality, the flexibility of the human psyche, or the effectiveness of informational autocracy. For more on informational autocracy, see *Guriev S., Treisman D., “Informational Autocrats”, in Journal of Economic Perspectives 33(4) (2019), 100–127.*

^{iv} This has to be the case, since utilitarian goods obey the law of diminishing marginal utility. In 2010, Angus Deaton and Daniel Kahneman confirmed the nonlinear correlation between subjective wellbeing and income level: in the United States, wellbeing increases up to an annual income of \$75,000, after which the increase stops.

Kahneman D., Deaton A., “High Income Improves Evaluation of Life But Not Emotional Well-Being”, Proceedings of the National Academy of Sciences 107(38) (2010).

Diamond D., “Angus Deaton, Who Just Won Nobel Prize, Thinks a \$75,000 Salary Makes You Happy”, Forbes (2015).

Some researchers dispute the Easterlin paradox, but in my opinion their arguments are unconvincing. For an example, see: *Stevenson B., Wolfers J., “Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox”, in Brookings Papers on Economic Activity 1 (2008), 1–87.*

Veenhoven R., Vergunst F., “The Easterlin Illusion: Economic Growth Does Go with Greater Happiness”, in *International Journal of Happiness and Development* 1 (4) (2014), 311–343.

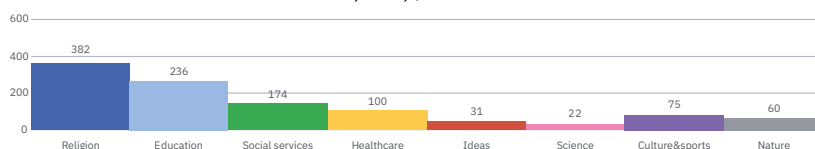
According to the World Happiness Report 2020, citizens of Sweden, Denmark, and Finland lead the world in terms their subjective wellbeing, but the sociologists don’t seem to understand the worldview of those who work fulltime so that the unemployed don’t even have to look for jobs. And we don’t know how much longer the Scandinavian model will stay competitive.

- v As Frédéric Bastiat, follower of Adam Smith follower and forerunner of the Austrian school, noted long ago, “If the socialists mean that, in extraordinary circumstances and emergencies, the state has to store up a few resources, assist in certain misfortunes, and smooth over certain transitions, for God’s sake, we would agree.” But he tempered this by adding that the law should protect private property instead of appropriating it.

Bastiat F., “Justice and fraternity”, *Journal des Économistes* (1848).

- vi How much money can the government distribute from the common pot? \$5 trillion? Today, public giving alone exceeds \$1 trillion, split roughly evenly between philanthropy and volunteer work (see illustration). The amount of “shadow” support given to family and friends without being accounted for anywhere is many times higher. But imagine a digital world based on that kind of support and encouragement; people would be motivated to participate in determining how much is given, how it is given, and who it is given to (for more on this, see Chapter 5 and Chapter 6).

CHARITY AND VOLUNTEERING BY SEGMENT, 2016, \$ BILLIONS



- vii This leaves room for interpretation, as evidenced by, for example: Kapelyshnikov R., “Inequality: How not to primitivize the problem”, in *Voprosy Ekonomiki* 4 (2017). All the same, Capital in the Twenty-First Century from Thomas Piketty, a proponent of “participatory socialism,” has become something of a bible for the left, even though many economists dispute the facts it presents and how they are interpreted. (Hernando de Soto, who has deep knowledge of the subject, pointed out Piketty’s lack of mastery.) Dmitry Nekrasov had this to say about Piketty’s characterization of inequality in Russia: “Piketty attributed the entire export of capital from the country to the income of the top 1%, without adjusting for foreign investors, emigrants, and tourists. [...] All the controversial issues in the basic assumptions distort the picture in order to make inequality look as impressive as possible.”

- viii This data was collected by the Digital Society Laboratory (DSL), which I founded in 2012. The research group analyzed information from open and commercial sources and coordinated with contractors with special knowledge of individual industries (the main contractor was the marketing agency Loga Group).

It is also worth mentioning previous research carried out by researchers from the Pragmatics of Culture foundation, faculty members at the Pragmatics of Culture Department at the Higher School of Economics (which I headed between 2004 and 2014), and analysts from Imhonet, a recommendations service. At that point, my focus was on charitable practices, copyright, recommendation services and algorithms, personal data, the recording industry, beauty and fashion, advertising and branding,

and sports. I also conducted social experiments in the fields of cinema, theater, and other areas of cultural consumption.

All the information collected is structured to align with the objectives of this book. At the same time, I am aware that the relevant specialists are more knowledgeable in their fields than I am, and I am always grateful for corrections and suggestions.

^{ix} Before the development of GDP – and less than 100 years have passed since that moment – measurements of the utilitarian existed in much the same state as measurements of the non-utilitarian today. There was no clear picture of national economies; elites vaguely understood the connections between political structures and economic growth. With the advent of GDP, the picture became clearer and then began to lose clarity again due to the growth of industries that well-established accounting methods were not equipped to handle.

GDP reflects the total value of all goods produced in a country. People began measuring it in the 1930s, and the results were first reported to the US Congress in 1937. From that moment on, GDP growth became the prescribed remedy for all ills, despite the fact that it does not give a complete picture of life. Simon Kuznets, one of the architects of the system for calculating GDP, was skeptical about equating GDP growth with increased social welfare.

More refined indicators include the “Genuine Progress Indicator” (GPI) and “net savings.”

^x The data set was collected by industry and includes:

- global revenue in US dollars; revenue data by country, primarily for the leaders in a given industry;
- classification (breakdown) of each industry into one or two levels; in most cases, the revenue of sub-industries within an industry is given; in significant cases data is given for segments within those sub-industries;
- revenue dynamics expressed as percentage growth per year.

These statistics were taken from dozens of primary and hundreds of additional sources; the main source was Statista (a business data platform covering 600 industries in over 50 countries), for which I am deeply grateful.

Some tables and diagrams are given in the text, and others are available on the project website.

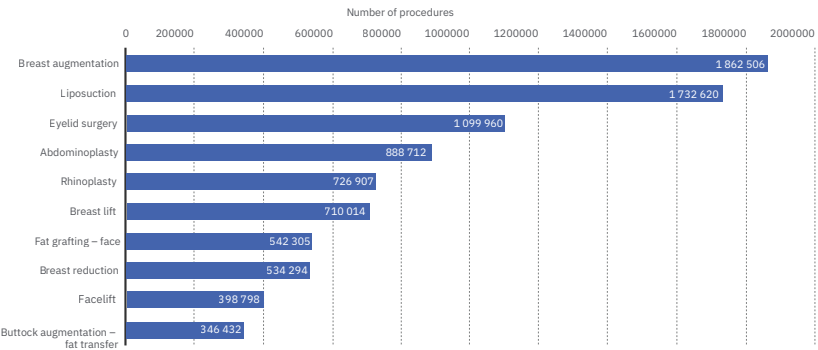
^{xi} Statistics on plastic surgery in the US:

2024 Cosmetic Surgery Procedures	2024	2023	% Change 2024 vs 2023
COSMETIC SURGERY PROCEDURES - BREAST			
Breast augmentation (implant placement for both primary and/or revisions)	306,196	304,181	1%
Breast implant removals (augmentation patients only)	41,271	41,115	0%
Breast lift (mastopexy)	153,616	153,600	0%
Breast reduction	76,734	76,031	1%
Breast reduction in males (gynecomastia surgery)	26,430	25,888	2%
COSMETIC SURGERY PROCEDURES - BODY			
Abdominoplasty (tummy tuck)	171,064	170,110	1%
Buttock augmentation with fat grafting	29,466	29,383	0%
Buttock implants	1,245	1,234	1%
Buttock lift	7,954	7,748	3%

2024 Cosmetic Surgery Procedures	2024	2023	% Change 2024 vs 2023
Labiaplasty	10,827	10,631	2%
Liposuction	309,728	307,782	1%
Lower body lift	10,957	10,933	0%
Thigh lift	9,914	9,600	3%
Upper arm lift (brachioplasty)	23,527	23,058	2%
COSMETIC SURGERY PROCEDURES - FACE			
Buccal fat pad removal	4,903	4,866	1%
Cheek implant (malar augmentation)	9,130	8,825	3%
Chin augmentation (mentoplasty)	5,529	5,484	1%
Ear surgery (otoplasty)	4,825	4,817	0%
Eyelid surgery (blepharoplasty)	120,755	120,747	0%
Facelift (rhytidectomy)	79,058	78,482	1%
Facial fat grafting	34,286	34,216	0%
Forehead lift	13,621	13,578	0%
Liposuction (submental/chin)	30,000	29,567	1%
Neck lift	22,445	22,007	2%
Nose reshaping (rhinoplasty)	48,423	47,307	2%
TOTAL	1,585,878	1,575,244	1%

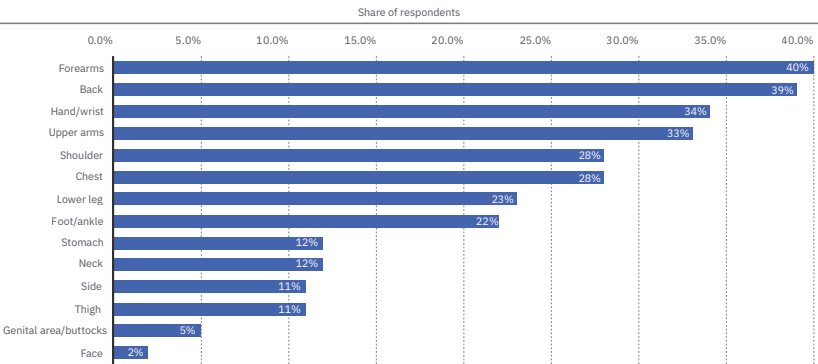
Source: 2024 National Plastic Surgery Statistics

TOP 10 SURGICAL COSMETIC PROCEDURES WORLDWIDE IN 2018



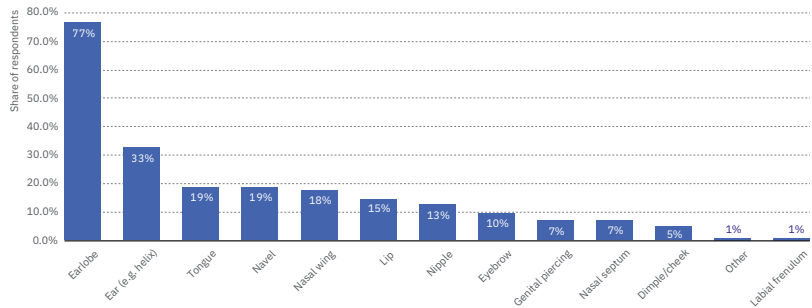
Source: ISAPS

xii AREAS OF THE BODY FOR TATTOOS IN THE USA, ACCORDING TO STATISTA, 2019



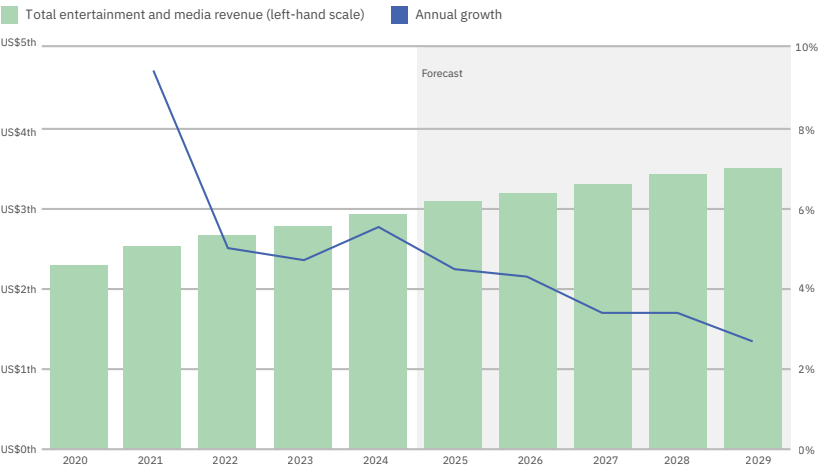
Source: Statista

xiii **PIERCED BODY PARTS OF AMERICANS, ACCORDING TO STATISTA, 2017**



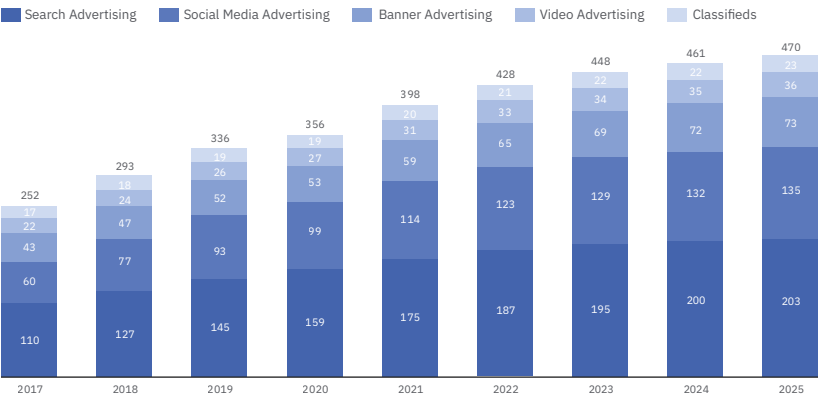
Source: Statista

xiv Five percent is \$1.5 trillion out of \$30 trillion. This is the number we get if we exclude print books, newspapers and magazines, photography equipment and the like from the table. PriceWaterhouseCoopers publishes similar data:



Source: Global Entertainment & Media Outlook 2025–2029, PwC

xv **THE GLOBAL DIGITAL ADVERTISING REVENUE IS EXPECTED TO GROW TO US\$470 BILLION BY 2025**



CAGR: Compound Annual Growth Rate / average growth rate per year
Source: Statista

xvi To do this, the internet would have to provide a unified picture of online activity by type and by user age, which did not happen. We do, however, have data on individual segments: it is known that the consumption of video games, which has been growing in recent years, accelerated during lockdowns by an average of 25% (and as much as 75% at peak hours), and most of that increase came from multiplayer games. The World Health Organization (WHO), which declared gaming an addiction, called it a suitable activity during quarantine. In March 2020, the WHO launched its #PlayApartTogether campaign with support from nearly two dozen game developers (including Activision Blizzard, Riot Games, Zynga, Twitch, and YouTube Gaming).

xvii The emotions of a choir are a perfect example. When a person listens to familiar music, their brain reproduces it an instant before it sounds. When the actual sound catches up with the mental sound, the person feels either pleasure or protest. The game of prediction – when a person expects something to happen and it does (or doesn't) – is a fundamental homo sapiens activity that is stimulated by dopamine and actively exploited by industries.

Here is how shared emotions work in a choir: the choir members begin to hum softly, then they sing out, attempting one challenge after another, their song a collective achievement. They feel that their voices are fuller when used together. After a while, they reach the climax and give birth to something that raises the limits of what is individually possible. Each choir member simultaneously confirms their achievement of the impossible and realizes that they did it together with others, their voices dissolving into one. This is one of the variations of happiness.

xviii According to Randall Collins, emotional energy is what drives social life: whether it be religion, politics, idle chatter, or academic lectures, people repeat their rituals over and over again, and out of this process comes a shared excitement. If shared emotions do not arise, those present experience depression and try to avoid similar situations in the future. Rituals construct politics by concentrating emotions around one set of interests in opposition to others (Nazis against Jews, communists against the bourgeoisie). Material things like weapons, money, and technology matter, too, but they are inert and blind without shared emotions.

Collins R., Interaction ritual chains and collective effervescence (2014), 299–311.

xix In another scenario, a new habit profile would be established. I originally wrote this in 2020; today there are signs of online intoxication, and it seems that the pendulum has swung back in the opposite direction. This is evidence, for example, by the fact that the French luxury goods conglomerate Louis Vuitton Mœt Hennessy became the first European company to reach a market capitalization of \$500 billion. Based on the results of the first quarter of 2023, revenue was up 17% to €21.04 billion, double what analysts had forecast. As a result, LVMH shares rose 30%, and CEO Bernard Arnault topped Forbes' list with a fortune of \$211 billion.

xx Nozick explained the essence of the proposed thought experiment thus: "Suppose there were an experience machine that would give you any experience you desired. Superduper neuropsychologists could stimulate your brain so that you would think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, preprogramming your life's experiences? [...] Of course, while in the tank you won't know that you're there; you'll think it's all actually happening. [...] Would you plug in?" Nozick's answer was a resounding no, because it is better to live in contact with reality. Without that contact, all pleasures lose their meaning.

Nozick R., Anarchy, State, and Utopia (1974).

xxi This was actively explored in the 1960s before research was curtailed after Richard Nixon signed the Controlled Substance Act in 1970. The opportunities offered by psychedelics are being revisited today. In the 1960s, psychedelics were tested on alcoholics, people suffering from depression and obsessive-compulsive disorder, people with autism and schizophrenia, and prisoners, as well as artists, scientists, and theologians (in order to study the chemical nature of religious insights).

Today, research is being conducted at Johns Hopkins University, the Harbor-UCLA Medical Center, the University of New Mexico, Imperial College London, and Zurich University. For cancer patients, psilocybin alleviates suffering by changing their perception of the disease and relieving anxiety.

It seems that psilocybin will follow a similar trajectory to marijuana and eventually enter consumer markets.

xxii Comparison of passive and active components of various industries:

Industries	Passive	Active
Fashion, jewelry, accessories, perfume	355	355
Flowers		105
Pornography (sites and magazines)	22	
Souvenirs		68
Dating		12
Live music	100	40
Family amusements centers		19
Theme parks and amusement parks	30	7
Water parks		7
Zoos and aquariums	25	25
Nature parks and centers		18
Educational/entertainment centers		7
Opera and ballet		1
Club dancing		10
Theater	3	10
Sporting events (ticket sales)	10	23
Festivals, ice shows, magicians, extreme shows	27	100
Museums	50	50
Broadcasts of professional sporting events	20	20
Recorded music	20	7
Social media		102
Film	60	37
Radio and podcasts	8	35
Books	65	65
Television	400	195
Newspapers and magazines	196	
Video games (not including mobile apps)		184
Apps (games)		75
Casinos		182
Online casinos		45
Lotteries	139	
Slot machines (outside casinos)	76	
Sports betting	59	
Bingo, lotto, etc.	12	
Collector cars		27
Personal aquariums		23
Creating crafts		44
Toys (for children)		90
Photography		140

Industries	Passive	Active
Painting, sculpture, graphic arts		72
Musical instruments		31
Collecting		95
Sporting weapons in the US		100
Psychotherapy		40
Coaching		32
Religion		600
Gardening		22
Total rounded USD billion	3,100	1,700

xxiii Physiological needs, such as the need for food and warmth, are the pyramid's foundation. One step up are safety needs, and above that comes the need for love, attachment, and belonging in a social group. The next step is the need for esteem and approval. Maslow placed cognitive needs at the next level, followed by aesthetic needs (finding harmony, filling one's life with beauty and art). The highest level is self-actualization, where a person strives to uncover his own inner potential. Partial fulfillment of the needs at any given level is sufficient for a person to move up to the next level.

The pyramid has been presented many different ways, and all of them leave something to be desired. The actual structure of motivation may differ from theory. While there is a tendency to satisfy needs from the bottom to the top, this is by no means imperative. Maslow was aware of this criticism and knew that the order in which needs are satisfied can change depending on age and other factors.

Hollyforde S., The Motivation Handbook (2002).

xxiv Maslow pushed psychology's focus toward humanism. His concept also took hold because, as Gerard Hodgkinson of the Warwick Business School explained, it had a profound impact on education and management.

Maslow was not the only – or even the first – researcher to talk about self-actualization. But he presented it in such a way that it became a cornerstone of personality theory and the secular worldview as a whole. The original definition of “self-actualization” differed slightly from how it is understood today. Like “libido” and “archetype,” it lost in specificity as it gained in popularity; today, psychologists “do not differentiate self-actualization from self-realization, self-expression, self-affirmation, personal growth, or growth in general.” (D. Leontyev, *Self-Actualization as the Driving Force behind Personal Growth: a historical and critical analysis*). The differences are not significant for our purposes, but I will describe them briefly.

Self-actualization involves innate potential that must be actualized.

Self-realization is a broader concept than self-actualization. It is understood to mean the development of one's true self and the communication of that self to other people and to the culture at large using one's personality for constructive creativity (to create texts, understood broadly). This concept is not tied to a specific personality theory. Nietzsche, Jung, Karen Horney, Erich Fromm, Kurt Goldstein, and other theorists of life goals all wrote about self-realization. It was Goldstein who introduced the concept of self-realization, Karl Rogers who developed it further, and Maslow who gave it a modern form. He was interested in three aspects:

- self-actualizing personalities,
- peak experiences,
- and self-actualization as a growth process.

I'd also like to mention self-determination theory, developed by Edward L. Deci and Richard M. Ryan as a furtherance of Maslow's idea. Self-determination (or the need for autonomy) is the drive to feel that one is the initiator of one's own actions and controls one's own behavior.

Deci E., Ryan R., Intrinsic Motivation and Self-Determination in Human Behavior (1985).

- xxv Maslow took his top 1% – the quintessence of all the best in human nature – from among active, successful, and healthy people over the age of 50. (His list included Abraham Lincoln, Thomas Jefferson, Albert Einstein, Eleanor Roosevelt, Jane Addams, William James, Albert Schweitzer, Aldous Huxley, and Baruch Spinoza, among others.) He set out the 15 traits he had identified as being typical of this type of person and added a concession to mere mortals, saying that no single individual possesses the full set traits and adding the caveat that self-actualizing individuals tiresome, irritable, vain, and biased. They cannot avoid conflict, frustration, resentment, guilt, and anxiety. That said, their problems are the real problems of life, unlike the pseudo-problems that plague neurotics. You belong to the top 1% if you make life of your loved ones unbearable, but they tolerate you nevertheless.

Maslow A., Motivation and Personality (1970).

- xxvi People display consistence of preferences with respect to their health, prestige, sensual pleasures, and other fundamental aspects of life. That is why economics works, and why Maslow's pyramid is important. Surely the only way to predict how people will behave is to ensure a limited range of possible reactions to stimuli. Maslow's idea that people have generalized, hierarchical needs is the main force that has allowed economic theory to model behavior without tripping over the variability of desires. There are a plethora of aggregate (root) preferences, however, and this makes it difficult for economists to predict how people will react to various stimuli. Even Becker's list of preferences is a bit of a catch-all: it includes health, envy, and benevolence, and he could just as well have added relaxation, the need for variety, the Cassanova complex, and much more.

Michael R., Becker G., "On the New Theory of Consumer Behavior", in The Swedish Journal of Economics 75 (1973), 378–396.

- xxvii It is hard to divide the field of science into utilitarian and non-utilitarian. Like education, science is both public and private, and consumers do not pay for it. This is one of the few B2B (or rather, B2S, "business for society") industries in the list; the rest are B2C. It might have been a good idea to limit inclusion to humanitarian and social sciences, but I couldn't bring myself to cut science out of my calculations.

My calculations do include B2B market research, consulting, and HR services. I also included 10% of the advertising industry's revenue. It looks like some of that almost \$30 trillion might not entirely belong there, but the total also fails to include all the items I omitted by accident or because I couldn't decide how to value them. For example, industrial aesthetics, such as factories, bridges, dams, machine tools, and equipment. The connecting rod is a thing of beauty. At a glance, all of this together amounts to at least \$2 trillion. Some of this amount is included in consumer prices, but there are also investments by governments and private funds.

See Appendix 1 for a discussion of the methodology for calculating the non-utilitarian economy.

- xxviii This refers, in particular, to the recognized dispute between individualistic economists and holistic sociologists. The former reduce everything to the individual as the one who acts, while the latter reduce everything to society as the force that programs opinions, motives, and roles, as well as the means and directions of activity.

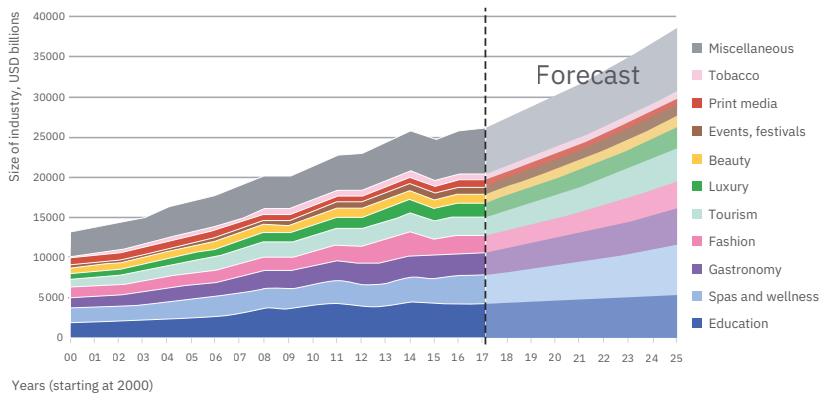
- xxix Estimate of the Consumer Cost of Maslow's Hierarchy. One option is to calculate consumer cost within the framework of the classical representation of the pyramid.

Hedonism	Experiences	Social Needs	Prestige	Cognitive	Aesthetic	Self-Actualization
3	1.6	8.7	4.7	6.8	2.5	1

Another option places "new" needs above the social level

Pleasure Pure Hedonism Impressions Games Physical Activity Nature	Social	Prestige	Cognitive	Aesthetic	Self-Actualization
6.25	8.9	4.4	5.9	1.85	1.0

- xxx TOTAL GVA. EDUCATION, SPA AND WELLNESS, GASTRONOMY, FASHION, TOURISM, LUXURY, BEAUTY, EVENT INDUSTRY, PRINT MEDIA AND TOBACCO FOR 2000–2025 IN BILLION. USD



* Miscellaneous: drugs, sports, alcohol, volunteering, TV and video streaming, advanced legal services, branding, charity architecture and interior design, museums, libraries and archives, photography, video games, children's toys, amusement parks, social networks and blogging, radio and audio streaming, performance arts.

- xxxi When Csikszentmihalyi asked people to describe their most enjoyable experiences, their accounts were identical and the key word was "flow." Csikszentmihalyi identifies the following characteristics of flow: 1) a balance between the challenge and the person's skills; 2) a merging of action and awareness; 3) clarity of goals; 4) immediate feedback; 5) concentration; 6) transformation of time; 7) a turning off of self-awareness; 8) autotelic experience (actions are performed because they are internally rewarding).

Csikszentmihalyi M., *Flow: The Psychology of Optimal Experience* (1990).

Csikszentmihalyi M., *Finding Flow: The Psychology of Engagement With Everyday Life* (1998).

Csikszentmihalyi M., *Beyond Boredom and Anxiety: Experiencing Flow in Work and Play* (1975).

Fullagar C., Kelloway K., "Flow at work: an experience sampling approach", in *Journal of Occupational and Organizational Psychology* 82 (2009), 595–615.

- xxxii Aristotle understood happiness through virtue as following one's essence, or purpose (telos in Greek). Flow is the same thing.

Csikszentmihalyi defines flow as something we do that expresses our essence, so that the activity becomes the reward. He points to musicians and athletes as examples of people who achieve excellent through total immersion in their activity, and explains that this type of flow experience is what gives us a sense of mastery and confidence in our lives.

xxxiii “When a person becomes so dependent on the ability to control an enjoyable activity that he cannot pay attention to anything else, then he loses the ultimate control: the freedom to determine the content of consciousness. Thus enjoyable activities that produce flow have a potentially negative aspect: while they are capable of improving the quality of existence by creating order in the mind, they can become addictive, at which point the self becomes captive of a certain kind of order, and is then unwilling to cope with the ambiguities of life.”

Csikszentmihalyi M., Flow: The Psychology of Optimal Experience (1990).

xxxiv Posner, a leading figure in legal economics and a practicing judge, based his court decisions on calculations of wealth measured in money. To expose the weakness of the utilitarian argument, he invites us to compare a person prepared to spend a large sum of money to buy a piece of jewelry with a thief prepared to risk physical punishment to steal it: the paying client is a productive member of society because they satisfy their desires in a way that benefits the seller, too, while the thief offers no productive benefits to the seller or anyone else.

Posner R., Utilitarianism, economics and legal theory (1979).

In the cited article, Posner develops the idea of maximizing welfare as an ethical concept devoid of utilitarianism’s weaknesses. It is significant for us that he narrowly defines maximizing as economic value. Welfare, according to Posner, is the value of everything in society expressed in dollar terms. Preferences only count if they are backed by money, and the market for them does not have to be obvious. Posner says this narrow approach is useful because well-being is a less squishy term than happiness, making it a more useful concept in questions of policy and government involvement in people’s lives.

Posner’s attitudes align with my own. He proposes maximizing what is measurable in practice (and only money is suitable for such measurements) and shows that when theorists – who are aware that money does not capture everything – attempt to close this gap with their own ideas about what is good, they inevitably go to extremes. Posner’s idea that the social product contributes to overall welfare was formulated in the late 1980s, when there were no digital goods to be had. Now, we clearly see how socially valuable products are undervalued in money, while utilitarian products, on the contrary, are overvalued. Just look at the global production of sugar – the most harmful product in the world – which adds a trillion dollars to the public welfare. I say this because, if we find a way to measure the symbolic, it will become possible to optimize both individual and public welfare.

xxxv Sociology has adopted a multidimensional approach to statuses. They are distinguished by property and income, education, lifestyle, cultural level, and consumption style. A person’s main status is the most characteristic status for that individual (mainly associated with their profession), and it determines their lifestyle, circle of acquaintances, and behavior.

xxxvi This idea was in the air in the first half of the 20th century. In Andrei Platonov’s story “The Innermost Man,” Foma Pukhov understands this cycle:

One welder doubted that the work meant anything. “We may build a locomotive, but a cannon will blow it to smithereens anyway.”

“So what?” Pukhov replied. “It’ll stop the projectile.”

“Why can’t they shoot at the ground? That would be softer and cheaper,” the welder insisted. “Why waste a manufactured product for no reason?”

“It keeps the cycle going,” Pukhov explained. “You get your rations, you build the locomotive, and the locomotive gets blown up. Then you get new rations and start all over again. Otherwise all that grub would have nowhere to go!”

xxxvii Between 118 and 138 tombs both large and small have been identified as pyramids.

Khufu's necropolis was built over the course of 20 years by an army of 100,000; in today's money, the cost was between \$5 billion and \$12 billion, approximately the same as the Large Hadron Collider at CERN.

In his treatise on "History," Herodotus seems to be writing for Bataille: "Cheops [...] brought them to every kind of evil: for he shut up all the temples, and having first kept them from sacrificing there, he bade all the Egyptians work for him. So some were appointed to draw stones from the stone-quarries in the Arabian mountains to the Nile, and others he ordered to receive the stones after they had been carried over the river in boats, and to draw them to those which are called the Libyan mountains; and they worked by a hundred thousand men at a time, for each three months continually. [...] For this, they said, the ten years were spent. [...] For the making of the pyramid itself there passed a period of twenty years."

xxxviii I can't list them all, unfortunately, but I will give a few of the names: Benedikt Livshits, Osip Mandelstam, Marina Tsvetaeva, Nikolai Gumilyov, Alexander Solzhenitsyn, Mikhail Zoshchenko, Anna Akhmatova, Nikolai Zabolotsky, Isaac Babel, Boris Pilnyak, Mikhail Koltsov, Alexander Vvedensky, Daniil Kharms, Nikolay Oleynikov...

xxxix If we judge by its worthy output, what that system produced was a sparring partner for the US in the field of space and weapons, an edifying example to other people (which they soon forgot, as did those who suffered), and a great victory – at a terrible price – over another nation victimized by totalitarianism.

xl Adam Smith used the metaphor of the invisible hand in *The Theory of Moral Sentiments*, writing: "They are led by an invisible hand to make nearly the same distribution of the necessities of life, which would have been made, had the earth been divided into equal portions among all its inhabitants, and thus without intending it, without knowing, advance the interest of the society, and afford the means to the multiplication of the species." The idea of there being an unintentional order in chaotic systems, which underlies the invisible hand metaphor, can be found in the works of Petty and Locke.

Vaughn K., "Invisible Hand", in *The new Palgrave dictionary of economics* (1987), 1–4.

Here's a description of how Adam Smith's hand works: the consumer sees prices and chooses products that are cheaper and better; the manufacturer also sees prices and decides whether or not it can produce the product with sufficient profit and in what volume it can be sold. This creates competition for goods to become better and cheaper. If something is produced in excess, both demand for it and its price fall and production slows. If there is a shortage, both the price and production increase until supply and demand are in balance again. No one gets to decide or issue orders on how much of which product to make. Thus, the invisible hand operates through the price information system that drives market forces.

Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012), Section 1.5.

xli An example of an insidious metaphor with far-reaching consequences is the conflation of a nation with a family in which the government is the parents and the citizens are the children. In tandem with legends about ancient tribes and about the oxytocin and empathy that predetermined our evolutionary triumph, this metaphor became a tool of statisticians, who support a strong state. For more on this topic, see George Lakoff, who explained that conservatives and liberals proceed from different definitions of a family. Conservatives gravitate toward a strict paternalist model in which people better themselves through self-discipline and hard work, and everyone is cared for by taking care of themselves. Liberals profess a model of caring parents.

Lakoff G., Johnson M., *Metaphors We Live By* (1980).
Lakoff G., *Moral Politics: How Liberals and Conservatives Think* (1996).
Baake K., *Metaphor and Knowledge: The Challenges of Writing Science* (2003).

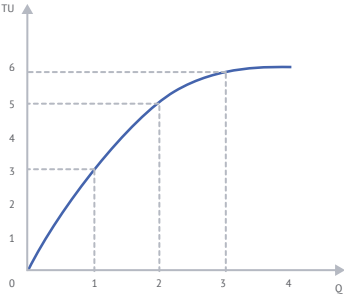
xiii Gossen knew it. His second law (in the simplified version of a natural economy) states: given a certain number of different products and a limited period of time, an individual can consume those products in various combinations, one of which must be the most profitable, delivering maximum pleasure; this is achieved by establishing equality between the marginal utilities of all the products.

Hence the advice to keep your desires equally unsatisfied.

xliii Gossen’s law of satisfaction of needs states that for any given person, the marginal utility of a good decreases as the amount they possess increases. This aligns with the Weber-Fechner law, which states that the relationship between sensation and stimulus is logarithmic. Mathematically, it can be expressed this way: if y is the intensity of sensation, x is the measurable external stimulus, and k is the individual constant, then the relationship between x and y is described by the differential equation $dy = kdx/x$.

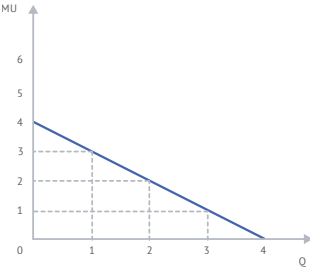
Law of diminishing marginal utility: as more of a good is consumed, the total utility TU from its consumption increases but at a slower rate:

TOTAL UTILITY



At the same time, marginal utility (MU, or additional utility derived from the consumption of an additional unit of the good) will decrease:

MARGINAL UTILITY



In his book, Gossen boasts that he explains the laws of human interactions much as the Renaissance astronomer Copernicus explained the laws governing heavenly bodies.

Gossen G., *The Laws of Human Relations and the Rules of Human Action Derived Therefrom* (1983).

- xliv In the late 19th century, marginalist economists realized that it made more sense to look not at the good as a whole, but at the attractiveness of its last (marginal) portion. They took the idea of infinitesimals from differential calculus and applied it to economics, which made it possible to “mathematicise” economic theory and bring it to the applied field.

The marginal utility of a good refers to the benefit that the last unit of that good delivers. As soon as that last unit becomes less desirable than the addition of a different good that has not yet become old hat, the consumer will move their resources to that new good. The theory of marginal utility arose as an alternative to the labor theory of value, and Gossen formulated its main provisions in 1854. The “marginalist revolution” began in the mid-1880s, led by the economists Stanley Jevons, Carl Menger, and Léon Walras. The actual term “marginal utility” was coined by Friedrich von Wieser.

- xlv And yet he and Kevin M. Murphy proposed the theory of rational addiction, according to which a consumer behaves rationally when consuming an addictive good – even when they are aware of the potential harm and the addictive effects – since in this way they can maximize the utility of their time. Becker underestimated the scale of the phenomenon, reducing the matter to harmful addictive goods.

xlvi



- xlvii Becker allied himself with Ronald Coase when he appealed to the word The Market for Goods and the Market for Ideas. (Coase R., “*The Market for Goods and the Market for Ideas*”, in *American Economic Review* 64 (1974), 384–391.) I should point out that when Becker wrote that the state has no reason to treat these markets differently, he was reading into Coase something other than what the latter had in mind. According to Coase, the case for government regulation of the market for goods applies even more forcefully to the market for ideas because: 1) there are consequences (externalities, or external effects) that impact the public more than the creators of doctrines and have the potential to become catastrophic; 2) the creators of ideas are no less prone than anyone else to deception or self-deception; 3) consumers possess less information about symbolic products than about utilitarian ones.

Since these considerations are valid for both types of markets, then if we are to protect consumers, we must do so in both places. Coase pointed out that intellections oppose government intervention in the market of ideas while they are by no means against the same type of intervention in markets for goods. In this way, they allow themselves the luxury of holding mutually exclusive views without worrying about

their incompatibility. Coase's colleague Aaron Director noted this as well, pointing out that freedom of speech and press was the last area where the principle of *laissez-faire* is still recognized. (He saw which direction things were headed and added "still" for a reason.)

Coase's explanation: the sphere of public administration acts as an employer for intellectuals; therefore, the wider and more sophisticated the regulation of commodity markets, the higher the demand for their services. Thus, utilitarian and non-utilitarian markets are similar in terms of the motives of their economic agents, who are intellectuals. In discussing the aspect that interested him, Coase did not say that the markets are indistinguishable; this, however, is exactly what Becker took from him. The whole point, though, is that since the markets differ by the nature of their rarity, they should be treated differently.

Can the transition from classical to social (new, left) liberalism, which advocates deep regulation of markets, really be explained so easily? Is it only a matter of the self-interest of the people who earn money by issuing advice? In the university system, left-leaning economists outnumber their right-leaning colleagues by a factor of 9 to 1; in the humanities, that ratio is 40 to 1. We can largely thank these proportions for repressive tolerance (Herbert Marcuse), cultural appropriation, and other intractable problems spawned by the new ethics.

^{xlviii} Tolerance for political risk actually decreases in countries where the people have a long history of being treated badly. People who survived the siege of Leningrad never stopped keeping bread under their pillows, even in years when they had plenty to eat. This example comes from psychology, as does a significant portion of modern economics.

^{xlix} Labor fulfills three basic human needs: self-sufficiency, performance, and relationships with others. Richard Ryan and Edward Deci, the founders of self-determination theory, identify three innate psychological needs:

- self-determination and autonomy;
- competence (the desire to achieve certain internal and external results, the desire to be effective at something);
- relationships with other people that are based on affection and belonging.

Deci E., Ryan R. (Eds.), Handbook of self-determination research (2002).

Ryan R., Deci E., "Self-determination Theory and The Facilitation of Intrinsic Motivation, Social Development, and Well-Being", in American Psychologist 55 (2000), 68–78.

Sheldon K., "Introduction to The Self-determination Theory (SDT) and New Approaches to The Growth Motivation", in Sibirskiy Psikhologicheskii Zhurnal 12 (2016), 7–17.

Deci E., Ryan R., "Self-Determination Theory: A Macrotheory of Human Motivation, Development, and Health", in Canadian Psychology 49 (2008), 182–185.

¹ According to Marx, leisure progresses from idleness to meaningfulness; labor proceeds from necessity and moves in the same direction. At the vanishing point, everything will become a game, and "the realm of freedom actually begins only where labour which is determined by necessity and mundane considerations ceases."

^{li} The Matthew Effect describes the uneven distribution of advantages, in which the party that already possesses advantages sees them continue to accumulate and grow, while the party that starts with limited capabilities becomes even more deprived and has less of a chance of subsequent success. Robert Merton described the workings of this phenomenon in the academic world in 1973 when he noticed that Nobel laureates

complained about gaining excessive popularity while many other scientists who had made equally valuable contributions to their fields were overshadowed “He pointed out that Nobel laureates complained about gaining excessive popularity while many other scientists who had made equally valuable contributions to their fields were overshadowed. The phenomenon takes its name from a parable in the book of Matthew where Jesus is quoted as saying “For whoever has, to him more will be given... but whoever does not have, even what he has will be taken away from him.”

The effect can be observed in sociology and scientometrics (the difference in the recognition and citation of works by eminent researchers and works of similar quality by their lesser-known colleagues), education (how long it takes children to learn to read creates a widening gap between those who do well and those who lag behind), in social networks...

^{lii} Hayek F., *The Fatal Conceit: The Errors of Socialism* (1988).

According to Hayek, the chief conflict of modern times is brewing between “advocates of the spontaneous extended human order created by a competitive market, and ... those who demand a deliberate arrangement of human interaction by central authority.”

His position: a self-organizing system is smarter than a made one.

Here’s an expanded explanation: As a result of billions of market decisions, resources are allocated by trial and error, which is optimal from the point of view of matching the structure of production with the preferences of end consumers. This type of distribution is unpredictable, impossible to measure, impossible to calculate, and impossible to model by anything other than the market; since there is no ready-made knowledge about what the “correct” distribution of resources would look like, it is formed as a result of market interactions. Market competition functions as the procedure for discovering knowledge and reducing uncertainty. Any government intervention distorts market information and leads to increased uncertainty, which ultimately manifests itself in economic crises.

“For the same reason, only the alterable division of the power of disposal over particular resources among many individuals actually able to decide on their use – a division obtained through individual freedom and several property – makes the fullest exploitation of dispersed knowledge possible.”

See Sowell’s book, which Hayek praised highly as a development of the ideas of the Austrian school of economics and his own ideas: *Sowell T., A Conflict of Visions: Ideological Origins of Political Struggles* (1987). Also see: *Sowell T., Knowledge and Decisions* (1980) and *Sowell T., The Vision of the Anointed* (1995), where Sowell compares the conservative, libertarian, liberal, and progressive worldviews, is also worth reading, as is his *The Quest for Cosmic Justice*.

^{liii} If we return to the parallel with the family, then in once case we see a variant with the adult style of relationships, where all members have equal rights and everyone is responsible for their actions within the framework of roles that are consistent with their capacity (age, gender, etc.), while in the other case we see a variant based on patronage, where elders take the initiative on an indefinitely wide range of issues. Both variants have rules, but in the first case there are fewer of them and they are more stable and universal, while in the second case the rules are more numerous (in fact, unlimited) and they are introduced in an ad hoc manner. The risk with this variant is that more and more new rules introduced supposedly in the interests of the dependents will develop into excessive control and its associated consequences, all of which have been studied extensively in family psychology.

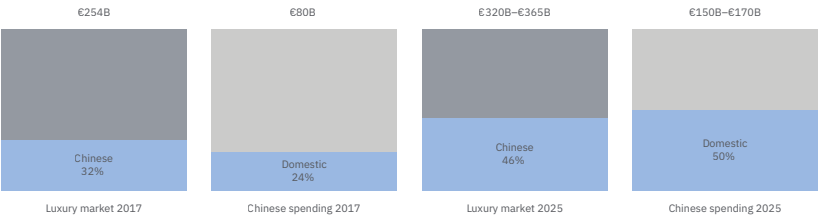
liv The trolley problem is a thought experiment in ethics that poses the question of sacrificing one to save many. It was first proposed by Philippa Foot in a 1967 essay.

She set up the situation thus: “Five men are working on one track and one man on the other; anyone on the track [the runaway tram] enters is bound to be killed.” The question is which track the driver should steer onto, and the fat man is not present in this original version. Once he is brought in, the problem looks like this: you are walking along a bridge and see a trolley moving along the rails. You also see that five people are tied to the tracks. A fat man passing by sees the same thing. At the very moment he leans over the railing, you can push him onto the rails and the trolley will stop. What will you do?

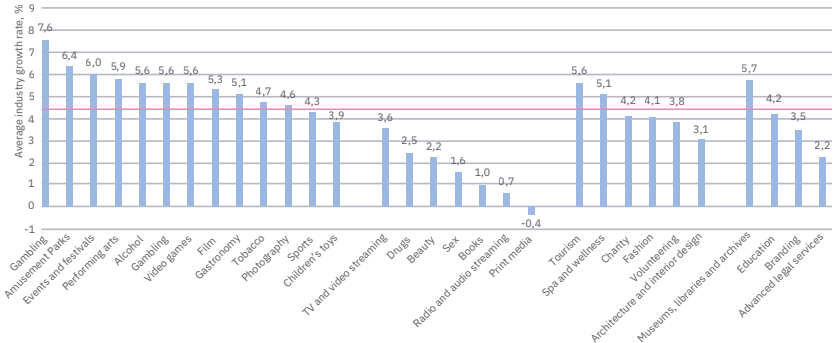
This same dilemma was considered by Judith Thomson (*Thomson J., “The Trolley Problem”, in Yale Law Journal 94 (1985), 1395–1415*) and others, their versions differing in the degrees of involvement/detachment and activity/non-intervention on the part of the subject. David Edmonds brought together all the different variations on this thought experiment in his book *Edmonds D., Would you kill the fat man?: the trolley problem and what your answer tells us about right and wrong (2014)*. Among other things, it covers the doctrine of double effect (for more on this, see *Kagan S., The Limits of Morality (1991)*), which condemns aggression even to achieve positive results. Utilitarianism, if you recall, prescribes the exact opposite: action, not inaction. For moralists, “trolley studies” have become a rich source of arguments for and against any political choice.

lv Export/import balances could help make adjustments here, but they lack the necessary detail. The problem can be solved using customs databases, but that would be time-consuming.

PRESENCE OF CHINESE FIRMS IN LUXURY MARKETS



lvi When we compare the dynamics of the two spheres, we must remember that the internet has made leisure time cheaper, which has adjusted the picture, although we don't know exactly how.



lvii According to the law of diminishing marginal utility, as the quantity of a good consumed increases, its total utility (TU) increases by an ever smaller amount (*see end-note xliii*).

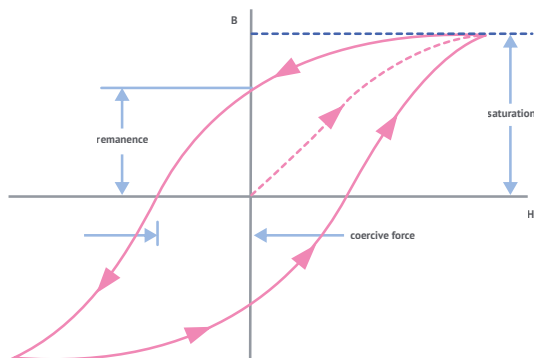
lviii Rawls proposed two normative principles: 1) “Each person is to have an equal right to the most extensive basic liberty compatible with a similar liberty for others,” and 2) “Social and economic inequalities are to be arranged so that they are both (a) reasonably expected to be to everyone’s advantage [and] (b) attached to positions and offices open to all under conditions of fair equality of opportunity.”

Rawls J., Theory of Justice (1971).

Any theory of justice is fundamentally utilitarian. Since justice is a means of justifying and distributing between individuals the benefits and burdens of their joint existence, its practical implementation is associated with assessments and calculations (see the passage highlighted above).

lix Hysteresis loop

HYSTERESIS | PHYSICS | BRITANNICA



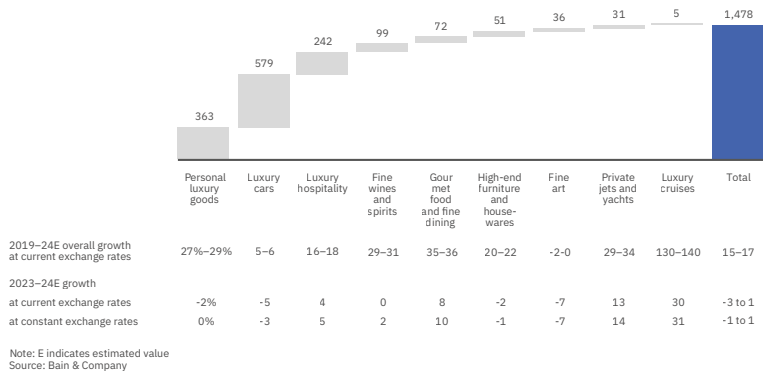
For information about the gradients of positive and negative emotions, see these articles.

lx “The items that make up the consumer basket are balanced in terms of price and taste. Change one thing in the basket and all the other items will change, as well. Consumption is not a whim, but a rational means of stratification and segregation.”

Dolgin A., Manifesto of the New Economy: Institutions and Business Models of the Digital Society (2012).

A manifestation of this phenomenon is the compatibility of couples: as Lloyd Shapley and David Gale showed, an equal number of men and women looking for suitable partners can be divided into couples in such a way that none of them would prefer a different combination. The Gale–Shapley algorithm has been used to test the compatibility of doctors with hospitals, students with schools, etc.

lxi I want to point out something that advocates of equality deliberately fail to mention: conspicuous consumption has a redistributive function. Ninety percent of the cost of luxury goods and services ultimately ends up in the pockets of workers. The luxury industries alone contribute an amount equal to a 2% tax on global consumption (\$1.2 trillion of \$60 trillion) or an additional 4–6% income tax to the cause of equalization.



lxii “If 6 Millions of People be worth 417 millions of pounds Sterling, then each head is worth 69 pounds, or each of the 3 millions of Workers is worth 138 pounds, which is 7 years purchase, at about 12 pence per diem; nor is superlucration above his subsistence to be reckoned in this Case.”

Petty W., *Verbum Sapienti* (1664).

Petty was assessing workers’ ability to work, not the potential derived from their talents and knowledge. He relied on lifetime earnings, which he calculated using the national income.

Jeremy Bentham, the founder of utilitarianism, relied on Petty’s calculations.

lxiii **CHANGE IN HUMAN CAPITAL'S SHARE OF TOTAL CAPITAL**

Year	Change, %
1700	10%
1800	20–22%
1913	33%
1973	56%
1998	74%

The trend toward an increase in the share of human capital continues in the 21st century.

lxiv We owe this breakthrough to Theodore Schultz (Nobel prize, 1979), Gary Becker (Nobel prize, 1992), and, above all, Jacob Mintzer (who linked the distribution of income in a society to differences in educational attainment. His name was given to the equation that ties income with investments as human capital, and he was the one who coined the term “human capital.” See Mincer J., “Investment in Human Capital and Personal Income Distribution”, in *Journal of Political Economy* 66(4) (1958), 281–302.

“Until the 1990s, the few attempts that were made to assess human capital reserves in monetary terms similar to physical capital stocks received little attention. If such statistical measurements were even made, then most often using natural rather than monetary units (such as the literacy rate of the population, the average number of years of education per person, and the like). Monetary calculations remained very rare and, as a rule, were unsystematic in nature.”

Kapelyushnikov R., *Essays in Economics: Methodology, Institutions, Human Capital* (2016).

lxv The principle of accounting for lost profits in training costs was first applied in the early 1960s by Theodore Schultz and Fritz Machlup. They counted lost earnings – meaning what the students could have earned if they had gone to work instead of

class – as investments in human capital. Their calculations showed that lost earnings make up the bulk of the total cost of training.

Shultz T., “Human Capital”, in *International Encyclopedia of the Social Sciences 2* (1968), 278–286.

- lxvi Calculating everything is theoretically impossible. Educational capital is accumulated outside of school hours, including curiosity; erudition, observation, ideological breadth, taste, gaming skills, and other things that cannot be included in the calculations all play a role here. For Kendrick, educational investments include the cost of industrial and military training, expenses for religious education, museums and libraries, the educational component and television shows and radio programs, and the like. He divides all the assets embodied in a person into two categories: tangible and intangible. The former include the costs of raising children to working age (14), and the latter are the costs associated with improving the quality or productivity of that labor (with the actual accumulation of human capital). In addition to education costs, the latter includes health and mobility costs.

His calculations span the period from 1929 to 1969 and demonstrate that accounting for human capital resulted in an approximate doubling of the United States’ national wealth. He estimated net reserves of human capital at \$3.7 trillion in 1969, which was greater than the estimated physical capital of \$3.22 trillion. About two-thirds of the wealth embodied in people was intangible, while the remaining third was tangible.

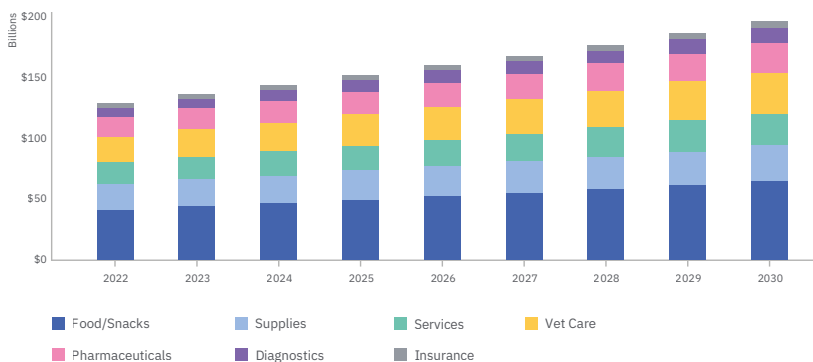
- lxvii Another part of their proposal was that for any individual at age x , the present value of lifetime earnings is equal to the sum of their current wage and the present value of their expected lifetime earnings at age $x+1$ year, taking into account the probability that the individual will survive to that age.

Jorgenson D., Fraumeni B., “The Accumulation of Human and Nonhuman Capital, 1948–1984”, *The Measurement of Savings, Investment and Wealth* (1989).

- lxviii “Its growth simply moves a portion of human capital from the ‘market’ category to the ‘non-market’ category. Paradoxically, the total volume of human capital remains the same at an employment level of 99% and at an employment level of 1%. However, there can be little doubt that as unemployment rises, so does the rate at which people’s knowledge and skills lose value.”

Kapelyushnikov R., *Essays in Economics: Methodology, Institutions, Human Capital* (2016).

- lxix **PET INDUSTRY:**



Source: Bloomberg

- ^{lxx} As Kapelyushnikov points out, the estimate obtained by this approach is six times higher than what Kendrick obtained using the cost method, despite the fact that his approach is broader in scope.

The higher the discount rate and the lower the annual growth rate of real earnings, the lower the present value of lifetime earnings and, therefore, the accumulated reserves of human capital. Productivity growth is determined by many factors, including investments in physical capital, R&D, and the like. Attributing productivity solely to human capital, which is essentially what happens in the lifetime earnings method, leads to an overestimation.

- ^{lxxi} This project only assessed the “market” portion of human capital (in US dollars at purchasing power parity). In the majority of countries for which calculations were made, the results fell in a range from \$400,000 to \$550,000. In Romania, per capital human capital was 12% of what it is in the United States; in Poland, it was 38%. Most other countries came in at around 60% of US human capital.

Kapelyushnikov conducted a study of human capital in Russia using a methodology comparable to that used by the OECD. His study showed per capita human capital of \$119,000 in 2002 and over \$380,000 in 2010.

Kapelyushnikov R., Essays in Economics: Methodology, Institutions, Human Capital (2016).

- ^{lxxii} The Human Development Index (HDI) has shortcomings of its own because the indicators it includes are incomplete (life expectancy, education, GDP, etc.). Furthermore, when these indicators are reduced to a single number, their weights are assigned with a certain degree of arbitrariness. As Brian Caplan points out, “This effectively means that a country of immortals with infinite per-capita GDP would get a score of 0.666 (lower than South Africa and Tajikistan) if its population were illiterate and never went to school.”

Caplan B., “Against the Human Development Index”, Library of Economics and Liberty (2009).

- ^{lxxiii} Todd Risley and Betty Hart, who studied the role of the language environment in childhood, found that differences in the way rich and poor people talk to their children largely determine their development trajectories. Their book, *Hart B., Risley T., Meaningful differences in the everyday experience of young American children (1995)*, published in 1995, was greatly influential in the field, and large numbers of researchers began studying the home environment. Dana Suskind published a book on how to encourage brain development in children, *Suskind D., Thirty million words: Building a child’s brain (2015)*. In 2014, the “Too Small to Fail” program was launched with support from Hillary Clinton; President Obama convened a White House conference to “bridge the speech gap” in 2015; the Bloomberg Foundation contributed \$5 million to the Providence Talks project. Bernard Lahire’s research stands out among recent works, demonstrating at a more subtle level that in wealthy families children begin interpreting texts and playing word games with adults from a very early age. *Lahire B., Enfances de classes. De l’inégalité parmi les enfants (2019)*.

Hart and Risley certainly understood that the difference was not just the quantity of words spoken, but their quality, and Suskind writes about this, too. But Lahir, with his emphasis on irony and sarcasm, went a step further. Despite all this work and the clear awareness that there are breakthroughs to be made in this area of the human sciences, it is not being advanced. Experts dispute how the data was collected and interpreted, and they identify other errors. Quibble as much as you like, but this is petty (See *Kamenetz A., “Let’s Stop Talking About The ‘30 Million Word Gap’”, NPR*

(2018); Fernald A., Weisleder A., “Twenty years after ‘Meaningful Differences,’ it’s time to reframe the ‘deficit’ debate about the importance of children’s early language experience”, *Human Development* 58(1) (2015), 1–4. It’s Time to Reframe the “Deficit” Debate about the Importance of Children’s Early Language Experience). Some researchers are fundamentally opposed to the concept of a vocabulary gap as racially and culturally loaded.

- lxxiv Sergei Guriev suggests starting from decisions where people have to weigh the cost of living: “The cost of a life can be calculated if we know, for example, how much more expensive safer cars are compared to ordinary ones, or how much higher wages are for people who work in hazardous industries.” Guriev S., *Economic Myths: the Misunderstandings and Stereotypes Spread by Media and Politicians* (2021).

Indeed, there are differences in wages between industries and occupations with different risks of death, and in a competitive labor market workers in hazardous industries should receive a premium for that risk. Knowing the wages paid across industries that differ in the probability of death, one can calculate the cost of living as the ratio of the difference in annual income to the difference in the probability of dying during the given year. Unfortunately, this approach only works for perfect markets, which labor markets are not. It also fails when risks are not perfectly understood. Since miners are tied to where they live, they are paid however much the situation allows.

- lxxv The EPA, CPSC, FDA, FAA, and BLS estimate the value of a life as follows:

Source	Value, USD
Labor market studies	5,400,000
European Commission	3.100,000
EPA	6.900,000
EPA Office of Water	8.700,000
US Department of Transportation	5.800,000
CPSC	2.000,000
FDA	5.500,000
FAA	3.000,000
BLS	4.000,000

- lxxvi Estimates of the value of life in Russia:

Source	Value, USD
Estimate based on average per capital income in Russia	≈ 90,000
Estimate based on Russia’s per capital GDP	≈ 90,000.
Estimate based on actuarial approach (average per capita income in Russia)	≈ 320,000
Insurer Rosgosstrakh recommended level for Russia	Up to 120,000

- lxxvii Guriev S., *Economic Myths: the Misunderstandings and Stereotypes Spread by Media and Politicians* (2021).

According to other calculations, a single human life is valued at around RUB 50 million. The Russian government pays the families of military personnel and police officers killed in the line of duty an amount equivalent to the decedent’s salary for 15 years of work, which until recently was around RUB 4 million. It would be more now.

- lxxviii The trolley problem is a thought experiment in ethics that poses the question of sacrificing one to save many. It was first proposed by Philippa Foot in a 1967 essay.

She set up the situation thus: “Five men are working on one track and one man on the other; anyone on the track [the runaway tram] enters is bound to be killed.” The question is which track the driver should steer onto, and the fat man is not present in this original

version. Once he is brought in, the problem looks like this: you are walking along a bridge and see a trolley moving along the rails. You also see that five people are tied to the tracks. A fat man passing by sees the same thing. At the very moment he leans over the railing, you can push him onto the rails and the trolley will stop. What will you do?

This same dilemma was considered by Judith Thomson and others, their versions differing in the degrees of involvement/detachment and activity/non-intervention on the part of the subject. David Edmonds brought together all the different variations on this thought experiment in his book *Would You Kill the Fat Man? The Trolley Problem and What Your Answer Tells Us about Right and Wrong*, 2015. Among other things, it covers the doctrine of double effect. For more on this, see *Kagan S., The Limits of Morality (1991)*, which condemns aggression even to achieve positive results. Utilitarianism, if you recall, prescribes the exact opposite: action, not inaction. For moralists, “trolley studies” have become a rich source of arguments for and against any political choice.

- lxxx Here is his main takeaway: “They say the economic collapse will cost Australia at least 180 billion AUS and then they look for how much the lives saved by the lock downs would be worth. To do that, they use the ‘statistical value of life’ estimate used in some government calculations, ie 5 million dollars. [...] Then they claim 1% of Australia would have died without the lockdowns, which is around 220,000 Australians. They multiply that 220,000 by 5 million and say the lock downs saved Australia 1.1 trillion dollars. That ‘estimated benefit’ is bigger than their claimed ‘cost,’ so they conclude the lock downs are worth it.”

Frijters P. “The corona cost-benefit analyses of Richard Holden, Bruce Preston and Neil Bailey: ooops!”, Club Troppo (2020).

- lxxx In short, one of the mistakes is to assume that the recession will end within a year. Frijters says it never happens that fast, and that Australians have downplayed the economic damage by perhaps a factor of six. (With the passage of time, it turned out that Frijters was, indeed, closer to the truth.)

One more controversial claim: without lockdowns, 1% of Australians would have died. Frijters considers this a massive exaggeration and it seems he is right.

- lxxxi Subjective time perceptions are directly related to the quality of time. As Sergei Rubenstein stated the “law of emotionally determined evaluations of time,” time that is filled with events having a positive emotional charge is experienced as shorter, while time filled with events having a negative emotional charge is lengthened. William James wrote on the same subject: “[...]a time filled with varied and interesting experiences seems short in passing,” but then he stumped the reader with a paradox: “...but [it is] long as we look back. On the other hand, a tract of time empty of experiences seems long in passing, but in retrospect short.” Perceptions of duration during an event and after it are diametrically opposed. A person fails to notice the passage of time when deeply engaged with an activity, so it seems to end quickly. In retrospect, however, the memory of the activity is played back as if it took a much longer time. And the opposite is true: a person stuck with nothing to do fixates on how slowly time is passing.

- lxxxii The price is set so as to maximize the seller’s return from sales, which is the product of multiplying the margin on a single purchase by the number of purchases demand can provide at this price.

- lxxxiii Economic logic permeates and structures social communications, but even the most insightful minds in sociology, anthropology, and semiotics – scholars who understood and described communication as an exchange – failed to note its resource-exchanging nature. Neither George Herbert Mead, who founded symbolic interactionism, his predecessors

Charles Cooley and Georg Simmel, Erving Goffman, the Moscow-Tartu semiotic school founded by Yuri Lotman, or any other researchers of social interactions ever paid the proper attention to the economic underpinnings of communication. Understanding the resource-intensive nature of choices and consumption of the symbolic was not prioritized.

We owe this breakthrough to economists, primarily Gary Becker, who explained that the economic approach extends beyond material goods and market sectors to encompass decisions made in areas like politics, family dynamics, and scientific research. He pointed out that scarcity and choice are pervasive across all resources, no matter how they are distributed. This includes decisions ranging from taxing industries and adjusting the money supply to personal choices like finding a spouse or deciding how long to sleep. Thus, Becker demonstrated the far-reaching applicability of economic principles.

Becker G., The Economic Approach to Human Behavior (1976).

- lxxxiv Becker also showed that prices, whether monetary or imputed, reflect the opportunity costs involved in scarce resources, and explained that the economic approach predicts that both market and imputed prices will react similarly to changes.

Becker G., The Economic Approach to Human Behavior (1976).

- lxxxv Google's PageRank algorithm calculates the importance of web pages by assuming that if one page links to another page, then it is essentially "voting" for that page; the more votes a page collects, the more important it is. Who is voting also matters. Thus, PageRank is a method for calculating a page's weight by adding up the weights of the pages that link to it. See: *Brin S., Page L., "The Anatomy of a Large-Scale Hypertextual Web Search Engine", in Computer Networks 30 (1998), 107–117.*

Google currently uses over 200 ranking signals. While PageRank is only one of them, it remains fundamental.

- lxxxvi According to the methodological individualism that is accepted in the science of economic, new institutions and practices do not arise on their own, but because they are somehow beneficial to people. Holistic economists respond by pointing out that this benefit is programmed by society, its informal institutions; they maintain that the question of what is primary and what is secondary is akin to the question of the chicken and the egg.

- lxxxvii Homans refers to the works *Barnard C., The Functions of the Executive (1971)* and *Chamberlain N., A General Theory of Economic Process (1955).*

- lxxxviii Gossen's law of satisfaction of needs states that for any given person, the marginal utility of a good decreases as the amount they possess increases. This postulate echoes the Weber-Fechner law of psychophysics: the intensity of a sensation is proportional to the logarithm of the intensity of the stimulus. Gossen boasted that he explained the laws of human interactions much as the Renaissance astronomer Copernicus explained the laws governing heavenly bodies.

The law of diminishing marginal utility describes the connection between the quantity of a good being consumed and the degree of satisfaction derived from consuming each additional unit of that good. It confirms that, as the quantity of a good being consumed increases, the total utility derived from its consumption grows but at a slower rate. As this happens, the marginal utility of each new unit consumed gets smaller.

- lxxxix While it is true that the individual is in many ways a black box for economists, they do know how to work with large quantities. Psychologists, sociologists, and political scientists also know how to use data, but they are outmaneuvered by economists like an adding machine

is outmaneuvered by a computer. Paul A. Samuelson: “With the assistance of mathematics, I can see a property of the ninety-nine-dimensional surfaces hidden from the naked eye.”

Samuelson P., “*Maximum Principles in Analytical Economics*”, in *The American Economic Review* 62(3) (1972), 249–262.

^{xc} Knight, F., Friedman, M., *The Ethics of Competition: And Other Essays* (1969).

According to Knight, life is the process of cultivating one’s taste, and the goal of social progress is to identify new humanistic needs.

Hypotheses about maximizing behavior form the core of the economic approach, which scholars in the humanities have labeled “economic imperialism” (the two other central provisions concern market equilibrium and the stability of preferences). However, the economic approach does not require that individual agents be aware of their desire to maximize or be able to explain their behavior.

Friedman M., “*The Methodology of Positive Economics*”, in *Essays in Positive Economics* (1953).

Many researchers do not accept the postulate of maximizing behavior because they think it reduces the human to a profit calculator. However, as Becker proves, homo economicus is anything but primitive. He optimizes not only the utilitarian, but also the non-utilitarian – everything that he feels improves the quality of the present (including the past and the future in the present) and the future: wellbeing, careers, social roles and connections, impressions and experiences, memories, and self-realization. It is a fact, though, that the more complex the behavior the harder it is for economists to explain. For example, Becker’s analysis of the phenomenon of families having fewer children as their wealth increases (demographic transition) is based on the principle that it’s better to have less of something (in this case, children) if you can have higher quality (in this case, the children’s quality of life). That said, there is no proof that the one follows from the other.

We are living in postmarginalist times. Utilitarian goods are losing ground to non-utilitarian goods that do not obey Gossen’s law: they can deliver increasing returns, and the desire to consume them can go up instead of down. Economists have not paid enough attention to this phenomenon or to the distinction between basic needs and higher needs (this topic is covered in Section 3.6.2).

^{xc} The Kula ring is a system of ceremonial exchange used in Papua New Guinea. It spans 18 island communities of the Massim archipelago, including the Trobriand Islands. Participants travel at times hundreds of miles by canoe in order to exchange ritual valuables. A necklace is exchanged for an armband and vice versa. The items are not intended for personal use and are instead exchanged for the purpose of building up cooperative relationships (which includes the observance of mutual obligations, hospitality, protection, and mutual aid), as well as to increase social status and prestige. The gifted object reflects the greatness of the giver. Anthropological study of the economics of gift-giving began with Bronislaw Malinowski’s description of this process.

Malinowski B., *Argonauts of the Western Pacific* (2014).

^{xcii} According to John Firth, there is no ethnographic evidence for exchanges of hau between people. Mauss misinterpreted hau, combining the hau of a person with the hau of the earth and the hau of a taonga. The Maori never said anything about individuals having hau. For more, see Marshall Sahlins with reference to commentary by Lévi-Strauss, Firth and Johanson.

Sahlins M., *Stone Age Economics* (2020).

Malinowski believed that gift-giving was politically motivated rather than altruistic.

Parry J., *The Gift, the Indian Gift and the ‘Indian Gift’* (1986), 453–473.

- ^{xciii} Empathy is the ability to feel another's feelings, to imagine oneself in their place, and to understand their feelings, desires, and actions. Empathy is divided into three components: 1) the ability to respond emotionally to the experiences of another; 2) recognition of another's state and the ability to inhabit their feelings or actions; 3) adequate methods of verbal and non-verbal interaction.

Cognitive (rational) empathy is built on attentiveness to small things and details.

Emotional empathy manifests itself the ability to feel and sympathize.

Intuitive (predictive) empathy is the ability to predict others' emotions and behavior.

- ^{xciv} The term was introduced by Edward Titchener in the early 20th century. Carl Rogers put empathy at the center of his approach to psychotherapy and considered it a necessary and sufficient condition for personal development. And yet, according to a relatively recent guide to altruism, despite the hundreds and even thousands of studies conducted annually, mainly in the field of neuroscience, much work remains to be done to rescue the subject from obscurity. *Jeffries V. (ed.), The Palgrave Handbook of Altruism, Morality, and Social Solidarity: Formulating a Field of Study (2014).*

- ^{xcv} This is different from how we think we are perceived by others. According to George Herbert Mead, the core self and the looking-glass self correspond to "I" and "me." "I" is what I think about others and myself. This is my inner world. "Me" is how I think others perceive me. It is my outer social shell as I imagine it. Mead's concept, like Cooley's, was formulated prior to Mauss' essay on the gift, but Mauss may not have known about it, since little of Mead's work was published during his lifetime.

There is also a somewhat different self-concept.

- ^{xcvi} Interference in a person's life by the state, family, church, etc. that is based on the presumption that it will be better for them is called traditional paternalism. This kind of paternalism has religious and moralistic overtones and is understood as limiting people's freedom in their own interests. Furthermore, the guardian projects its own preferences onto the ward and directs its behavior to meet those preferences.

The new libertarian paternalism preached by behavioral economists differs from this in that it prioritizes – or claims to prioritize – the preferences of the person and allows only for interventions that do not restrict freedom of choice (hence the modifier "libertarian"). Sunstein and Thaler, the ideologists of the new paternalism, proceed from the position that the state's role is to build a carefully crafted playing field and then step back so people can make their own choices.

Sunstein C., Thaler R., "Libertarian Paternalism", in American Economic Review 93(2) (2003), 175–179.

- ^{xcvii} Behavioral economics is one of the few social science disciplines that conducts experiments, albeit staged ones, and is therefore approaching the standard of science. Based in the natural sciences, this standard requires experiments to be reproducible, which is impossible in fields studying humans and society. The experiments are conducted mostly on students and in fictitious situations, but the conclusions are applied to people in real-life circumstances.

- ^{xcviii} Shefrin and Thaler associate their "planner" with the prefrontal cortex (the part of the brain responsible for long-term planning) and their "doer" with the limbic system, where short-term emotions and desires originate.

Shefrin H., Thaler R., "The Behavioral Life-Cycle Hypothesis", in Economic Inquiry 26(4) (1988), 609–643.

^{xcix} Dodonov studied the emotional orientation of the individual. He found that emotions are more than evaluative in nature – they are also valuable in and of themselves. People need emotional satisfaction, and the desire for certain types of emotions individualizes us. Here is the list of value-based emotions Dodonov described:

- altruistic (assistance and empathy for others),
- communicative (communication with others),
- practical (process and results of activities),
- gloric (fame and achievements),
- gnostic (cognition),
- pugnacious (wrestling and competition),
- romantic (perception of the mysterious),
- aesthetic (perception of beauty),
- hedonistic (mental and physical comfort),
- acquisitive (purchases and accumulation).

^c This effect can be illustrated using the example of a punching tool used in mechanical engineering. The dies used are expensive, so it is impractical to make a single run: the tool is a thousand times more expensive than the resulting product, and if its entire cost were spread across a small number of products then their price would be sky-high.

^{ci} According to his theory, any innovation is first accepted by a few but rejected by the majority. Then, as early adopters join in, people think “it’s not so bad.” The number of supporters increases and reaches a critical point, after which the snowball effect occurs. At the third stage, interest in the new product reaches its peak, after which there is a decline and the innovators move on to something new. According to Rogers, innovators make up 2.5% of society, early adopters account for 13.5%, the early majority makes up 34%, the late majority is 34%, and laggards make up 16%. These percentages may differ from what is listed above for various social processes, but they are more likely to go down than up.

Rogers E., Diffusion of innovations (2003).

^{cii} The Chapter 5 covers the paradox of value: certain useful goods, like air or poetry, have little or no exchange value, while others, perhaps significantly less useful goods that are scarce have a high exchange value. As Fernando Galiani explained in his *Treatise on Coin* (1750), the value of anything is determined not only by its ability to satisfy a need, but also by its availability. Prices react to scarcity, acting as a limiter on the quantity of goods that consumers are able or willing to pay.

When a good is scarce, people compete for the right to own it; those who pay the sellers price win. In this type of situation, the price is informative because it is “not any set of numbers but just those causing supply and demand to balance.” Arrow K., “*The Potentials and Limits of the Market in Resource Allocation*”, in *Issues in Contemporary Microeconomics and Welfare* (1985), 107–124.

If there is an abundance of a product, then there is no pressure on demand and the mechanism for balancing scarcity and availability is inactive. The perceived utility of a good can be stratospheric, but the consumer has no reason to pay it if the good is abundant.

We owe our understanding of how supply meets demand without the exchange of additional (non-price) information to Adam Smith. This is considered economists’ greatest contribution to the understanding of social processes. Arrow K., “*The Potentials and Limits of the Market in Resource Allocation*”, in *Issues in Contemporary Microeconomics and Welfare* (1985), 107–124.

ciii The theory of diffusion of innovations breaks this process into stages. During the first stage, the innovation is only accepted by a few people; the majority finds it strange and rejects it; as early adopters join in, more and more people begin to think that the innovation is not that bad after all; the number of supporters increases and reaches a critical point, after which we observe the snowball effect. The third stage, according to Everett Rogers, is when interest in the new product reaches its peak.

civ Charitable Giving by Segment USD billions

cv When I started writing this book there were no reliable statistics on donations; the numbers that started to appear later are incomplete. My estimate is based on the performance of Patreon, the leader in this segment, for which data can be found at Graphtreon. Adding in the contributions of other players gives us a cautious estimate of at least \$3 billion per year in turnover for the segment.

cvi [The word “geek” was originally used to describe 19th century carnival fools. By the end of the 20th century, it referred to people obsessed with gadgets and computers, followed by movie buffs, gamers, lovers of comic books, and the like.

Nerds are a subtype of geeks. Quiet and socially inactive, they do not care about their appearance or social status and are instead busy with their own research.

cvii This model follows the old idea of financing works through agreements between groups of potential users. The first illustrated publication of John Milton's *Paradise Lost* was released by subscription; Mozart and Beethoven offered subscriptions to their premiers and new works.

DeFigueiredo D., Unleashing the Power of Digital Goods: Enabling New Business Models for the Music Industry, Research Proposal (2003).

cvihi The Asian gaming market uses a variety of business models. Users pay by the hour to play China's World of Warcraft; Guild Wars releases paid updates; some niche projects like Slapshot are betting on in-game ads. In recent years, the most successful paradigm has been donations in return for advantages in the game.

cix Donations are a successful model in free games because the player does not pay a subscription fee (say \$15) and may not notice that, in the end, they are paying more than the cost of a subscription. The absence of in-game expense accounting reinforces this effect.

cx At first, popular online games like EVE online (2003) and World of Warcraft (2004) used a pay-to-play model. Gabe Newell, founder of Valve and developer of Steam, was one of the first people to recognize the potential of the donation model.

In 2011, Valve moved the game to a free-to-play model and added microtransactions, including lootboxes, with prices ranging from \$0.10 to \$50, plus \$2 for a key to open the box. The donations boom in multiplayer online games began in 2011, when Blizzard and CCP started offering it as an option for their games.

There are five game monetization models: 1 – purchase, 2 – pay-to-play, 3 – freemium, 4 – free-to-play, and 5 – pay-to-win

In Pay-to-play, the user pays more than a certain threshold amount to gain access to the full version of the game (examples: Warhammer Online, EverQuest, World of Warcraft).

Free-to-win (F2W) is a type of free-to-play in which the donation does not confer advantages and success depends on ability; however, microtransactions allow users to

progress through the game faster, gain experience, obtain more of the game's currency for certain actions, or change the game's appearance, among other things.

This model was first widely used by Wargaming in the game *World of Tanks*.

Under the pay-to-win model, investing real money in the game gives players an advantage over other players with more experience. This model is the opposite of free-to-win.

The Freemium model gives players free access to a limited version of the game and the ability to purchase the premium version.

- ^{cxi} Developers design game events so that players cannot master them without buying something.

Game developers have two instruments for handling this issue: first, they have clearly defined revenue optimization plans; second, they have a pool of users to work out the kinks on when designing the game's financial parameters (what users have to pay for, how much they pay, and when, etc.). Once you have an audience and a creative team, the rest is mathematics (computer science).

There are many subtleties and potential pitfalls in the creation of a monetization model. For example, developers were buoyed by the success of the first free-to-play games and started selling all sorts of game content, but they immediately discovered that nobody wants to play a game where all the achievements are for sale.

A series of failures taught Asian developers to balance the contents of their game stores. The leaders of "soft monetization" are games like *Perfect World* and *Shaiya*, which have complex, well-planned economies. Players who pay like the games; players who choose not to pay like the games, too. The old saw "time is money" comes into play here: you can play a game for hours to earn the loot or advantages that another player purchased.

Donation platforms have taken up some of the techniques developed in the gaming industry, including breaking up online payments into small amounts.

- ^{cxii} Former Facebook employee Jeffrey Hammerbacher is credited with coining a popular phrase about selling out for clicks. When he left the company in 2008, he explained his move to *Businessweek* by saying, "The best minds of my generation are thinking about how to make people click ads. That sucks."

Hammerbacher was wrong. Advertising doesn't suck. It's a necessary stage in the monetization of the internet. We have to master this stage before we can progress. (See Section 8.2).

- ^{cxiii} OnlyFans, as an advanced model of webcam usage, allows sex workers (as well as fitness models, musicians, and chefs) to communicate directly with paying fans. The service offers dozens of options for monetization: paid stories, subscriptions to profiles, and private correspondence and video chats. In 2020, OnlyFans earned approximately \$100 million.

Sources: OnlyFans Statistics – Users, Revenue and Usage Stats.

- ^{cxiv} Cohen-Peckham E., "The competitors of Patreon", *TechCrunch* (2019).

Starting to donate is easier if you don't have to create a Patreon account. This seemingly microscopic barrier to entry significantly reduces the number of users who end up making donations. This is the source of Apple's strength in the app market and the source of the media's dependence on Google, even though it would seem that asking users to create an account is a single, simple step.

With their massive audiences, Facebook and YouTube are best-placed to establish a pool of donation-ready users to test functions, design, and usability on without angering everyone at the same time.

^{cxv} Channel memberships were launched in 2018. Creators with 50,000 or more subscribers can offer monthly memberships priced at \$4.99 for exclusive access. (YouTube keeps 30% of the subscription revenue.) Other options for monetizing YouTube fans include:

- Super Chat: fans can pay to keep their comments pinned on the stream during live streams;
- Merchandise: creators with over 10,000 subscribers can offer personalized merchandise in integration with Teespring, which pays YouTube a commission on all sales, which YouTube shares with creators;
- Ticket sales: artists can sell tickets to their shows directly from their pages in integration with Eventbrite and Ticketmaster.

^{cxvi} Twitch is a video game live streaming service, founded in 2011, that specializes in gameplay broadcasts and cybersports tournaments. Owned by an Amazon subsidiary, Twitch attracts top YouTubers by offering tools for communicating with fans.

^{cxvii} The Matthew effect is a term used to describe the tendency of individuals who already have advantages to continue to gain and multiply those advantages while other, less advantaged individuals are left farther and farther behind. In academia, this effect was described by Robert Merton in 1973 when he noticed how often Nobel laureates complained that complained that famous scientists received excessive attention while many other scientists who had made equally valuable contributions to their fields were overshadowed.

The name of the phenomenon is taken from words attributed to Jesus in the gospel of Matthew: “For whoever has, to him more will be given...but whoever does not have, even what he has will be taken away from him.”

The consequences of this effect can be observed in sociology, academic publishing, education (consider how the speed with which a child learns to read impacts the size of the future gap between capable students and those who fall behind), social networks...

^{cxviii} The conflict of interests between a business that needs its ads to be seen more and an audience that, on the contrary, neither wants nor needs the unnecessary advertising, could be resolved if people agreed to a subscription fee (Facebook makes about \$35 per user per year). Many people are convinced that this is impossible and that there is no alternative to the advertising model – at least until users demonstrate that time is still money by watching ads to save \$2–4 per hour, while their time is worth much more.

^{cxix} Even for streaming services like Netflix (which played a major role in the development of recommendation engines), the accuracy of recommendations leaves much to be desired: if you only maximize accuracy, then richness and variety suffer; and highly attractive content may be left out of search results deliberately on the theory that people will find that content anyway.

Recommendations are a product of artificial intelligence. In the 25 years since their inception, recommendation systems have become a science and evolved into neural systems capable of processing enormous amounts of data while tracking the cost-quality ratio.

^{cxx} When companies are stuck, they reproduce an existing type of behavior because “that’s how it’s always been done.” A too-narrow focus on the current set of competitive tools can be caused, among other things, but employees being too concerned about their position in the company. Lazy competition is another issue: companies become complacent when an industry is an oligopoly without competitive pressure. It can also happen that the value of an industry or business model increases without anyone noticing; un-

like the first two options, this is probably not the case with Patreon, since everyone has already realized how important it is to be able to monetize content without resorting to advertising.

Hoffman R., “Choosing bad competition”, Greylock (2020).

cxix OnlyFans revolutionized the adult content industry by removing the porn studio as the intermediary between consumer and producer. It offered models – inheritors of the phone sex tradition – an advanced webcam format with which to monetize communication (along the lines of Uber). They no longer have to drive to a studio and have physical contact with partners. A beginning blogger’s toolkit is sufficient to get started producing adult content: a smartphone, a tripod, and a lamp. That said, successful models earn more from communicating with viewers than from taking their clothes off.

cxii *Cohen-Peckham E., “What Spotify can learn from Tencent Music”, TechCrunch (2018).*

In Asia, the Chinese and Korean music industries have melded with social exchange: live broadcasts, TV shows in a range of formats, advertising, personal events, and sing-alongs have combined to turn users into regular customers. The same fate awaits the film industry.

Peckham advises Spotify to create a virtual community where people can send gifts to their favorite musicians or pay for exclusive online concerts hosted on the platform. Spotify has not made intense community functionality a priority (the service even removed several social functions), but Peckham believes that building social interaction around music will be critical to staying in front in the race against Apple Music and the rest.

cxiii Stereo is a voice chat app designed to foster discussion and exchange of opinions. It was founded by Andrey Andreev, former owner of MagicLab, the holding behind the dating apps Badoo, Bumble, Chappy, and Lumen. Stereo matches people – and with all that dating app experience in its background, it is good at matching – for live conversations based on common interests and listening history, tracks and directs audiences to interesting shows and top creators, publishes a schedule similar to radio programs, and lets users search recorded performances by category, hashtag, or username.

Live broadcasts can be recorded and edited and music can be added before sending them to other apps.

Monetization: listeners can send speakers donations.

cxiv Substack’s mission: “The great journalistic totems of the last century are dying. News organizations [...] are turning to increasingly desperate measures for survival. And so we have content farms, clickbait, listicles [...] and a fake news epidemic. [...] [J]ournalistic content has lost much of its perceived value [...]. We believe that journalistic content has intrinsic value and that it doesn’t have to be given away for free. We believe that what you read matters. And we believe that there has never been a better time to bolster and protect those ideals.”

For more, see the blog belonging to Hamish McKenzie, co-founder of Substack, specifically *McKenzie H., “Why We Pay Writers”, Substack (2021).*

cxv Subscriber payments go to the creators. Substack is a tool for independent creators, who are neither employees nor contractors of the company. Substack provides support for some creators, such as Matthew Yglesias (from the blog Slow Boring) in the form of a publisher’s advance that is paid back out of future revenue (this is the Substack Pro of-

fer). Yglesias received an advance of \$250,000, but his subscription revenue fell from 90% to 15% for the first year. With around 9,800 subscribers that could bring in \$860,000 per year, Yglesias could have earned \$775,000 (90%) if he had foregone the advance. As it was, he made \$380,000. Peter Kafka finds it strange that “...unlike other digital platforms, Substack doesn’t have any lock-in that will keep writers – popular or otherwise – from bolting to competitors. And competitors – including ones from Facebook and Twitter – are definitely coming after Substack.” See his article *Kafka P., “Substack writers are mad at Substack. The problem is money and who’s making it”, Vox (2021).*

- cxxvi Thanks to their reach and ability to compete brutally on price, large platforms could steal Substack’s business: Twitter, with its hundreds of millions of users and viral nature, makes it easy for authors to gain a critical mass of followers and settle for 5% of the revenue; Facebook can afford to charge authors nothing at all. According to Thompson, however, the threat posed by Twitter and Facebook has been exaggerated: “[T]he problem with the social networks is that they want to own the reader, but the entire point of the sovereign writer is that they own their audience. Substack’s real threat will be lower-priced competitors.”

Facebook was also preparing to launch a paid newsletter service called Bulletin, but it shut down shortly after launch in 2022.

- cxxvii During the 2016 presidential election in the United States, many editorial boards threw aside their masks of respectability and showed that they are capable of anything. Subverters of the status quo, each with their own system of value coordinates, are squeezing their way into the gap between truth and fake “truths.”

- cxxviii Pirates pushed things in this direction by making it hard to sell music. The company was also helped along by the fact that its parent company, Tencent, owns WeChat and QQ and is present in the gaming market, which means that it understands the dynamics of in-game purchases. Tencent Music has exclusive rights to the most popular Western music from the major labels. The natural strategy to leverage this asset would be to charge a subscription to access it. But the reality is that piracy is still enough of a challenge in China that access to that music isn’t truly “exclusive.” (Section 1.5.) Plus while incomes are rising, there’s extraordinary variance in what price point the population can afford for a music subscription. As a result, [...] [the company] sublicenses that content to other Chinese music services.

- cxxix Spotify does not create opportunities for music lovers to interact directly with artists or each other, and it doesn’t offer live online experiences. Spotify and Apple Music have experimented with music and messaging, but these were bonus features and none of them were seriously integrated with the main product. Likewise, YouTube Music’s social functions are second-rate compared to Facebook.

“[I]t is surprising that Spotify hasn’t created a pathway for superfans of music to engage deeper with artists or each other. Spotify makes referrals to buy concert tickets or merchandise – a very traditional sense of what the music fan wants – but hasn’t deepened the online music experience for the segment of its user base that would happily pay more for music-related experiences online [...] or for deeper exposure to the process [...]. This is the business model of the mobile gaming sector [...]. Deeper social functionality doesn’t seem to be the path Spotify is prioritizing, though. It has removed several social features over the years [...] and the company’s acquisitions – of startups like Loudr, Mediachain, and Soundtrap – have focused on content analytics, content recommendation, royalty tracking, and tools for professional creators [...] likely aiming to disrupt the role of labels and publishers.

Cohen-Peckham E., “What Spotify can learn from Tencent Music”, TechCrunch (2018).

^{cxxx} By diversifying income streams, authors no longer have to bend over backward to attract an audience and encourage clicks.

^{cxxxix} Google's revenue was up 62% to a record \$61.9 billion in the second quarter of 2021; YouTube's revenue more than doubled; Facebook also posted rapid growth (in the first quarter of 2021, earnings were \$26.17 billion, up 48% year-on-year, and profit was up 94% to \$9.5 billion. This growth was mainly due to a 30% increase in the average cost of advertising and a 12% increase in the number of ads displayed.

^{cxxxix} Advertising technology is not stagnant. Companies like Panoply Media (Megaphone since 2019) sell software to automate the advertising process and target listeners, while Stitcher (owned by media conglomerate E. W. Scripps Co. and selling advertising for more than 250 shows for which it pays out millions to podcasters) act like traditional media buyers, connecting them with brands that target specific demographics. For \$4.99/month, the premium version of Stitcher offers subscribers exclusive podcasts. Popular podcasters earn ten times more from touring than from ads.

^{cxxxix} Unlike Patreon, Ko-fi does not require monthly donations or subscriptions (although that option does exist), and it does not charge fees. The platform earns its revenue from donations, as well as from subscriptions to Ko-fi Gold and a 5% commission it takes from funds directed to storefronts that do not have Ko-fi Gold.

Humphries S., "What Is Ko-fi, and Who Should Use It?", How-to Geek (2021).

^{cxxxix} One million people visited the contest site. Of those, 40,000 signed up and 20,000 voted (one-third voted with their own money, and the remaining two-thirds voted using money provided by the contest's organizers). In the Favorite Writers category, Mikhail Shishkin received the most votes and money. Blogger Slava S. took first place among journalists. In all, 300 writers participated.

Before the Reader's Prize, there were experiments with post factum payments at cinemas and theaters in which participants were given a chance to donate after watching a film or performance. This was done partly with their own money and partly with money given by the organizers. They were handed a sum of money by the organizers and told they could choose to donate up to a certain amount to express their appreciation for the show they had watched. The maximum donation was less than the amount given to each participant, so theoretically the participants could have kept some of the money for themselves. In a positive sign for the gift economy, none of the participants opted to do so.

See Dolgin A., *The Economics of Symbolic Exchange (2009), Appendix 4: Cinema and Theater projects.*

^{cxxxix} Rubenstein's full comment: "Post factum payments are not yet part of the mandatory intellectual package. With this prize, Dolgin is trying to introduce this norm into the rules of etiquette. We will have to wait patiently until the innovation takes root. Post factum payments should become fashionable in a certain environment. All sorts of social institutions have been fashionable at various times. At the turn of the 20th century, people thought it was hip and interesting to attend trials. Then they stopped. In the 1920s and 1930s, auctions became the hot ticket. Gratitude payments will become fashionable because they [the organizers] got it right."

^{cxxxix} A non-fungible token is a digital cryptographic certificate of uniqueness that certifies ownership of a digital object. NFTs are blockchain-based records (primarily on the Ethereum blockchain). They can be issued for any work of art, video, music, GIF, game, text, meme, code, or anything else of a digital nature.

At the moment, NFTs are most often used to trade digital art. A creator can upload an image, video, song, or text, for example, to OpenSea, and the creator's fans or speculators can buy a token that confers ownership and use rights, include the right to resell the work.

Steinwold A., "The History of Non-Fungible Tokens (NFTs)", *Medium* (2019).

cxxxvii Polog D., "In Praise of Ponzis A new economic model is emerging", *blog* (2021).

Notice that these models were proposed in the early 2000s. For more on this, see Section 4.8.2. Voluntary payment schemes in Dolgin A., *The Economics of Symbolic Exchange* (2009). Club founders also deserve rewards. I described how to do this in my book Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012) (paragraphs 1.8.2. A New Business Model for Electronic Media: Trust Advertising, and 1.8.3. Prospects for Monetization of Social Networks).

As an illustration, Polog points to Andrew Yang's launch of the crowdfunding and lobbying DAO Lobby3, which raises funds by selling crypto tokens and allows contributors to vote on how money is spent and track spending.

Another example is Moss Amazon NFT, a project designed to rescue the Amazon rainforest. The idea is to buy up land in strategic locations, thereby blocking deforestation. This is called a "Green Wall" of property. Building the wall will require the purchase of 15 million hectares and is expected to cost \$10 billion.

Polog D., "Hype-Free Web3", *blog* (2022).

cxxxviii "It's in part a measurement issue. Numbers lend an air of legitimacy and credibility. We have longstanding ways to denominate and measure financial capital and its flows. Entire websites, sections of newspapers, and a ton of institutions report with precision on the prices and movements of money. We have no such methods for measuring the values and movement of social capital, at least not with anywhere near the accuracy or precision. The body of research feels both broad and yet meager. If we had better measures besides user counts, this piece and many others would be full of charts and graphs that added a sense of intellectual heft to the analysis." Ibid (All the quotations in this paragraph were taken from Wei's essay).

cxxxix In an effort to resonate with users' aspirations, players in this market are testing very inventive – even exotic – restrictions. Wei highlights this example: "A social network like Path attempted to limit your social graph size to Dunbar's number (which defines the number of relationships a person is capable of maintaining at around 150), capping your social capital accumulation potential and capping the distribution of your posts. [...] Unfortunately, as social capital theory might predict, Path did indeed succeed in becoming the anti-Facebook: a network without enough users."

cxl Wei attributes this to the superiority of their visual skills over their writing skills and the fact that most tweets are rarely seen by anyone. TikTok has a much more intricate feedback loop than other social networks, both in positive and negative terms.

In line with the economic approach to social exchange, he concludes that people young and old pursue optimal strategies for building social capital given their differences in status. Young people, as a rule, have not yet acquired social capital. They have few assets of their own, no job title, and may not even graduate from college. If they do graduate but are unlucky enough not to have a trust fund, they are saddled with student loans. Everywhere they turn, they see adults playing status games: what brand of car you have, where you live, how many levels you are below the CEO. As long as they are unprepared for adult games like office politics, the most effective way they

can gain social capital is by doing something on social media or getting good at video games. Apps like Vine and Musical.ly are about the only viable route. (Girls who can look good doing lip synchs flocked to Musical.ly.)

The fact that young people gain social capital in the form of followers, likes, and comments from peers and strangers does not detract from its value. Peer approval is of the utmost significance, and social media has expanded the scope of young people's status games. Furthermore, older people are less likely to learn new games and skills, especially those that involve new technologies. Finally, young people have an excess of time to spend exploring new social networks, while adults wait for the right moment to join.

cxli More from Wei: "The more people who follow you, the more followers you gain because of leaderboards and recommended follower algorithms and other such common discovery mechanisms. [...] A social network should continue to prioritize distribution for the best content, whatever the definition of quality, regardless of the vintage of the user producing it. [...] In the virtual world, where exit costs are much lower than in the real world, new users can easily leave for a new network where their work is more properly rewarded and where status mobility is higher."

cxlii Wei includes most messaging apps and the video chat apps Skype, Zoom, FaceTime, Google Hangouts, and Viber in this category. They help you reach people you already know, but they don't introduce you to new people or offer status games. Some apps pick up billions of users in an environment of fierce competition for network effects, but Wei is skeptical about their ability to accumulate meaningful social capital.

cxliii The definition of Web3 will be established retroactively when we move on to the fourth iteration; this is what happened to Web 1.0 after the advent of Web 2.0, whose appearance was announced in 2005 by Tim O'Reilly. *O'Reilly T., "What is Web 2.0", O'Reilly (2005).*

Matthew Ball writes that we know the day a particular technology will be launched, but the birth of an era never happens in an instant. Innovation is always a synthesis of many sub-innovations that move each other. Here's an example: the iPhone ushered in the era of the mobile internet, but the iPhone itself was only possible because of 3G networks, Infineon chips, wireless communication standards, and cell phone towers; millions of developers created the apps that ran on it; the App Store required digital payments and a variety of other technologies, from the Samsung processor to the ST Microelectronics accelerometer, Gorilla Glass, and so on and so forth. *Malley A., "Every iPhone 3G chip named, illustrated in detail", Apple Insider (2008).*

cxliv "For creators – entertainers, artists, musicians, game developers – Web 2.0 platforms have been both a blessing and a curse. YouTube, TikTok, and the App Store have given them access to audiences that span the globe. But these platforms have notoriously high take rates, and capture much of the value generated in the creative economy before passing along payments to creators."

It is worth noting that the fact that technology makes digital content "...one-of-a-kind and therefore more valuable" does not in any way offer "a new universe of opportunities in the creative economy."

cxlv Fifty-three percent of respondents agreed that cryptocurrency is "the future of finance." Surveys also reveal that 17% of Americans own cryptocurrency; that number jumps to 28% in the 25–34 age group. *Editorial, "Over Half of Americans Think Crypto Assets Are the Future of Finance: New Survey", The Daily Hodl (2022).*

cxlvi Egan M., “The art world has a money laundering problem”, CNN (2020).

The spiritual forefather of the crypto industry, Timothy May, issued a warning about these threats back in 1998: leaks of secrets and know-how, drug trafficking, and other joys of the darknet. May saw cryptography as a way to resist government control of citizens, including taxation.

May T., *The Crypto Anarchist Manifesto* (1988).

cxlvii According to a16z, this is determined by: 1) digital identification; 2) management of property rights; 3) the security of financial systems, including sustainability and cybersecurity; 4) wide access to financial services, and 5) confidentiality of personal data.

cxlviii It’s time for US authorities to figure out how to regulate cryptocurrencies and blockchain and how to turn them to the country’s benefit. I expect the results of this process to look like this:

- Recognition of tokens as financial products;
- Extension of consumer protections to De-Fi and digital products;
- Pilot project for a US digital currency and/or official recognition of stablecoins (which are pegged to the US dollar);
- Decisions about an environmental tax and/or reporting, and/or mechanisms for offsetting carbon emissions.

cxlix It costs \$60–80 to mint an NFT. As Jacob Rozen writes in his article The ridiculously high cost of Gas on Ethereum, “[f]or most normal people, the blockchain is pretty much unusable for average size transactions.... To complete a simple UniSwap trade can run between \$60 and \$100 for each transaction. Unless you’re willing to pay \$100-\$200, you can forget about a complex smart contract interaction – it’s a financial nightmare.”

Rozen J., “The ridiculously high cost of Gas on Ethereum”, Coingeek (2021).

cl A16z: “Despite headlines, Web3 projects need not – and, in most cases, do not – consume vast amounts of energy. Ethereum [...] will soon use an energy-efficient proof-of-stake (PoS) consensus mechanism, reducing energy consumption by a factor of 1,000.”

A16z, *How to Win the Future: An Agenda for the Third Generation of the Internet* (2021).

cli Gas is the unit of measure of the computation power required to perform transactions or smart contracts on the Ethereum network. Gas is not a coin or part of a token, but a dynamic indicator like an electric power meter from which readings are taken to issue invoices for servicing transactions on the blockchain. The idea is to decouple the cost of computing on the network from the volatile market price of Ethereum. The more complex the tasks performed, the more gas they use. The total cost of a transaction is the amount of gas consumed multiplied by its price. The gas limit is the maximum that can be spent on a transaction; this protects against overspending by mistake.

clii Infura provides API access to Ethereum networks, functioning like a waiter or dispatcher who receives and processes orders.

Moxie explains: “In fact, even when you connect a wallet like MetaMask to a dApp and the dApp interacts with the blockchain via your wallet, MetaMask is just making calls to Infura!”

cliii Chen points out that blockchain evangelists praise it for secure data storage, anonymity, equality, etc. In reality, all of these benefits are mainly implemented outside the blockchain; its role, although significant, is not decisive. And when it comes to data quality and authenticity, blockchains by themselves are no panacea. Chen L. et al., *A Brief Introduction to Blockchain Economics* (2021). Blockchain is less anonymous than proxy servers, VPNs, and Tor.

cliv *Poleg D., “Unpacking the Web3 Sausage”, blog (2022).*

As Poleg explains, “Instead, his wallet app relied on an API – the OpenSea API! – to check which NFTs were associated with which blockchain account. [...] If Moxie had used a different app that checks the status of his NFT directly on the blockchain, he could have seen that the NFT is still there. Indeed, you can see that NFT on Rarible, an OpenSea competitor.” While “...the fact that popular wallet apps don’t display stuff in people’s accounts even though that stuff is there is a problem,” Poleg is excited about Web3’s promise to increase users’ freedom to switch between platforms.

clv “We believe in three core principles to guide policymakers:

1. Open, distributed technology platforms that are directly accountable to their users provide an alternative to a digital status quo that is dominated by big tech...
2. Decentralization is the organizing principle of our past and future success.
3. Policymakers should work with market participants to unlock the potential of Web3...”

clvi Weaver: “The cryptocurrency Web3 starts with all our existing infrastructure. So I still need a DNS name, I still need a server, I still need storage, and I still have a distributed computation occurring between the browser and the server. [...] Web3 is only about adding an additional layer of complexity in the name of justifying the underlying cryptocurrencies.”

Weaver N., “The Web3 Fraud”, Usenix (2021).

clvii Blockchains use various measures to prevent this and other disasters, but it is difficult, if not impossible, to completely prevent privileged players from pulling strings. For example, one common approach transfers influence to those who have more cryptocurrency, hence the risk of plutocracy, in which power is concentrated in the hands of the wealthy.

clviii Packy McCormick writes the blog Notboring. He and Dixon wrote an article on the future of Web3 that was published in *The Economist*.

Dixon C., McCormick P., “On the future of crypto”, The Economist (2021).

clix *Galloway S., “Web3”, blog (2022).*

Galloway is a professor at New York University’s Stern School of Business, as well as a prominent podcaster and entrepreneur. In 2017, he published *Galloway S., The Four: The Hidden DNA of Amazon, Apple, Facebook, and Google (2017).*

clx According to McCormick, the critics are missing the point that people have choices and can move from one platform to another. But Moxie did not miss that point. On the contrary, he mentions it and calls it oversimplified.

clxi This definition was canonized by McCormick’s colleague Dixon in the article Why Web3 Matters. The term Web3 is generally believed to have been coined by Ethereum co-founder Gavin Wood in 2014. *Edelman G., “The Father of Web3 Wants You to Trust Less”, Wired (2021).* Gavin Wood, who coined the term Web3 in 2014, believes decentralized technologies are the only hope of preserving liberal democracy.

clxii For an accessible explanation of the nature of this polarization, which is well known to sociologists and political scientists, see Dror Poleg’s Abrogation Theory In a world with unlimited information, thinking for yourself is irrational.

- clxiii While decentralization is by default considered a good thing, it – like centralization – has disadvantages that top managers are aware of. Companies often swing like a pendulum from one extreme to the other, either concentrating power at the top or moving it down the organizational structure.
- clxiv In the mid-1970s, Benjamin Klein and Friedrich von Hayek (working independently of each other) both formulated the idea of denationalizing money and abandoning state control over it.
- Hayek F., Denationalization of Money (1976).*
- Klein B., “The Competitive Supply of Money”, in Journal of Money, Credit, and Banking 6(4) (1974), 423–453.*
- clxv Nouriel Roubini, a professor at New York University’s Stern School of Business, was a senior economist during the Clinton administration and worked at the IMG, the Federal Reserve, and the World Bank. He was one of the few economists to predict the crisis of 2007–2009. Roubini and Stephen Mihm cowrote *Crisis Economics: A Crash Course in the Future of Finance (2010)*, as well as articles about the “crypto-bubble” (2017), the “crypto-apocalypse” (2018), and dozens of others on the same topic.
- clxvi This is why no one will ever be using them. No one prices anything in Bitcoin. Few retailers accept it [...] [T]he profit margin of any merchant can be wiped out in a matter of minutes....” “And it is a poor store of value, because its price can fluctuate by 20–30% in a single day.”
- Unless otherwise noted, all subsequent quotes in this paragraph regarding cryptocurrencies were taken from Roubini’s testimony to the US Senate and are given here with minimal editing.”
- clxvii Roubini sees the crypto community’s critique of fiat currencies for being subject to inflation as pointless: “[F]or the last 30 years commitment to inflation targeting in advanced economies and most emerging markets has led to price stability (the 2% inflation target of most central banks).” I would add that inflation reached 10% or more in many countries in 2022.
- clxviii For instance, thousands of types of money circulated in the US in the mid-19th century. Issuers included states, municipalities, private banks, railroads, and even stores, restaurants, churches, and individuals. Today, some municipalities issue money to boost the local economy and tourism. Rogojanu A., Badea L., “The issue of competing currencies. Case study – Bitcoin”, in *Theoretical and Applied Economics XXI(1) (2014), 103–114.*
- clxix In some places in the world, grocery stores accept cash for payment in five different currencies, recalculating them at the register using the day’s exchange rate; This is easier in the digital world (at least in technical terms, not institutionally).
- clxx Indeed, this is considered Bitcoin’s main obstacle. If crypto assets are stolen, they cannot be found or recovered. All the possible solutions to this problem, Roubini explains, would mean a return to the Stone Age: write down the encryption key on paper and bury it in the backyard. Or place crypto assets in a “cold” crypto wallet that is disconnected from everything and wait in horror for crypto robbers who force you to reveal the key at gunpoint. As for crypto exchanges, they are regularly hacked.
- clxxi Kaiser B. et al., “The Looming Threat of China: An Analysis of Chinese Influence on Bitcoin”, in *arXiv.org (2018)* (analyzes China’s motivations for subverting Bitcoin and describes the potential attacks).

The book gives three reasons behind China's mining ban: 1) environmental concerns, 2) the risk of capital flight, and 3) the threat cryptocurrencies pose to e-RMB.

clxxii Energy consumption will be discussed below. Studies showing that Bitcoin technology is bad for the environment:

- Li J. et al., "Energy consumption of cryptocurrency mining: A study of electricity consumption in mining cryptocurrencies", in *Energy* 168 (2019), 160–168.
- Truby J., "Decarbonizing bitcoin: Law and policy choices for reducing the energy consumption of blockchain technologies and digital currencies", in *Energy Research & Social* 44 (2018), 399–410.

clxxiii Leading coins like Ether, EOS, Litecoin, and XRP have seen their prices drop by over 80%, thousands of other digital currencies have plummeted 90–99%, and the rest have been exposed as outright scams. Roubini mentions a scam that used Tether "stablecoins" to manipulate prices. Roubini N. Blockchain isn't about democracy and decentralisation – it's about greed theguardian.com, 15.10.18

clxxiv According to a 2016 report on this research, if Bitcoin were to replace national currencies, it would be a return to the gold standard. As in 1880–1913, central banks would not be able to dictate interest rates and adjust inflation. As unlikely as Bitcoin's widespread adoption may be, it could fundamentally disrupt the banking system.

Here is the Bank of Canada's position, as recounted to industry analyst Christopher Malmo by Warren Weber, a visiting scholar at the Bank: "So will bitcoin take over? Not if governments or central banks have anything to do with it. Weber argues that they'll 'take actions to prevent it,' for two reasons. One is to protect the revenues they bring in from 'the ability to almost costlessly create money...' The second...is to protect their ability to 'implement interest policies to affect their domestic economies. Governments would lose the ability to do either or both of these under the Bitcoin standard.'"

Malmo C., "What Would a Bitcoin Gold Standard Look Like?", Vice (2016).

clxxv The fact that billionaires are singing on to the Giving Pledge speaks to their morality, but it also indicates that their problematic fortunes – only a tiny percentage of which are spent on personal consumption – are receiving outsize public attention. It also shows that the bottleneck in charitable giving is not where to find money, but where to find ideas for spending it usefully.

clxxvi This is how I envisioned it in 2002 (condensed quote from my own book): "For gratitude payments, it would be useful to have a meta-currency that would circulate within the symbolic space while also being convertible to ordinary money. The two autonomous types of money would build out something like a two-coordinate system: the usually monetary axis would be in charge of the material sphere, and the "secondary money" axis would represent the symbolic sphere."

But no matter how culture might benefit from a parallel money system, it is practically impossible to implement unless existing money is used as a voluntary donation. The practical ideas of this book boil down to this one thing.

Dolgin A., The Economics of Symbolic Exchange (2009).

clxxvii Banks' compliance departments block transactions without explanation. Anything can be prohibited: sports betting, payments from Instagram followers or Patrons, money sent to lovers, or really anything you might not broadcast to the whole world. Ordinary transactions end up falling through because they can take months to clear compliance. Transfers between close relatives are declined all the time if compliance

deems that, for example, no one's children need that much money. While wealthy clients whose wealth was "obviously" ill-gotten come in for a fair amount of scrutiny, the same level of suspicion often falls on regular people earning regular salaries. Bureaucrats seem to think they can expose terrorist plots by examining payments of several hundred euros under a microscope. The greatest indignity is the moral corruption of bank employees, who put obstacles in people's way in the name of and on behalf of the state, of which they are cogs.

Roubini is blind to it all: "Until now, Bitcoin's only real use has been to facilitate illegal activities...." [emphasis added] His testimony is even amusing at times. Roubini's critique of the monopoly in Bitcoin ("...the top four [miners]...behave like any oligopolist: jacking up transaction costs to increase their fat profit margins") sits right next to his praise for the banking system, as if banks did not suffer from the same problem, as if the high commission for conversions were not just monopoly rent."

clxxviii At the same time, I see that government has grown too large and that its growth is becoming irreversible. Liberalism needs government that is strong but not omnipresent, as it has become, having established total control over money and becoming like Mancur Olson's stationary bandit, who receives everything he asks for in return for the protection he provides. Everyone knows that power corrupts, but no one ever thinks about how that applies both to those who possess power and to the citizens who become accustomed to their lack of independence. It is a vicious circle: the more government there is, the more people scurry to get under the cover it provides; this leads to more regulation (administrators have to keep busy), less free market, and more government.

clxxix "Unlike all self-interested crypto insiders and scammers who [...] spin their fake news," Roubini told the Senate, "I have zero position and financial interest in this entire space. I have zero long or short position in any coin or cryptocurrency and any blockchain business venture.... The only thing that is at stake is my personal, intellectual, and academic reputation."

clxxx Dimon recognizes that blockchain has advantages over the slow-moving banking system: "If you said to me, 'I want to send \$200 to a friend in a foreign country,' that could take you two weeks and cost you \$40. You could do it through a digital currency and it'll take you seconds." Ray Dalio, founder of the hedge fund Bridgewater Associates wrote that Bitcoin is a good tool for hedging against inflation, but it still loses out to gold in this context. Mark Cuban, who preferred bananas to bitcoin back in 2019 ("you could eat bananas"), has switched sides and is now a crypto enthusiast. Kevin O'Leary from Shark Tank once called Bitcoin "a giant nothingburger," but today he believes in stablecoins in light of the interest demonstrated by the governments of Canada and the UAE. I will just add that most of the world's billionaires have cryptocurrencies in their asset portfolios.

clxxxii A recent report from the Bank of International Settlements found this to be the case. Kosse A., Mattei I., *"Gaining momentum", in BIS Papers 125 (2022)*.

The report states that "[s]ingle-currency stablecoins are perceived to have the highest potential to become an alternative method of payment."

clxxxiii They will resist in order to preserve their revenue from issuing national currencies, first of all, but also to retain the right to dictate interest rates.

Malmo C., "What Would a Bitcoin Gold Standard Look Like?", Vice (2016).

The Bank of Canada imagines a bitcoin future in a new report. (Interest rates are the most important lever for controlling the economy, a kind of gas/brake pedal. Central banks also have regulatory powers over other banks.)

clxxxiii The accounts were frozen perfectly legally under a national emergency declaration. All crowdfunding platforms or payment processors participating in convoy-related fundraising were required to register with Canada's Financial Transactions and Reports Analysis Center. As a result, word spread that the financial system was threatening all aspects of life and that financial freedoms were coming to an end. For many people, the fact that the state guarantees money is a painful reminder of the lack of freedom, not only for anarcho-capitalists and libertarians, but for anyone who has suffered from the depreciation of money due to official actions or felt that they were on a short financial leash.

Tunney C., "Federal government invokes Emergencies Act for first time ever in response to protests", CBC News (2022).

Bradshaw J., "Emergencies Act will expand powers of Canadian banks to freeze accounts, halt funds", The Globe and Mail (2022).

clxxxiv The idea of a narrow corridor within which the benefits of democracy are realized was popularized by Acemoglu and Robinson. *Acemoglu D., Robinson J., The Narrow Corridor: States, Societies, and the Fate of Liberty (2019)*. But the belief that once we hit that corridor our job is done and it will hold onto us like a water park slide the rest of the way is nothing but illusion. Society risks falling out of its humanistic groove if it does not stop the Kafkaesque machine that regulates every cough and sneeze. While the average person is relatively resigned to the obstacles officials put in place, they are increasingly turning up and voting "unexpectedly" for populism, as they did during the presidential elections in the US, France, and other countries. Statist academics shrug their shoulders: why don't they appreciate first class banks? Why don't they understand? Whenever the state takes the initiative from the private sector, entrepreneurship is always marginalized, with all the consequences that entails. Those consequences cannot be fixed by ranting about guaranteed basic income, the disappearance of blue-collar jobs, and how machines are going to do everything for us.

clxxxv There are no simple explanations for what is happening on the frontier of science and technology. This reminds about a popular opinion that if someone truly understands something, they can easily convey this knowledge even to a child. But this is not the case. The only thing we really can do for complete amateurs, is to create an impression of clarity. For example, we can reduce the theory of relativity to the twin paradox and " $E=mc^2$ " memes. Simple explanations are simulacra of truth; they are almost never fully correct.

clxxxvi *Greenfield A., Radical Technologies: The Design of Everyday Life (2017).*

Greenfield admits the blockchain is an extremely complicated technological concept that is hard to grasp even for the smartest and most talented of us: "Should the reader lack an immersion in the body of shared assumptions that constitutes financial cryptography, meaning skips glancingly across the surface of the words. <...> At every step of the way, a new primitive seems to crop up – one fundamental term or idea that won't make sense until everything leading up to it has been worked out, but which absolutely must be defined before any of what's already been set down on the page makes the slightest bit of sense. <...> Thus the conceptual foggy that shrouds the subject of Bitcoin."

clxxxvii "Blockchains can be public (also referred to as open or permissionless), permissioned, or private. [...] Public blockchains typically allow any agent to potentially be a consensus recordkeeper via the protocol and randomization; permissioned blockchains have a prespecified group of recordkeepers; and private blockchains retain their irreversibility and tamper resistance property, but are mostly proprietarily maintained. Most

cryptocurrencies (e.g., Bitcoin) are based on public blockchains, whereas many enterprise applications rely on permissioned/consortium blockchains.”

Chen L. et al., A Brief Introduction to Blockchain Economics (2021).

clxxxviii This is why significant transactions like sales of real estate are conducted under the control of a third party. For most small purchases, buying and selling is just a direct exchange of goods for money. Immediately after the transfer of the goods, the buyer becomes the new owner. In other situations, a significant amount of time may pass between when a transaction closes and when the transfer of ownership is recorded. Often such situations arise in real estate transactions. This creates an opportunity for the seller to sell a single product to multiple buyers. It also creates opportunities for taking out multiple loans against the same property.

clxxxix Three generations of blockchain:

- Digital currency.
- Open finance (also called distributed finance, or DeFi: programmable money with expanded functionality. Ethereum created a virtual machine on top of the storage layer, allowing programs to be written and run directly on the chain. Ethereum smart contracts are serverless scripts that execute on the blockchain like Bitcoin transactions.
- Open internet: public tokenization of any content, anything can become money, connecting the internet with open finance.

Trautman E., “The Evolution of the Open Web”, Near (2020).

cxix Proof of Capacity (PoC) allows participating nodes to share memory. The more space on a node’s hard drive, the more rights it has.

Proof of Activity (PoA) is used on the Decred blockchain and is a hybrid of PoW and PoS. Proof of Burn (PoB) requires that a small amount of cryptocurrency be transferred to an un-spendable account, essentially “burning” them.

Proof of History (PoH) was developed by the Solana Project and is analogous to Proof of Elapsed Time (PoET) in that it cryptographically generates timestamps for blocks.

cxci A wing gains lift because its shape creates a difference in the air pressure above and below it.

cxcii Frederic Laloux wrote a book about them: *Laloux F., Reinventing Organizations (2014).*

Also see Mark Rozin on teal companies. Valery Razgulyaev analyzed the companies from Laloux’s study and found that they were far from 100% aligned with the term, “although they muse many teal management tools.” Teal may remain an ideal, but simply being aware of it humanizes corporate cultures. *Mahmoud F., “The Rise and Fall of a Teal NGO”, Stanford Social Innovation Review (2017).*

cxci “Blockchain fundamentalists’ ideal world is one in which all economic activity and human interactions are subject to anarchist or libertarian decentralization. [...] But [blockchain] has also become the byword for a libertarian ideology that treats all governments, central banks, traditional financial institutions, and real-world currencies as evil concentrations of power that must be destroyed,” Roubini concludes.

As Chen notes, “...many economists question whether a lot of the excitement about blockchain is merely excitement about database upgrade. We would like to point out that even permissioned and private blockchains represent important innovations rather than mere database upgrades for the following reasons: the consensus

generation process, though not fully decentralized, is often more decentralized than traditional systems; more importantly, the immutability of blockchain records coupled with proper encryption algorithms can enable proprietary databases [...] to interact to produce useful information aggregation, verification, and exchanges, all without sacrificing data privacy. This was difficult to achieve before the introduction of secure multi-party computation, one of the most important developments in computer science over the past few years. It also allows us to enhance traceability of offline assets/products by recording their origination and path of ownership in a tamperproof manner....” *ibid*.

^{cxciv} Roubini finds the idea of non-mediation absurd because any contract can be broken unless the financial agreements are 100% backed by money, which is not feasible.

Chen sees the idea that blockchain completely eliminates intermediaries as indeed unfounded, but its openness causes competition between intermediaries to go up and commissions to go down. *Ibid*.

^{cxcv} It is worth noting that government agencies disclose title records, and in Norway they even release data on citizens’ tax payments.

^{cxcvi} Roubini: “...[I]n cases where distributed-ledger technologies – so-called enterprise DLT – are actually being used, they have nothing to do with blockchain. They are private, centralized, and recorded on just a few controlled ledgers. They require permission for access, which is granted to qualified individuals. [...] [P]erhaps most important, they are based on trusted authorities that have established their credibility over time. All of which is to say, these are “blockchains” in name only. [...] So it is no surprise that whenever “blockchain” has been piloted in a traditional setting, it has either been thrown in the trash bin or turned into a private permissioned database.”

^{cxcvii} TCP/IP (Transmission Control Protocol/Internet Protocol) is a set of communication protocols used to connect network devices on the internet (and intranet). TCP/IP defines how data is exchanged over the internet, providing end-to-end communications, including how data must be packetized, addressed, transmitted, routed, and received at its destination. TCP/IP requires minimal centralized management and is designed to ensure network reliability with the ability to automatically recover from the failure of any device on the network.

^{cxcviii} Single Points of Failure (SPOF) are undesirable in any system. With a multitude of nodes duplicating each other’s work, the failure of one node will not shut down the entire network. It’s the same in a human context: bribing a single judge is easier than buying off a whole judicial panel. When crypto exchanges are hacked or DAOs are attacked, it affects wallets and accounts. Here are some high-profile examples of SPOF: Facebook’s data leak to Cambridge Analytica and Google’s €57 million fine for violating GDPR. If the system were decentralized and peer-to-peer, failures would be less likely.

^{cxcix} I am referring to the distribution of securities (crypto tokens) among early adopters (ICO), as well as rewards for user efforts, which UGC platforms do not do because they monetize attention and data exclusively for their own benefit.

^{cc} Roubini: The very fact that Buterin is considered a “benevolent dictator for life” refutes the assertion that “code is law” and that the software underlying blockchain applications is immutable. The truth is that developers have absolute power to act as judge and jury. “[W]hen something goes wrong in one of their buggy “smart” pseudo contracts and

massive hacking occurs, they simply change the code and “fork” a failing coin into another one by arbitrary fiat, revealing the “trustless” enterprise to have been untrustworthy from the start.”

- ccii Roubini: [W]ealth in crypto-land is more concentrated than in North Korea where the inequality Gini coefficient is 0.86 (it is 0.41 in the quite unequal US): the Gini coefficient for Bitcoin is an astonishing 0.88.”

There are other ways of estimating the concentration of wealth that make Bitcoin look slightly better, but Roubini is right to point out the high numbers.

- ccii There are other connected compromises in blockchain technology, such as transparency, immediacy, and level of adoption.

Chen points out that Brewer was talking about this back in 2000 (*Brewer E., “Towards robust distributed systems”, in Proceedings of the Nineteenth Annual ACM Symposium on Principles of Distributed Computing (2000)*), and two years later Gilbert and Lynch provided strict confirmation (*Gilbert S., Lynch N., “Brewer’s conjecture and the feasibility of consistent, available, partition-tolerant web services”, in ACM Sigact News 33(2) (2002), 51–59*).

- cciii Nakamoto, who came up with the concept of Bitcoin mining (essentially PoW), assumed that a new block would be added to the longest chain. Heuristic argument: token rewards are only paid if others follow the chain, so it is highly likely that the fraudulent branch will be shorter than the one accepted by the rest of the community. There are other heuristics, such as the “first look rule,” which instructs miners to add blocks to the heaviest chain.

- cciv When Bitcoin was cheap, mining was cheap. But as Bitcoin has grown, mining has become more profitable and miners have invested more resources in it. Bitcoin’s software responds to competition by increasing computational complexity. Hence the intensive energy consumption, as well as the dominance of centralized mining farms, which creates a vulnerability: theoretically, the blockchain can be rewritten by the party that controls most of the mining. Mining farms are generally installed next to hydroelectric power plants and in cold regions such as Canada, Russia, and China. (China banned mining in 2021.)

- ccv *Hafid A. et al., “Scaling Blockchains: A Comprehensive Survey.”, IEEE Access 8 (2020).*

Solutions to the blockchain scalability problem can be sorted into two levels. Level one solutions offer modifications to the blockchain (for example, increasing the size of blocks), while level two solutions are implemented outside the chain. Among level one solutions, the review’s authors focus on sharding, or dividing the network into multiple committees, each of which processes its own set of transactions.

Level two solutions can also be divided into two classes: sidechains (e.g. Plasma, Root-Stock) and payment channels (e.g. Lightning Network, Raiden Network). The tables below show the results of a comparison.

Another alternative to PoW is Byzantine Fault Tolerance (BFT), but it only works with a small number of members and does not scale well in open environments, which limits its use. There is a fair amount of interest in modifications of BFT: practical BFT (pBFT), hybrid BFT, delegated BFT, obfuscated BFT, simplified BFT, and VBFT, involving PoS. Facebook’s Libra stablecoin relied on a version of BFT as part of its consensus protocol.

Castro M., Liskov B., “Practical byzantine fault tolerance and proactive recovery”, ACM Transactions on Computer Systems 20 (2002), 398–461.

- ccvi *Biais B. et al., “Strategic interactions in blockchain protocols: A survey of game-theoretic approaches”, in Principles of Blockchain Systems (2021), 155–174.*

This article states that miners are turning to transaction rewards as bitcoin become scarcer, raising unpredictable problems.

See also *Easley et al., “From mining to markets: The evolution of bitcoin transaction fees”, in Journal of Financial Economics 134(1) (2019), 91–109.*

Chen gives a list of papers that analyze the ways in which miners can attack the system. For example, selfish mining, in which participants or pools of participants hide mined blocks so that honest miners keep looking for them while they get a head start looking for the next block; eventually this leads to an attack by the majority.

Chen L. et al., A Brief Introduction to Blockchain Economics (2021).

- ccvii “Supporters of crypto argue that it would not be in the interest of an oligopoly of miners to start a 51% as it would destroy their source of income/fees. But leaving aside that such an attack would allow them to steal the underlying assets – worth in some cases dozens of billions of dollars as in the case of BTC. The main problem is any oligopolistic cartel will end up behaving like an oligopoly: using its market power to jack up prices, fees for transactions and increase its profit margins.”
- ccviii Roubini: “[W]hen something goes wrong in one of their buggy “smart” pseudo-contracts and massive hacking occurs, they simply change the code and “fork” a failing coin into another one by arbitrary fiat, revealing the entire “trustless” enterprise to have been untrustworthy from the start.”
- ccix Roubini expands on this idea: “Although we can be fairly certain that blockchain will not unseat TCP-IP, a particular blockchain could eventually set a standard for specific private permissioned, not general and public, applications, just as Enterprise Linux and Windows did for PC operating systems. But betting on a particular “coin,” as many investors currently are, is not the same thing as betting on adoption of a larger “protocol” that does not require the use of any coin.”
- ccx The term “smart contract” was coined by cryptographer and cypherpunk Nick Szabo in the mid-nineties; two decades later, smart contracts became the basis of Ethereum. All the terms of smart contracts must have a clear, logical path to performance that can be coded, so they are being used for only the simplest transactions.
- ccxi Smart contracts are easier to use with assets in the digital ecosystem. It requires special effort to connect them to the physical world, even though that is where most of the transaction costs are concentrated, such as notary fees and title company fees for attesting that your property does, in fact, belong to you and that it has the characteristics you say it has. In other words, a smart contract can automatically pay for goods, but you still need a trusted party to verify that the goods were delivered and conform to what was promised.
- Oracles can be centralized or not, which is the source of their problems. If the oracle is centralized, there is the risk of hacking – the so-called man-in-the-middle attack. Decentralized, consensus-based oracles operate using multiple data sources, but this does not solve the problem.
- ccxii “Everyone says the blockchain [...] is going to change everything. And yet, after years of tireless effort and billions of dollars invested, nobody has actually come up with a use of the blockchain – besides currency speculation.” *Stinchcombe K., “Ten years in, nobody has come up with a use for blockchain”, Medium (2017).*

ccxiii In this regard, he mentions a case where, due to a software bug, the DAO “voted” to invest \$50 million in a vehicle run by “...very clever programmers who knew a lot about recursion issues during balance updates.” [...] In the end, everyone got together and voted to retroactively amend the software contract and move the money back to its original owners.”

ccxiv The movie “Line Goes Up – The Problem With NFTs” (2022), is a critical review of the cryptocurrency and Web3 universe, examining its roots and history so far..

See Olson’s interview: *Levinson E., “Meet the Guy Who Went Viral for Explaining How NFTs Are a ‘Poverty Trap’”, Vice (2022).*

Takeaways from Olson’s interview:

- Many of blockchain’s innovations are attempts to solve problems it caused.
- The only thing that cryptocurrencies have succeeded in doing is disrupting the market for common scammers.
- The biggest problem with cryptocurrencies is the lack of things that can be bought with them (including due to “gas wars” and the high cost of transactions).
- There is not enough cash in the ecosystem to transfer large blocks of stablecoins into it. Those behind the coins also own the places where they are exchanged for dollars, and there is evidence that resources are simply being transferred from one pocket to the other. Crypto whales are suffering from a shortage of buyers. To cash out their assets, they need to convince someone else to buy them.
- The ultimate goal of this machine is to monetize everything.
- NFTs exist to provide cryptocurrencies with credibility and functionality, and this benefits crypto scammers. The only purpose that artists serve is to boost crypto by purchasing coins to mint NFTs.
- A smart contract is a reward for an error.
- If you are tricked into doing something, all subsequent actions on the distributed ledger are legal.
- The epidemic of fictitious trading on Opensea is due to Sybil attacks and people buying bored ape NFTs from themselves for hundreds of thousands of dollars.
- A low-trust environment is also a low-confidentiality environment.

ccxv Tokens are required to access the crypto-economy, and stablecoins avoid the risk of volatility, at least in theory. In practice, stablecoin issuers are not always able to maintain a peg to the dollar. *Poleg D., “Are Stablecoins Stable?”, LinkedIn (2022).*

The top ten crypto assets suffered the most severe, rapid decline in the market’s history, absorbing about 80,000 Bitcoins that were sold in a futile attempt to restore the UST peg to the dollar. The \$UST stablecoin (see below), which is the third largest stablecoin, fell as well, generating panic.

At the same time, the \$UST governance token LUNA lost 99% of its value, falling from \$24.14 to \$0.1538, which created the risk of a takeover if someone bought up 50+% of the votes in the ecosystem. In response to this incident, US Treasury Secretary Janet Yellen called on Congress to quickly pass legislation regulating stablecoins, citing UST as an example.

Background information: TerraUSD (UST) is a decentralized algorithmic stablecoin pegged 1:1 to the US dollar. It is not backed by the dollar or by any commodity. Instead, UST relies on a smart contract algorithm that monitors demand for TerraUSD (UST) and adjusts its supply to maintain a value of around \$1. If the supply increases and the value of UST decreases, then the algorithm encourages users to burn UST to mint new LUNA coins, and vice versa.

^{ccxvi} Olson aphoristically called every smart contract a bug bounty. Newton recalls how resourceful players bought up high-priced NFTs listed on OpenSea below their value and resold them without the true owner realizing what was happening. (*Gkritsi E.*, “*NFT Marketplace OpenSea Launches New Listing Manager After Discount Bug*”, *CoinDesk* (2022).) Newton explains that OpenSea’s lack of listing oversight and the irreversible nature of blockchain-based transactions creates a situation where spoofing victims have no other recourse but to beg the platform for compensation. What was striking about this story was OpenSea’s reaction: a company representative said that “this is not an exploit or a bug,” but rather “an issue that arises because of the nature of the blockchain.” To paraphrase Newton, it’s as if a bank tried to justify losing its clients’ money by pointing to its accounting system.”

^{ccxvii} More precisely, bonded proof of stake of delegated proof of stake: any owner of SOL tokens can delegate their votes to the validator they choose and share with that validator the rewards or penalties for verifying transactions. According to Buterin, most high-throughput DPoS (similar to BPoS but with some differences) blockchain are secure and scalable, but not decentralized.

^{ccxviii} The Tor network offers true anonymity through its “onion encryption” technology: the connection is encrypted in several layers and transmitted through several layers, each of which knows only the previous and next participant in the chain and removes only one layer of encryption.

^{ccxix} In an interview with Camila Russo, Buterin named some of his favorite DAOs, including a defense fund for Julian Assange. He also pointed to Ethereum Name Service (ENS) and decentralized voting tools such as CLR Foundation as good use cases for blockchain.

See *CoinYuppie* (*Camila Russo*) interview with Vitalik Buterin on YouTube.

It should be noted that developers, including blockchain mouthpieces, do not deign to explain how the stated ambitions fit in the ammunition, putting everyone off with hints and presentations that are nothing more than screenshots of road maps. This may be justified by a need for secrecy, but it will not convince anyone of blockchain’s operability and reliability, given that we are talking about unverifiable characteristics.

^{ccxx} I think it will take much longer. After all, mechanical engineers did not sit down in a day and invent automation and robots, and it took decades for the automobile industry to displace horse-drawn carriages; that said, blockchain supporters have plenty such arguments without my help, but so far they have not convinced their opponents. Ten years is not enough time to talk about the viability or failure of an institutional shift of this magnitude. In the past, the type of change took centuries. Machine learning, too, experienced winter seasons before it shocked the world with conversational apps like ChatGPT.

^{ccxxi} According to an annual game industry survey, more than 70% of employees surveyed said their studios are not interested in integrating cryptocurrency payments or NFT mechanics into their games. *Zandt F.* “*Game Over for Crypto and NFTs in Games?*”, *Statista* (2022). After playing around with blockchain, many users have either sent it to the rubbish bin or applied it in ways that have little in common with a public blockchain. This is bad for the crypto web since games are an important part of the metaverse.

^{ccxxii} Chen’s position is that “[w]ishful ideology or Utopian dreams of full decentralization are not going to effectively propel the industry forward.”

Chen's work provides examples of applications and references to research: *Chen L. et al., A Brief Introduction to Blockchain Economics (2021)*. *Schneider N., Cryptoeconomics as a Limitation on Governance (2022)*.

Galloway is also moderately optimistic about Web3's prospects: "There is likely great potential in blockchain technology, tokens, and smart contracts and much of this innovation will be enduring. DAOs offer the potential to modernize organizational and corporate governance.... However, like most 'revolutionary' technologies, they will ultimately prove evolutionary, changing lives in ways that are meaningful, but likely less dramatic than envisioned. [...] But there's a reason entities of any size, from school districts to shoe companies, adopt a representative model instead of attempting pure democracy. Leadership, expertise, and accountability improve outcomes...." *Galloway S., "Web3", blog (2022)*.

ccxxiii From *@Cooopahtroopa, "DAO Landscape", Paragraph (2021)*:

According to a16z, "DAOs...may become the default mechanism for facilitating collaboration in the 21st [century]. DAOs enable individuals to collaborate, manage projects, own assets, invest, and operate like a traditional organization, but they can provide far greater levels of transparency, openness, and democratic governance. [...] [T]here is currently no clear path for DAOs to perform three basic functions of an organization: enter into legal contracts, benefit from limited liability, and pay taxes. [...] Federal policymakers should establish a clear framework for DAOs to participate fully in the economy."

ccxxiv People are looking for ways to use smart contracts in finance, insurance, e-commerce, and auditing, all of which are fairly easy to formalize. Ant Financial is implementing blockchain technology in philanthropy. Bill Gates shared his experience funding poorer countries and getting "money out to their citizens very, very efficiently." See also <https://www.thenonproffitimes.com/technology/blockchain-gaining-ground/>.

A number of tasks meet the criterion of being formalizable: for example, transactions with commodified goods and NFTs, corporatization, royalties transfers, payments for simple, factually verifiable actions (such as sending messages, viewing advertisements, or liking content). Product and cash flow traceability enables firms to effectively utilize receivables and collect payments from banks. Obviously, the more complex the product, the sooner the hierarchy takes over. There is no escape from specialization, coordination, delegation of tasks according to experience and qualifications, or from individual preferences.

Buterin denounces coin voting in DAOs, calling it a form of plutocracy. "It's become a de facto standard," he told Time, "which is a dystopia I've been seeing unfolding over the last few years."

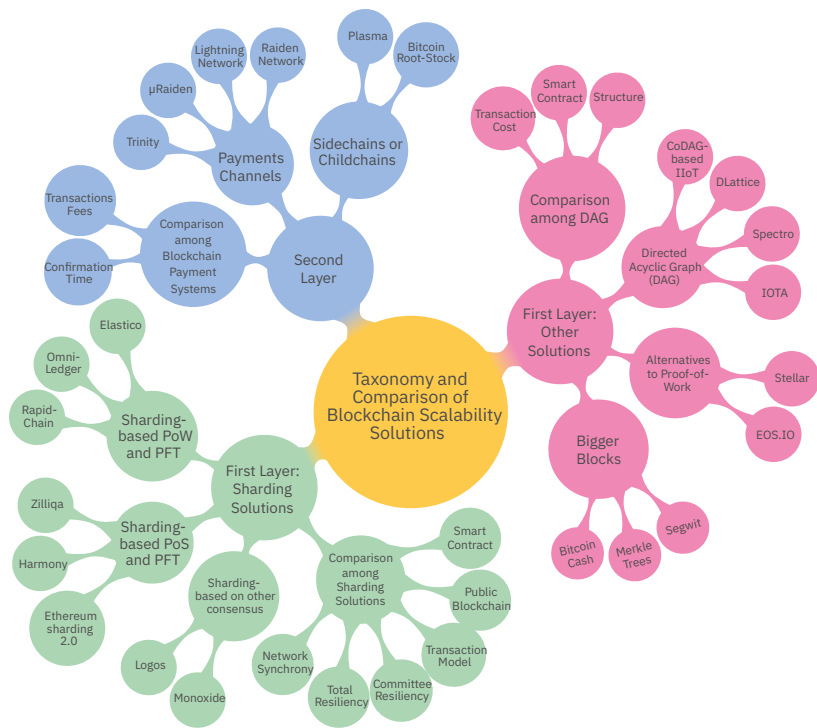
ccxxv The \$69 million deal mentioned above looks strikingly like a transfer of money from one pocket to the other. David Gerard investigated it and found that Bepple (the seller) is a business partner of Metakovan (the buyer), which owns 2% of B20 tokens. Speaking sarcastically, Gerard is "...sure there is no conflict of interests here."

Gerard D., "Metakovan, the mystery Bepple art buyer, and his NFT/DeFi scheme", blog (2021).

ccxxvi Work is being done to scale both the first layer of the blockchain (sharding, larger blocks, DAG) and in the second layer, where payment channels, side chains, and the like are being constructed.

Hafid A. et al., "Scaling Blockchains: A Comprehensive Survey.", IEEE Access 8 (2020).

TAXONOMY OF APPROACHES



ccxxvii Instead of relying on a multiplicity of uninformed heads, you can use fewer heads that are better prepared. You can dig through tons of notes about the metaverse, or you can turn to an expert or someone who can tell you where to find an expert. There are plenty of such people, which is why ratings – and ratings of ratings – come into existence.

ccxxviii Getting close to 100% security is sufficient for many practical purposes. It’s not a big deal if your phone doesn’t recognize you on the first try. UAVs are supposed to have close to absolute reliability; this has not been achieved, but they are still expected to put vehicles on the road in full automation mode (level 5 under the SAE J3016:2021 standard). A good benchmark for automated vehicles would be matching the natural rate of traffic accidents, but that is difficult to explain to people.

ccxxix Sharding is the division of databases, individual objects, or search engine indexes into independent segments, each of which is controlled by a separate fragment of the database server, usually located on a separate computing node, so that distributed computing can be used.

ccxxx *Chow A., “The Man Behind Ethereum Is Worried About Crypto’s Future”, Time (2022).*

Buterin’s sentiments resonate with intuitions voiced by Nathan Schneider, who ponders the fundamental questions of blockchain: what governance options are eliminated when institutions seek to reduce the space of trust? What things does the “trust machine” fail to measure or distort when it measures them?

Schneider N., Cryptoeconomics as a Limitation on Governance (2022).

From the article: “But for cryptoeconomics to achieve the institutional scope its advocates hope for, it needs to make space for less-economic forms of governance.” [emphasis added]

Schneider differs from me in that he defines the non-economic as political: "...cryptoeconomic projects need to rediscover older habits of political life. This entails enveloping economics within rules set by institutions no primarily economic in nature, which are capable of articulating, instantiating, and evolving shared understandings of the common good."

ccxxxii Here are Moxie's exact words: "I can easily see why so many people find the Web3 ecosystem so neat. I don't think it's on a trajectory to deliver us from centralized platforms, I don't think it will fundamentally change our relationship to technology, and I think the privacy story is already below par for the internet (which is a pretty low bar!), but I also understand why nerds like me are excited to build for it. It is, at the very least, something new on the nerd level – and that creates a space for creativity/exploration that is somewhat reminiscent of early internet days. Ironically, part of that creativity probably springs from the constraints that make Web3 so clunky." See *Shapiro E., "The Metaverse Is Coming. Nvidia CEO Jensen Huang on the Fusion of Virtual and Physical Worlds", Time (2021).*

ccxxxiii As for Olson's own views, he may use the word trust every now and then, but as Casey Newton noted, he sees crypto solely "...through the lens of rising inequality, pandemic-era isolation and loneliness, self-dealing venture capitalists, and a desperate sense among young strivers that the future is only ever getting smaller."

Newton C., "Three things Web3 should fix in 2022", Platformer (2022).

ccxxxiiii Buterin and others who care about blockchain's fate are right to be concerned about commercialization, but the unsecured lending mentioned in the article – with SBT-confirmed reputation serving as collateral – is almost comically dissonant with the anti-mercantile pathos. Such lending is an interesting idea, but it is not clear how one might use as collateral something that cannot be sold.

ccxxxiv Buterin seems to understand this on an intuitive level: at the EthCC conference in Paris in 2021, he expressed his hope that Ether will become the basis for a new ecosystem of social networks that encourages quality publications.

ccxxxv Kolonin A. et al., "A Reputation System for Artificial Societies", in *ArXiv (2018).*

Here are the article's points that are relevant to our discussion:

- The time has come for hybrid ecosystems that unite humans and computer systems by means of artificial intelligence.
- Participants' capabilities are determined by the amount of reputation, social capital, or "karma" they have actually earned in interactions with other participants, taking into account the reputations of those other participants.
- The article describes an algorithm based on the principle of "fluid democracy," where the votes of some participants implicitly influence others' votes, flowing into them; this is called the "fluid ranking" or "liquid rank" algorithm. *Aigents, "Proof of reputation as Liquid Democracy for Blockchain", Steemit (2017).*
- The value of a participant's vote concerning a service provider's qualifications can increase based on the cost of the entire service within the system.
- Ratings obtained for different aspects can be synthesized to infer a participant's overall reputation. The article also examines the concepts of "Reputation consensus," "Proof-of-reputation" and "Reputation mining."

ccxxxvi There have been extensive studies of the reliability of participants' reputations in decentralized systems. *Swamynathan G. et al., "The design of a reliable reputation system", Electronic Commerce Research 10(3-4) (2010), 239–270.* In blockchains, various forms of

weighted voting are used to achieve consensus, each of which relies on its own heuristics about how far to trust a network's nodes.

Cachin C., Vukolić M., “Blockchain Consensus Protocols in the Wild”, in arXiv (2017).

ccxxxvii This is why they got together – to help each other find interesting content with the support of recommendation algorithms. This is pure UCC (user certified content).

ccxxxviii Without human participation, projects will continue to stumble over the same limitations as cognitive AI, which is devoid of human emotion. It is futile to postpone emotions for later in hopes of nailing them onto algorithms developed using a computational approach. The processes of perception and cognition in humans are inseparable from emotions. Emotions and cognition are two parts of a whole; the modeling cannot be modular, but requires a single architecture for implementation.

Pessoa L., “Do Intelligent Robots Need Emotions”, in Trends in Cognitive Sciences 21(11) (2017), 817–819.

ccxxxix But he does not elevate it to an absolute, admitting that there are all sorts of applications that do not require decentralization and that different levels of control are valuable. Specifically, he states that decentralization is not necessary for one-off interactions.

See *CoinYuppie (Camila Russo) interview with Vitalik Buterin on YouTube.*

ccxl Ethereum projects raised over \$20 billion through ICOs in 2017 and 2018. In January 2019, Ethereum fell by more than 90% and the ICO boom ended, but by January 2021, NFTs and DeFi powered a new surge. Then Bitcoin and Ethereum fell by more than 50%, some cryptocurrencies reached zero, and many predicted a long winter for crypto.

Despite dire predictions, \$70 billion has been poured into various projects, venture capital funds have raised more than \$15 billion (see the table below), and Stripe, Meta, Shopify, JP Morgan, Goldman Sachs, and others are integrating cryptography into their businesses.

ccxli Poleg says we cannot be certain that Web3 will be fairer and freer by default, but that it will generally create more freedom of action. As a blogger, he has great respect for social capital, and views the threat of losing access to accounts on multiple platforms as more serious than the threat of losing his citizenship.

This sounded alarmist in January 2022, but one month later that “someday” arrived for Belarusians and Russians. Repressed by their own governments, who they hoped would lose their war, many citizens lost the lion's share of their social capital while also being subjected to discrimination in the countries they emigrated to and where they were cut off from the banking system. Some internet services, such as the Swiss ProtonMail, also participated in the persecution.

ccxlii There is gossip to the effect that Zuckerberg has switched all his attention to the metaverse, which has yet to earn revenue despite the tens of billions of dollars invested in Reality Labs, which is responsible for the development and production of virtual and augmented reality devices – the very engine of his metaverse strategy. If his bet on the explosive growth of virtual worlds does not pay off, these and subsequent investments will turn into losses.

ccxliii He writes: “It’s easier to build things the lazy centralized way, and it takes serious effort to ‘do it right.’ <...> [N]ew projects are slow to ramp up, and the centralized workarounds have had years of head start.”

In his interview with Camille Rousseau, Buterin repeated for the hundredth time that the need for decentralization is often overlooked until it is obvious. Developers need assurance that their platforms and ecosystems won't be hijacked by a small number of people.

- ccxliiv Gamers were always looked down on, like overgrown boys playing with trains. COVID encouraged the skeptics to make themselves at home in virtual worlds. This was followed by economic injections: 1) investments in virtual assets (through cryptocurrencies and NFTs); 2) gaming platforms have become attractive for marketing, with non-gaming brands and talent investing in them, from Prada, Ford and Gucci to the footballer Neymar and the rapper Travis Scott.
- ccxlii Warhammer, Minecraft, Cyberpunk 2077, Fallout, Fornite, Final Fantasy, and other games have elements of a metaverse. Second Life, a three-dimensional virtual space with elements of a social network, is definitely a metaverse, as are VRChat and EVE Online. Even a simple online game like Grand Theft Auto Online is a sort of metaverse.
- ccxliii The author depicted a comprehensive 3D world of the future internet that both simulates and complements physical reality. In Stephenson's novel, the metaverse is a shared "imaginary place" where there are buildings, parks, signs, war zones where people hunt and kill each other, and zones where the rules of three-dimensional space are ignored. The online worlds Active Worlds and Second Life were inspired by Stephenson's Metaverse, which also popularized the avatar.
- ccxlvi
1. Hardware required to create, immerse oneself in, act and interact in and with the metaverse: cell phones, VR headsets, haptic gloves, and enterprise equipment like professional cameras, projection and tracking systems, and scanning sensors.
 2. Networking. A real-time, high-capacity network powerful enough for millions of users to access it simultaneously. This requires decentralized data transfer.
 3. Computing. Must be powerful enough to render objects and to coordinate and synch data between artificial intelligence, projections, motion capture, etc.
 4. Virtual platforms: immersive simulations of environments and worlds.
 5. Interchange tools and standards. Like Web 2.0, the metaverse will need new formats, services, engines, and everything else that supports interaction between people.
 6. Payments. According to Ball, the economy of the metaverse needs decentralized payment services and conversion of cryptocurrencies into freely convertible currencies.
 7. Content, services, and assets. The metaverse must be filled with new types of content if it is to attract residents. To do this, it will need its own business models and digital asset management system.
 8. User behavior
- ccxlviii All of these may ultimately end up the same, but the order of the moves matters. It would be a shame to take a decades-long detour and not see (or wait for) anything truly exciting. A metaverse of people is a merger of the physical and cyber worlds into a single immersive 3D environment encompassing trade, communications, and entertainment. A metaverse of things is an alliance of objects from the real world and their digital twins that is used to train AI and practice operating in the physical world. China has already mastered the technology of building digital twins of industrial and logistics complexes, such as Yangshan port in Shanghai. Next up is the creation of digital self-optimizing models of smart cities, followed by a digital transformation of industry, with all its sectors recreated in the metaverse. Huawei is leading this project.

See also *Todorovic N., "Balkanized" Internet The Dark Future of Decentralized Internet?*, *Hackernoon* (2022).

ccxlix The action takes place in 2045. The characters spend a significant portion of their lives in a computer game called OASIS, a kind of three-dimensional Facebook where people can work, study, and hang out. However, the principles on which this virtual world operates are presented sparingly, and its economy is incomprehensible (or absent). Critics saw Ready, Player One as the embodiment of the trends of its time: nostalgia for the eighties, retrogaming, geek culture's transition into the mainstream, postmodernism, imitation to the point of plagiarism, and a lack of ideas. They noted the book's attempt to convey a moral idea – virtual is good, but we need to get outside more because the real world is the only place you can get something real to eat – but they found it to be superficial.

ccl Taras Ostapchuk worked on a yacht belonging to Rosoboronexport CEO Alexander Mikheev and estimated to be worth €7 million. On February 26, 2022 he sank it in the port of Mallorca as revenge for the shelling of a residential building in Kyiv at 7A Lobanovsky Street. Ostapchuk told the police that the yacht's owner was a criminal who made his living selling weapons used to kill Ukrainians. As a result, he was released from custody and is treated like a hero.

ccli Daniel M'Naghten suffered from a delusion that he was being hunted: he believed that the ruling Conservative party had declared war on him. Supposedly the Tories were spying on him and had brought his business to ruin. He decided to launch a pre-emptive strike. His intended victim was prime minister Robert Peel, but he accidentally shot the prime minister's secretary, Edward Drummond, instead.

cclii Since then, the M'Naghten Rules have been the standard criterion in common law jurisdictions for deciding whether or not defendants with mental disorders can be held criminally liable. According to the rules, the accused can be found “not guilty by reason of insanity” or “guilty but insane” and be sentenced to treatment instead of punishment.

One of the questions asked in the House of Lords was: “If a person under an insane delusion, as to existing facts, commits an offence in consequence thereof, is he thereby excused?” The judges answered thus: “making the same assumption as we did before, namely, that he labours under such partial delusion only, and is not in other respects insane, we think he must be considered in the same situation as to responsibility as if the facts with respect to which the delusion exists were real.”

M'Naghten's Case, United Kingdom House of Lords (1843).

M'Naghten was acquitted, not because he lived in an illusory world created by his sick imagination, and not because he could not control his actions, but because in his imaginary world he was being hunted politically and acted out of self-defense. If, still delusional, he had shot Drummond to send Peel a message, he would most likely have been sentenced to hang, since this would no longer be self-defense even in the world of his own madness.

ccliii Should we regard their miscalculations as malpractice or attribute them to the blinders of economic theory? Allow me to remind you that one of the miscalculations was that, having accepted that a human life was worth \$5 million, the economists failed to take into account the fact that not all lives were at stake, but one-twentieth of them.

See Frijters P. “*The corona cost-benefit analyses of Richard Holden, Bruce Preston and Neil Bailey: oops!*”, *Club Troppo* (2020).

ccliv But then, Vakhshstein concludes, turning a blind eye to the fiscal side of the matter, “In the wake of the FBI's lawsuit against Linden Lab Corp, the developer of Second Life, Game

of Thrones fans should sue writer R. R. Martin for the murder of the only positive character, Edward Stark.” And he asks the question, “How do we distinguish between an author’s worlds and worlds not made by human hands? Dreams and madness are presumably not attributable to an author, but Linden Lab is the creator of Second Life. Does this mean that there is no difference between Second Life and the world of insanity? For James and Schutz, despite all their differences, the answer is no. That makes it impossible to establish the extent of the demiurge’s liability.”

Vakhshtain points out that “Irving Hoffman abandoned the axioms of James and Schutz and introduced into theory the figure of the ‘creator of reality:’ worlds are no longer closed and everyday life no longer occupies a privileged place among them.”

That does not answer the question of who occupies a world and whether or not it can be vacant.

cclv He seems to assume that Meta is doomed to success and that it would be beneath him to resort to such effective means of inciting fantasies as adult applications. Be that as it may, it is no accident that the sex industry – respectable or not (see the classification at the end of this note) – is considered the internet’s technological frontier. Sex will drive VR, where it will produce changes comparable in significance to the development of contraceptives. This book is not the place to examine all the options, but the film industry is paying attention; consider, for example, the “Black Mirror” episodes San Junipero (2016) and Striking Vipers (2019).

cclvi Hurtado J. Towards a postmortal society of virtualised ancestors? The Virtual Deceased Person and the preservation of the social bond, 2021. The article introduces the concept of a thanatechnological artifact with the character traits and manners of the deceased that functions as a posthumous social actor. It also includes a bibliography of note to anyone interested in the topic. Some examples:

Bassett D., “Who wants to live forever? Living, dying and grieving in our digital society”, *Social Sciences* 4(4) (2015), 1127–1139.

Bassett D., “Digital afterlives: From social media platforms to thanabots and beyond”, in *Death and Anti-Death* 16, 2018.

Sofka C., et al. “Digital immortality or digital death?”, in *Postmortal Society* (2017).

Researchers in the field of digital immortality have focused either on social effects or on technology; only a few, among them Zygmunt Bauman, have paid attention to the ontological status of digital immortality. Bauman Z., *Mortality, immortality, and other life strategies* (1992).

cclvii Dismantling the boundaries between life and death (Howarth G., “Dismantling the boundaries between life and death”, in *Mortality* 5(2) (200), 127–138). leads to societies in which digitized ancestors participate in real-world events and even begin to influence them. Meese J., et al., “Posthumous personhood and the affordances of digital media”, in *Mortality* 20(4) (2015), 1–13.

Skeptics call this kind of immortality “digital endurance.” See Kasket, E. *All the ghosts in the machine: Illusions of immortality in the digital age* (2019).

cclviii In Nozick’s thought experiment, the subject is asked to imagine a pleasure machine that can give them any experiences they desire. The question is: would you agree to be connected to it forever, provided that you believe everything is really happening? The same question: “Suppose there were an experience machine that would give you any experience you desired. Superduper neuropsychologists could stimulate your brain so that you would

think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, preprogramming your life's experiences? [...] Of course, while in the tank you wouldn't know that you're there; you'll think it's all actually happening. [...] Would you plug in?" Nozick's answer is a resounding no. It is preferable to live in contact with reality; without it, pleasures lose their meaning.

Nozick R., *Anarchy, State, and Utopia* (1974).

cclix Chaabane R., "Is the Chinaverse ready to take over the world?", *Canmaign* (2022).

According to Fabernovel, the "meta wave" has already reached China with the support of Tencent, Alibaba, ByteDance, and Baidu, which are all controlled by the Communist Party. The Chinaverse, it should be noted, relies on a centralized blockchain owned by the Chinese government, whose vision includes crackdowns on cryptocurrencies, restrictions on NFTs (see the link at the end of this note), and "red zones." Meanwhile, the Chinese Communist Party supports the development of the metaverse and Web 3.0.

According to Zhiyan Consulting, in 2022 Chinese investments in the metaverse are growing exponentially year-on-year; the market is estimated to be worth \$8 trillion. (See Zhivan's forecast analysis for 2022–2028).

In 2022, the Chinese Academy of Governance launched a "metaverse-empowered party-building" system. *Fabernovel, Into the Chinaverse* (2022).

The official ban on secondary trading of digital collectibles has undermined the business potential of the Huanhe platform. Coco Feng Tencent to shut down Chinese NFT platform Huanhe a year after launch, report says, amid declining market in Beijing 21.07.22

cclx Tim O'Reilly, a proponent of civil participation in public politics, is considered the originator of the idea of the state as a platform. O'Reilly T. "Government as a platform", in *Open Government: Collaboration, Transparency, and Participation in Practice* (2010), 11–40.

The digital state includes digital government, digital democracy, digital electoral technologies, digital public services, and digital justice.

Google returns millions of hits in response to a request for information about the digital state; all of them, with rare exceptions, concern functioning states.

cclxi Rosecrance R., *The Rise of the Virtual State Wealth and Power in the Coming Century* (2000).

Tshishonga N., "Forging Civic and Democratic Governance From Below", in *Civic Engagement Frameworks and Strategic Leadership Practices for Organization Development* (2020), 67–95.

Fountain J., *Building the Virtual State: Information Technology and Institutional Change* (2002).

Prospects for the Virtual State

Salter M., *Rights of Passage: The Passport in International Relations* (2003).

Pont S., *Digital State: How the Internet is Changing Everything* (2013).

However, other articles show that claims about the advent of a "virtual" state, while popular in debates about globalization, have no empirical basis. For an example, see Bernauer T., Hristoph C., "From 'Real' to 'Virtual' States?: Integration of the World Economy and its Effects on Government Activity", in *European Journal of International Relations* 6(2) (2000), 223–276.

cclxii This was prompted by the Arab Spring, which showed that troublemakers can and should be monitored on social networks, and by Barack Obama's electoral campaign, which revealed the internet's political potential, and mainly the areas to work on and the corresponding opportunities for civil servants to advance through the ranks.

cclxiii E-government is understood as the reorganization of political and legal interaction between citizens and public authorities in order to increase grassroots participation in government and provide better services. While faultless at first glance, this is an insidious definition. Power is multi-tiered. The top layer may be public and changeable, but the body of the bureaucratic iceberg is hidden and stable. Because digitalization is controlled by the body of the iceberg, it serves to preserve it. Dissidents and troublemakers are easy to spot, and their potential accomplices are subjected to high-tech indoctrination.

Guriev S., Treisman D., "A Theory of Informational Autocracy", in SSRN Electronic Journal (2019).

Democracy also receives dividends from digitalization, but as Tiberiu Dragu and Jonathan Lupu showed, democracy is only helped in the first stage, after which the advantage goes to the information autocrats. Information technology is becoming a key factor in maintaining power, providing both censorship and the construction of reality.

Dragu T., Lupu Y., Does Technology Undermine Authoritarian Governments? (2017).

Sherry Arnstein developed the "ladder of citizen participation" with eight types of participation leading to the final result:

The bottom two steps – "Manipulation" and "Therapy" – are both manipulative. The next two – "Informing" and "Consulting" create the appearance of change: citizens can be heard by authorities but lack influence. At the fifth stage, "Participation," citizens offer advice but decisions are made at the top. At the "Partnership" stage, negotiations and compromise become possible. At the highest levels – "Delegation of Power" and "Civil Control" – citizens participate in the decision making. The Ladder of Participation can be used as the basis for an index of participation in management.

Arnstein S., "A ladder of citizen participation", in Journal of the American Institute of Planners 35 (4) (1969), 216–224.

See also: *Ruppert E., Isin E., Being digital citizens (2015).*

cclxiv As it turned out, bureaucrats are unable or unwilling to communicate with people using accessible language; they are biased in the bottlenecks they select for clearing, giving priority to indicators that affect their reputations but are otherwise irrelevant; they are eager to relay fear and inflate hysteria.

An Interview with Zeynep Tufekci about Lessons from the Pandemic and the Crisis of Authority, Stratechery Podcast (2021).

cclxv He defines culture as "institutionalized life practices: how we build our lives, who we consider ourselves to be, what language we speak. These are the institutions of education, art, media, and social assistance

cclxvi Kant presents two objections to world government. 1) Such a government will slide into global tyranny, hindering instead of enhancing the ideal of human autonomy. While it would be unable to ensure impartial global justice and peace, it would be able to force humanity to serve its interests, opposition to which would cause ongoing civil wars. 2) The remoteness of such a global power would make it ineffective and meaningless.

The idea is also tainted by conspiracy theorists, who believe in an authoritarian world order secretly imposed by ruling elites.

- cclxvii Philip Pettit developed a republican understanding of freedom that differs from the liberal definition in its focus on the principle of “non-domination” as a solution to the dichotomy of negative freedoms and positive freedoms.

Pettit P., Republicanism: A Theory of Freedom and Government (1999).

- cclxviii The state has exclusive sovereignty within its borders, but the technosphere encompasses the globe and internal politics generate externalities that become a common problem. The international club charter, burdened by the archaic right of veto, is not equipped with instructions for what to do in the event of a deadlock. Having found no way to rewrite the charter, countries today play a game of winks and glances, sometimes recognizing and sometimes ignoring the authority of whoever is really in charge. The morally outdated doctrine of sovereignty prohibits interference in the affairs of countries that are, themselves, interfering. This is like saying that you can’t object when your roommate spills mercury on their side of the room because it’s none of your business. No one has established the line of reasonable self-defense or what is considered beyond its limits. Recent attempts by the US to operate in this gray zone were regarded as unacceptable. Today we can see that the policy of nuclear deterrence – based on game theory and lasting three-quarters of a century – has failed.

Richard Rorty’s 1999 explanation of the motives behind NATO’s military intervention in Kosovo is relevant here. In short, Rorty explains that the UN only acts as a peacekeeping organization when not restrained by the permanent members of the Security Council, and shows that, at the time of writing, the organization faced the choice of allowing Milosevic to commit genocide or, as a lesser evil, rescuing the victims by some means outside the UN. He further voices his hope that European peacekeeping successes will eventually empower the UN and free it from the veto so that it can stop the next dictator.

They haven’t been successful yet.

- cclxix The movement has three stated goals: to influence international politics, improve democracy, and bring people together in cooperation. According to the movement’s website, these goals can be achieved by implementing the equitist concept of a just world. The slogan is Let’s build the first Digital State! Over 20,000 people from more than 100 countries around the world have joined the Atlas movement.

- cclxx Being in a stronger group makes the self-realization efforts of each member of that group more successful, and the group’s strength grows in opposition to competing groups. This is transparent in sports, where peer-to-peer competition is a condition for high achievement, and it is why leagues exist.

- cclxxi More from Zorin: “Is it possible to live without the idea that somewhere a center exists, whether semantic, political, state or power? It’s worth a try. After a period of over-centralization, there often comes a period of hyper-anarchy; perhaps at this stage, if some kind of “distributed Rusia,” “virtual Russia,” or other Russia were to exist, then the fragments of social structures that survived within its historical borders would have somewhere to go without worrying about center vs. periphery.” Zorin is not confident about the prospects of the extraterritoriality he desires, but “it won’t work if we don’t try. There are no other options.”

- cclxxii It is possible that my approach will blur or even eliminate barriers such as 25%, 50%, or 75%. It will also automatically eliminate the problem of minority shareholders’ rights being infringed by the principle of “one person, one vote.” When ones and zeroes are replaced by a system that operates using all real numbers between -1 to +1, many things will change.

cclxxiii And yet, as we have seen, cryptographers working on blockchains have found an antidote, albeit not an absolute one, against the concentration of power in decentralized systems, fake participants (Sybil attacks), double spending, cheating, and other issues. Internet search has accumulated vast experience solving similar problems, and the same is true of the recommendation industry. (See Swamynathan G. et al., “The design of a reliable reputation system”, *Electronic Commerce Research* 10(3-4) (2010), 239–270). Donations will give these systems the missing quanta of security, that very last percentage of reliability on which adoption into practice depends.

cclxxiv In its dominions and sandboxes, experiments can be carried out with short feedback cycles that set the vector of development for what is happening on Earth.

ACE (Administration and Cost of Elections) contains information on many aspects of holding elections. See Electoral Knowledge Network and Electoral Systems Encyclopedia.

cclxxv Copyright is a means of stimulating creative production with money. It is believed that if authors’ property rights are not protected, then their creations will be replicated by everyone who feels like it, the author will be left with nothing and will stop creating, and society will get bored. This approach has been in effect for three centuries since the Statute of Anne, which was passed by England’s Parliament in 1710, and for almost one hundred years it has been criticized for being burdensome, as well as because production and consumption without regard to financial results can produce better results.

Plant A, “The Economic Aspects of Copyright in Books”, in *Economica* 1 (1934).

Three key questions to ask about copyright:

1. Is the copyright system really a necessary condition for the creation of new products?
2. Are products created under copyright more valuable than those that could have appeared without it, if the resources saved by doing away with the copyright system had been allocated to their production?
3. If there are benefits from the institution of copyright, aren’t they negated by the contradictions and administrative costs hidden within the law?

Hurt R., Schuchman R., “The Economic Rationale of Copyright”, in *American Economic Review* 56 (1966), 421–32.

cclxxvi Berners-Lee T. et al., “The Semantic Web: A New Form of Web Content That is Meaningful to Computers Will Unleash a Revolution of New Possibilities”, in *Scientific American* (2001).

He saw logic as powerful enough to capture human meaning but not so powerful that it was impossible to confuse programs with language paradoxes such as “this statement is false.”

The concept of the semantic web appeared in the early 1960s through the efforts of Allan Collins, Elizabeth Loftus and other scholars. Tags can be viewed as a step in this direction.

In the context of Web 3.0, it is worth recalling Giulio Camillo’s plan from five centuries ago to create a universal system of classification of all things in the form of a theater of memory.

Camillo G., *L’Idea del Theatro* (1530).

cclxxvii It seems that nothing has reduced the skepticism that has dogged machine learning since its inception. (Marshall C., Shipman F., “Which semantic web?”, in *Proceedings of the fourteenth ACM conference on Hypertext and hypermedia* (2003), 57–66). But ChatGPT is not the first sign of spring and did not come out of nowhere. Machine learning has more than a half-century of history peppered with successes and failures; back in the early 1990s, it was used to recognize store receipts. Studies of neural networks were considered marginal until the end of the 2000s. That attitude changed in 2012.

cclxxviii The concept of a search tool that provides an answer instead of dumping out a bunch of information is not new. Yandex originally provided only links to websites, but over time it began accepting questions asked in natural language and then moved on to displaying information from reference sources (mainly Wikipedia). When handling complex queries, Google limits itself to snippets (quotes from websites). Google Search improving Featured Snippet callouts with MUM and consensus, 10.08.22.

cclxxx Notice that Amazon, Microsoft, Baidu, GitHub, Meta, Apple, IBM, Nvidia, Baidu and others also have natural language processing platforms. However, few companies have worked as intensively with large language models in the context of internet search as Google. It owns DeepMind, one of the pioneers of deep reinforcement learning and the place where, for a moment in time, the transformer model on which ChatGPT is based was developed.

cclxxx Will this affect labor? No, we will see the same situation play out that we observed with robots 5–6 years ago: people stopped talking about them once they realized that they were displacing fewer jobs than they were creating. Although ChatGPT sowed panic among artists, copywriters, call center workers, and entry-level programmers when it was first released, demand for both designers and programmers has only gone up. *Lock S., “What is AI chatbot phenomenon ChatGPT and could it replace humans?”, The Guardian (2022)*. According to forecasts, companies will start switching from SaaS-services to what could be called MaaS, or models as a service.

Babich N., “ChatGPT: Why it’s such a big deal for all industries, and will it kill Google?”, Medium (2022).

cclxxxi Deepfakes – realistic but fake photos and videos – were made possible by the creation in 2014 of so-called generative adversarial networks consisting of two AI agents, one of which forges an image while the other tries to detect the forgery. Deepfakes went mainstream in 2019. The fakes were still easy to spot, but they were so cheap to produce that they attacked Reddit, Pornhub, and other platforms by the thousands. In 2020, megapixel deepfakes of Disney content appeared. In 2021, a visually undetectable deepfake of Tom Cruise was posted on TikTok. There are reports of fakes that cannot be detected even by deepfake detection tools, which makes it impossible to use video recordings in court and elsewhere.

Texts raise the same question: were they created by a human or a robot? Legislators are almost ready to require a “written by bot” label, but that would not be easy to implement. OpenAI intends to put digital watermarks (analogous to watermarks on money) on ChatGPT texts to combat spam and plagiarism.

cclxxxii *Dickson B., “What is machine learning?”, TechTalks (2017).*

Today, AI is mainly associated with artificial neural networks and deep learning, but before that, for more than half a century, it was based on the symbols and rules of logic programming. Software developers drew the boundaries of the task, described the facts, entities, processes, and relationships, and turned it all into lines of code. This works well in areas where rules can be clearly defined and translated into sequences of commands, but not in areas such as computer vision, or detecting online criminals, or moving a robot through unknown terrain. Artificial neural networks can, without resorting to formal rules, be taught to work with material they have not encountered, at least within a certain range of novelty. For example, they can identify images containing cats by analyzing examples of images that have been manually labeled as “cat” or “no cat.”

The algorithm finds patterns in the data that are invisible to humans. For example, it can calculate the norm for network activity, compare it to the behavior of an individual, and highlight any deviations. This type of learning is a step closer to self-learning than su-

pervised learning, but the results are often unpredictable and require human intervention to edit the process.

A person is required, among other things, to select the type of training examples (for handwriting analysis, this could be a word, sentence, or larger volume of handwritten text) and create a representative training set of input objects, as well as a set of “outputs” – correct answers given by experts or obtained through measurement. Another example is speech recognition, where the algorithm is given samples and corresponding word forms. The more samples it has, the more accurately the algorithm recognizes new data, but preparing data for the machine – collecting and labeling it – makes up 70% of the work. Hope Reese Is ‘data labeling’ the new blue-collar job of the AI era? 10.03.16

cclxxxiii *Kung-Hsiang H., “Introduction to Various Reinforcement Learning Algorithms. Part I (Q-Learning, SARSA, DQN, DDPG)”, Medium (2018).*

Laskin M., “An informal introduction to reinforcement learning”, Anyscale (2022).

Dickson B., “What is reinforcement learning from human feedback (RLHF)?”, TechTalks (2023).

See also the Demystifying AI series of publications.

Branches of reinforcement learning theory began cropping up in the mid-1950s. Chris Watkins brought them together in 1989, and modern reinforcement learning began with work on AlexNet in 2012. In 2013, Vlad Mnich and his DeepMind colleagues released Deep Q Network, paving the way for modern deep reinforcement learning systems.

cclxxxiv Free tagging by users helps with this somewhat, and this is why ChatGPT allows voting. By voting up or down on the answers they receive, users help educate the chatbot. In December 2022, OpenAI announced a feedback contest with a prize of \$500 in credits.

Another source of labeled data – albeit noisy – is online forums and social networks; for example, on Reddit posts are formatted as answers to questions and rated.

cclxxxv OpenAI used a version of GPT-3 for this, tracking from 10 million to 52 billion parameters. The language model was trained on 45 TB of text, which is equal to 225 billion words from books, websites, blogs, and Wikipedia. Google’s DeepMind used the Gopher model with 280 billion parameters.

cclxxxvi Answers are not graded because different people’s approaches to evaluation would generate uncalibrated, noisy data; instead, the human reviewers compare answers to other answers and rank them by usefulness. This is somewhat like the Elo system used in chess.

cclxxxvii These differences are described on the OpenAI blog and in research articles linked to in the blog. OpenAI initially built the GPT 3.5 language model using web content and other publicly available sources. In the second phase of training, a reward model was created, with answer options ranked by reviewers. In the last phase, the main model was trained and reviewers ranked its answers. The configuration process used Proximal Policy Optimization, an automated process during which the AI evaluates its own responses.

For more on this topic, see the article *Lambert N. et al., “Illustrating Reinforcement Learning from Human Feedback (RLHF)”, Hugging Face (2022).*

cclxxxviii *Silver D. et al., “Reward is enough”, in Artificial Intelligence 299 (2021).*

The authors proceed from the idea that this is the mechanism by which living beings evolved, and that the maximization of fitness, measured by reproductive success, led to the formation of complex abilities, since “[a]n animal’s stream of experience is suf-

ficiently rich and varied that it may demand a flexible ability to achieve a vast variety of subgoals (such as foraging, fighting, or fleeing) in order to succeed in maximizing its overall reward (such as hunger or reproduction.” Hence the possibility that, in the process of maximizing reward, a good reinforcement learning agent may eventually gain perception, language, and even social intelligence. In the context of AI, “[r]eproductive success can be seen as one possible reward signal that has driven the emergence of natural intelligence. However, artificial intelligence may be designed with other goals than reproductive success, and may maximize the corresponding reward signals using methods other than mutation and crossover, potentially leading to very different forms of intelligence....Maximization of free energy or minimization of surprise may yield several abilities of natural intelligence, but does not provide a general-purpose intelligence that can be directed towards a broad diversity of different goals in different environments.”

cclxxxix AI is understood as the flexible ability to achieve goals. According to the popular approach, only a carefully designed reward can lead to general-purpose AI, hence the question: what should the reward signal be? The authors suggest that the development of intelligence may be robust to the nature of reward and explain it this way: “[S]uch environments as the natural world as so complex that intelligence and its associated abilities may be demanded by even a seemingly innocuous reward signal.”

ccxc *Kahneman D., Thinking, Fast and Slow (2011).*

“Fast thinking” and templates are not all that shabby. Critics call chatbots parrots that don’t understand what they’re saying. But what does it mean to understand? If we decompose this ability into its constituent pieces, such as structuring the text, isolating the main idea, identifying the intonation, and the like, then it looks like the language model has these skills to a certain extent. We could even estimate that it understands a fraction – say one-third – of the total.

We can set up an experiment to test this by asking ChatGPT to rewrite a Chekhov story in Nietzsche’s style. This kind of transposition is possible in music and painting, but can it be done in literature? I may be wrong, but I believe the chatbot will only be able to pull off some cosmetic editing based on characteristic elements in Nietzsche’s writing. If that is the case, then the similarities will be on the surface without any deep resonance. But what if ChatGPT succeeds? Then literature will receive its Omniscient and Omnipotent Being, which has already come to chess.

ccxci Reinforcement learning is effective for robotic arms or in board games and video games, but it is up to the humans to choose the right architecture, heuristically simplify the task, and assign rewards. “Every classifier (in fact every machine learning system) can be described in terms of a representation, a method for measuring success, and a method of updating....At this point, though, we don’t have any method for generating those representations, goals, and optimizations,” Roitblat wrote in a discussion around the article Reward is Enough.

ccxcii Transhumanist philosopher Nick Bostrom warns of the existential risk to humanity.

Bostrom N., Superintelligence: Paths, Dangers, Strategies (2014).

Daniel Dennett believes the threat is exaggerated. He recognizes the possibility of strong AT with human understanding and agency, but no sooner than 50 years from now. In his opinion, we are not the ones who need to humanize AI – it needs to teach us understanding.

Dennett D. From bacteria to Bach and back: the evolution of minds (2018).

ccxciii The GPT-4 System Card, released by OpenAI in March 2023, breaks down risks into eight types. The disappearance of labor is listed among them but covered only sparingly. One reason is that this same issue got a lot of attention in the context of robotization, but those fears came to nothing as the relatively slow implementation of robots has played out over decades. AI is another matter, however, and its rapid development puts people in a more difficult situation. That said, I believe a way out will be found. The new generation of chatbots require training and adaptation for special needs and tasks, and some portion – hopefully a significant portion – of the people who are displaced by AI tools will switch to training them.

The system card mentions encouraging research into the economic consequences of AI and finding solutions to reduce the resulting impacts on society. The system of reputations and statuses I advocate for in this book serves this goal, as well, because it increases the financial potential of the digital economy and opens up opportunities to bolster disappearing professions and jobs.

See also Altman S., “*Planning for AGI and beyond*”, *blog OpenAI (2023)*.

ccxciv Napster and collaborative filtering are the ideological forerunners of a cultural exchange. The fact that these innovations appeared in the field of recorded music is no accident, because this is where the most pressing problems of modern culture are intertwined: pricing equalization, copyright, piracy, navigation difficulties, and the dominance of corporations. In *The Economics of Symbolic Exchange*, I wrote this about Napster: “A decisive step in this direction would be to voluntarily place a monetary value on perceived quality. This is the missing piece that kept Napster from being viable.”

ccxcv King released his novel *The Plant* in free installments on his website with the caveat that subsequent installments would only be released if at least three-quarters of the people downloading the book paid \$1 for the current download. Five installments of the novel netted King \$500,000. Revenue for each subsequent installment declined, however, and after the sixth installment the author pulled the plug on the experiment, much to readers’ disappointment.

Robert Woodhead, a proponent and user of the tipping model, explained that King got the pricing wrong. In Woodhead’s opinion – and I agree with him – it was a mistake to set a price for the content. Instead, King should have let readers decide how much they would pay. Woodhead cites his own experience of letting users choose how much to pay, a move that doubled his income. He points out that by setting prices ahead of time, creators exclude customers who can’t buy at that price and cut off a stream of revenue from those who would have happily paid more.

Woodhead R., *Tipping – a method for optimizing compensation for intellectual property (2000)*.

At the time, I wrote: “The failure of King’s experiment in no way puts an end to the idea of voluntary payments. First of all, the internet has grown exponentially since then, and transaction costs for consumers have fallen; if he tried it again today, King would most likely raise the amount he wanted. Second, it is not realistic for a single book to do away with an entrenched habit. [...] Social norms are a network benefit. The more people profess them, the more closely they are followed. And finally, King was unaware of collaborative filtering, which serves as both the carrot (increasing the efficiency of consumer choice) and the stick (keeping out non-payers). This situation can tip the scales in favor of post factum payments.”

Dolgin A., *The Economics of Symbolic Exchange (2009)*, Paragraph 4.8.2. *Voluntary payment systems*.

^{ccxcvi} According to NeoReach and Influencer Marketing Hub, which surveyed over 2,000 creators, almost half of those who have been building an audience for more than four years earn more than \$20,000 per year. Creators whose content is their main source of income (78%) earn over \$23,500 per year.

YouTube: Of the 31 million channels, approximately 1 million creators have more than 10,000 subscribers.

Instagram: Of the 1 billion accounts, around 500,000 have over 100,000 subscribers and are considered active influencers.

Twitch: There are 3 million streamers on Twitch, and around 300,000 of them have partner status.

Misc: There are approximately 200,000 other creators out there, including musicians, podcasters, writers, and illustrators.

Amateur creators (~ 46.7 million)

YouTube: There are 31 million channels, and around 12 million of those have between 100 and 10,000 subscribers.

Instagram: Of the 1 billion accounts, around 30 million have between 50 and 100,000 subscribers.

Data from tubics.com, mention.com

^{ccxcvii} From the story I Decided to Mess Up the Party. The poet Lev Rubinstein used these words by Kharms to sum up Imhonet’s Readers Prize, which tested the donation model in a live competition.

^{ccxcviii} “...Facebook News Feed simultaneously increased the efficiency and distribution of new posts and pitted all such posts against each other in what was effectively a single giant attention arena, complete with live updating scoreboards on each post...[H]undreds of millions, and eventually billions, of humans who had grown up competing for status in small tribes [were] suddenly dropped into a talent show competing against EVERY PERSON THEY HAD EVER MET. Predictably, everything exploded. The number of posts increased. The engagement with said posts increased.” [emphasis added]

^{ccxcix} When he presented Meta in October 2021, Zuckerberg told Stratechery: “I care about this existing, just virtual and augmented reality existing, but it getting built out in a way that really advances the state of human connection and enables people to be able to interact in a different way. That’s sort of what I’ve dedicated my life’s work to.”

I might add that this is more than just a new chapter in the history of the internet, which Zuckerberg attributes to Meta. *An Interview with Mark Zuckerberg about the Metaverse (2021)*.

^{ccc} Copilot integrates with Microsoft 365 in two ways: 1) it is built into Word, Excel, PowerPoint, Outlook, Teams, and other apps, and 2) business chat. The chat works with LLM, Microsoft 365 apps, and user data, such as calendars, email, chats, documents, meetings, and contacts. It accepts tasks posed in natural language and generates status updates based on morning meetings, emails, and chats.

^{ccci} Those achievements exist, of course, in the track record of each of the Big Five tech companies, but, as Wei warns, it is difficult to succeed if you don’t keep your finger on society’s pulse. Telegram is present in this pair because Pavel Durov is known for his focus on high-quality web content and his team of the world’s strongest programmers, led by Nikolai Durov.

As for Musk, his incredible successes were achieved outside the world of social networks; inside that world, he faces serious challenges. I believe that his attempts to reform Twitter with content moderation and status verification would have benefitted from the idea of donation-based reputations.

ccci According to Metrics for Reddit, there are hundreds of thousands of communities on the platform and over 3 million subreddits with hundreds of millions of participants. Brian Dean compiled information about Reddit from RedditList, Metrics for Reddit and Statista in his post *Reddit User and Growth Stats* from October 12, 2021. Some highlights:

- In 2020, the platform hosted 303 million messages and 2 billion comments;
- 52 million active users per day. One-quarter of the adult population of the United States uses Reddit;
- Forty-two percent of adult Reddit users in the United States receive regular news updates from Reddit. Of those, 79% support the Democratic Party. (Source: Pew Research);
- Reddit's revenue reached \$804 million in 2023, which is 20 percent increase compared to 2022.

ccciii "Communities reflect society, in both beauty and ugliness. In my experience, it's almost impossible to create a place for the best of humanity without opening up a Pandora's box of the worst. To outsiders, it may look like the only reason people use Reddit is to hate monger," Giana Bianchini explains the difficult experience of building an open society: *As Reddit Burns, Some Hard-Earned Lessons on Building an Open Community*.

ccciiv *Salihefendic A., "How Reddit ranking algorithms work", Medium (2015).*

Salihefendic A., "How Hacker News ranking algorithm works", Medium (2015).

Unlike Facebook, Reddit can't afford to introduce user credentials and add even more manual oversight because that would escalate tensions with volunteer moderators.

"For a platform built on the principles of free speech that brings together strangers to talk about obscure and controversial interests, only a limited and specific type of advertising will work: one that enables moderators to benefit from connections made between brands and sub-communities." Gina Bianchini, *Ibid*

cccv Zombie accounts are nurtured using posts about cats in order to later serve subversive purposes. Accounts that have been around for four years and made several thousand posts costs hundreds of dollars. Here is what Anna Samoydyuk, who once moderated the Stories section on Reddit, says: "A zombie account can be purchased on sites like *playerup.com* or *epicnpc.com*. Scammers – whether bots, trolls, or propagandists – scour the internet for viral memes or images: food, videos of things falling, puppies. When they post a photo, they expect you to like it, share it with others, and give the zombie account credibility and trust. Indeed, it is difficult to accuse someone of being a foreign agent because of a photo with a lab puppy."

According to the Transparency Report 2019 compiled by Reddit, administrators deleted over 53 million posts in one year, 99.6% of which were spam or an attempt to juice an account's rating. More than 7 million accounts were banned for trying to boost their ratings. Violations of other rules resulted in 55,000 accounts and 222,300 posts being deleted. Most of the removals concerned harassment.

cccvii Until recently Reddit let users reward others for helpful posts using Reddit Coins, which were bought from the platform and were a part of its profit. This was not the type of donation I describe as part of the tournament of statuses, but it did contribute to clarifying reputations.

cccvi Participants who make greater contributions to the community are given greater weight, or karma, which is defined as a collective moderation tool that allows community members to give other community members rights, or conversely, limit their powers through voting. Karma is used to automatically cull content, and content ratings automatically decrease over time. This is done to ensure that newcomers get their share of attention. Karma is also used on other collective blogs and web forums.

cccviii A division of Wolters Kluwer. The materials available on the site are prepared by leading experts in their fields in compliance with academic standards. Is it any surprise, with access costing over \$500 per year, that over a million doctors use it?

When it comes to conditions like erectile dysfunction or psoriasis, however where the treatments are controversial and require brand-name drugs, we see a conflict of interests develop.

Amber K., “Conflict of interest in online point-of-care clinical support websites”, in *Journal of Medical Ethics* 40(8) (2014).

Dynamed, a competitor of UpToDate, has been vetted by ethicists, but generally speaking, the healthcare system continues to rely on traditional reputational mechanisms.

cccx According to Nielsen, online reviews are the second most trusted source of information after recommendations from family and friends. Between 3% and 10% of clients leave reviews. And since positive reviews are the best way to sell a product on Amazon, the best way to get those reviews is to buy them.

Fake reviews are produced on an industrial scale: fraudulent reviews come from a network of subreddits, invitation-only Slack-channels, private Discord servers, and closed Facebook groups that contain hundreds of such reviews.

cccx VICE journalist Oobah Butler used fake reviews to turn his backyard shed into the top-rated restaurant in London. In addition to the fake reviews, the defunct establishment www.theshedatdulwich.com received negative “real” reviews from competitors. TripAdvisor has not taken up the issue, because “Generally, the only people who create fake restaurant listings are journalists in misguided attempts to test us. As there is no incentive for anyone in the real world to create a fake restaurant it is not a problem we experience with our regular community – therefore this ‘test’ is not a real world example.” That said, TripAdvisor was instrumental in getting the head of the fake review source PromoSalento sentenced to nine months in prison and an €8,000 fine.

According to some 2020 data, a flattering review on the service [TripAdvisor] costs on average between \$3 and \$50. You need about 100 reviews to reach the top. (Bacon Agency was disgraced for offering a quick ascent to the top of TripAdvisor for \$600.) Booking.com only allows reviews from users who book a vacation on the platform, which makes leaving fake reviews somewhat more difficult. The site also offers paid tools for becoming more visible and a privileged program.

cccx Kolonin et al develop this idea further and argues that under the distributed (decentralized) option, all community members are responsible for calculating reputations, as on blockchains, where all participants can be responsible for validating and recording transactions. In this case, one can either reach a coordinated consensus on the state of reputations (“coordinated agency”) or everyone has their own point of view on others’ reputations (“independent agencies”).

cccxii Reputations themselves are a means of navigation, but they are generalized. They characterize the sources of products, but search and selection begin with the formation of a

request and a review of the options. Only then does an appeal to expertise follow. Recommendations are intended to close this gap, including by selecting recommenders based on their reputation.

cccxi Today, when we look for something to watch on YouTube, we focus on the videos fed to us by the algorithm and the number of views and subscriptions for those channels. This is better than nothing, but it is not enough. How do you decide which translation of a film to watch, or which translation of Nabokov's *Invitation to a Beheading* to read (there are three Russian translations of the novel)? How do you select a personal guide for a trip when the options are marked with stars and a meaningless number of views of their tour descriptions? How do you decide which sports commentator to watch? These are needs with a relatively narrow social base. They exist on the so-called long tail. (Chris Anderson *The Long Tail*) What about the inevitable ordeal involved in finding a teacher or a massage therapist?

cccxiv In 2019, the online learning market was estimated to be worth \$171 billion; by 2025 it is projected to reach approximately \$300 billion (that's average annual growth of 10.85%). By 2026, ReportLinker predicts online learning will reach \$458 billion in revenue, of which the language training market alone is expected to bring in \$26 billion.

Online Learning Market Size is Projected to Grow CAGR 10.85% by 2025 - Valuates Reports, 10.08.20 The almost double upward revision is due to the acceleration COVID-19 gave this market.

cccxi That said, Habr – to its credit – distinguishes between status and profile reputation: the first is karma, the second is a rating. High karma does not necessarily parlay into a high ranking due to differences in professional and general reputations. Thus, some ratings leaders on Habr have lower karma due to their complex personalities.

Here are some other examples: Etsy, the hospitality exchange service CouchSurfing, the software developer community Advogato, and the online consultations service Stack Exchange.

cccxi Recommenders act as guides to the good, standing on a par with the creators of products and services. Popular recommendations can be rewarded because there are specific people behind them. A recommender's share of any reward is determined by their contribution to the forecast and the moment when they sent the quality signal (the earlier, the better). It can also be tied to the amount of the post-factum payment expressing the judgment. In this last aspect, donations resemble futures.

Dolgin A., Manifesto of the New Economy: Institutions and Business Models of the Digital Society (2012).

cccxi The China social credit system monitors behavior and trustworthiness of citizens. Failure to pay a fine on time or listening to a loud music while on a train may entail penalties of some kind. The topic has been extensively covered in media and raises a serious concern.

See: *"Social scoring: Could that Facebook post stop you getting a loan or a mortgage?"*, *Euronews (2020).*

Fenwick A., "How's your social credit score?", blog (2017).

There is not a unified system yet; however, a more local system Zhima Credit affiliated with Alibaba Group is already operational.

cccxi Klout based its rating (ranging from 1 to 100) on more than twenty indicators, taking into account the number of retweets, comments, subscribers and their influence, etc.

Details can be found in the book: *Schaefer M., Return On Influence: The Revolutionary Power of Klout, Social Scoring, and Influence Marketing (2012).*

cccxi “What happens a year from now when you try to get a job in marketing and you’re rejected because your Klout score is only in the 30s? Or when a bunch of black hat rats figure out how to game the Klout system and make their small fortunes selling you robot apps that will juice up your Klout score?”

“Delete Your Klout Profile Now!”, Social Media Today, 2012.

cccxx Klout’s statistics also helped brands learn about their audience. Here are some fundamental questions about ratings: 1) Do they measure anything objective? 2) How protected are they from hacking? 3) Who can use them (and how) for marketing, government, or other purposes? 4) How do they bring in revenue? 5) What is their long-term impact?

cccxxi In 2018, Klout’s parent company, Lithium Technologies (now Khoros), which specializes in marketing tools, shut it down four years after buying it for a reported \$200 million. The official explanation was that the standalone service did not fit the company’s long-term strategy.

cccxxii Some examples: Credit ratings (credit scores), dating services (Baihe.com gets data from Zhima Credit), rideshare services (with passengers and drivers rating each other), tourism (TripAdvisor, Booking), and Getcontact ratings to combat telephone fraud. The pros and cons are well known, including the susceptibility of ratings systems to fraud and other negative aspects of crowd marketing. I have already said all that was necessary about their shortcomings (Section 12.1); without a systemic approach, they will never be eliminated.

cccxxiii Toffler “coined the term ‘future shock’ to describe the shattering stress and disorientation that we induce in individuals by subjecting them to too much change in too short a time.” According to him, it is a defense mechanism against the radical change in the environment caused by technological progress, expansion of knowledge and various social and informational issues. Toffler mentions that “Nobel prizewinners, hippies, psychiatrists, physicians, businessmen, professional futurists, philosophers, and educators gave voice to their concern over change, their anxieties about adaptation, their fears about the future.” Future shock can be understood as the shock experienced by the present when exposed to technologies of the future.

Toffler A., Future Shock (1970).

Also see a book *Toffler A., Third Wave (1981).*

cccxxiv I’ll list a few names:

- Alvin Toffler, Yuval Noah Harari, Adam Greenfield, and Douglas Rushkoff and techno-pessimists;
- Billy Childish and Charles Thomson, Geoffrey Nilson, Christian Moraru, Nicolas Bourriaud, Timotheus Vermeulen, Robin van den Akker, Bronisław Szerszynski, Celia Deane-Drummond, Alan Kirby, and Robert Samuels represent the literary wing;
- Richard Watson and Kevin Kelly are realists;
- Anthony Giddens, Zygmunt Bauman, Gilles Lipovetsky, and John Urri are sociologists;
- Tyler Cohen is an economist;
- Paul Mason, Jeremy Rifkin, Nick Srnicek, and Mark Fisher (late) are leftist philosophers. The same applied to Mark Fisher, who died in 2017.

cccxxv As Charles Péguy wrote in 1913: “The world has changed less since the time of Jesus Christ than it has in the last thirty years.” Taken from: *Hughes R., The Shock of the New: Art and the Century of Change (1980).*

List of innovations: “the recoiling machine gun in 1882; the first synthetic fiber, 1883; the steam turbine, 1884; coated photographic paper, 1885; the electric motor, the Kodak box camera and the Dunlop pneumatic tire, 1888; cordite, 1889; the Diesel engine, 1892; the

Ford car, 1893; the cinematograph and the gramophone record, 1894. The following year, Röntgen discovered X-rays, Marconi invented radiotelegraphy, the Lumière brothers introduced the movie camera, Freud published the first of his theories on hysteria and the unconscious. And so it went on – the discovery of radium, of the electron, the magnetic recording of sound, the first voice radio transmissions, the first powered flight, the special theory of relativity and the photon theory of light, the discovery of the gene. Together, they amounted to the greatest alteration in man's view of the universe since Isaac Newton."

Watson P., *The age of nothing. How we have sought to live since the death of God* (2014).

- cccxvvi Richard Florida, who presented the theory of the "creative class," believes that while the generations that lived in the first half of the 20th century witnessed much greater technical changes than those who lived in the second half, from the point of view of values the situation was exactly the opposite.

Florida R., *The Rise of the Creative Class: And How It's Transforming Work, Leisure and Everyday Life* (2002).

Watson states something similar about the early 2000s: "Technologically speaking there have been periods of greater upheaval but, from the point of view of values, the change that we have witnessed since 2007 has been significant."

Watson R., *Future Files: A Brief History of the Next 50 Years* (2010).

- cccxvii I emphasize this point because my beloved Hayek objected to any attempt to impose anything on society, including rules for distribution, whether such rules aimed to create equality or inequality. But the principle of merit is not an imposed rule, and its distribution of statuses and benefits happens spontaneously.

It is worth noting that Nozick, a libertarian, had little sympathy for meritocracy, seeing it as yet another "exemplary" principle for distributive justice. Daniel Bell, for example, was a proponent of meritocracy and felt it was the key to a well-organized life.

Bell D., *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (1973).

- cccxviii The term self-fulfilling prophecy was coined by Robert K. Merton, who also popularized the Thomas theorem, which states that if people define situations as real, then they are real in their consequences; accordingly, a belief or expectation – right or wrong – can lead to the desired or expected result.

- cccxvix The Great Transformation was written in the 1930s and 1940s, when the world's best minds were wrestling with what caused the crisis of Western civilization. (In it, Polanyi debates ideas raised in Karl Mannheim's *Man and Society in the Age of Reconstruction*, Joseph Schumpeter's *Capitalism, Socialism, and Democracy*, Friedrich von Hayek's *The Road to Serfdom*, Karl Popper's *The Open Society and Its Enemies*, and Erich Fromm's *Escape from Freedom*.) Polanyi identifies the root of evil thus: "Instead of economy being embedded in social relations, social relations are embedded in the economic system." Polanyi K., *The Great Transformation: The Political and Economic Origins of Our Time* (2001), *Part I: The International System*.

Polanyi wrote that the human economy had become an adaptive system of markets in which our thoughts and values were held hostage, and that no previous economic order had ever allowed markets to exist without social control. "...[R]edistribution also tends to enmesh the economic system proper in social relationships. We find, as a rule, the process of redistribution forming part of the prevailing political regime, whether it be that of tribe, city-state, despotism, or feudalism of cattle or land." Today we have the reverse. Polanyi believed this situation was reversible and that government was capable of restoring society's rights."

We can only hope that this will happen not, as he saw it, by a reverse coup, but through reassimilation. The symbolic will not destroy markets the way that markets destroyed society in Polanyi's view. Instead, by becoming embedded in and empowered by markets, the symbolic will change them from within. It will not take a cultural revolution to control the economy, as Polanyi believed necessary, driven as he was by a desire to subdue that was fed by a deep pessimism about economics extending to more kinds of human relationships. Polanyi K., *"Our Obsolete Market Mentality"*, in *Commentary* 3 (1947), 109–117.

In reality, that which is economically beneficial is also universally beneficial. The competitive exchange of resources extends within the boundaries within which it is justified. If some area is not ready to rationalize exchange, for whatever reason, and the market does not deliver gains, then such exchange will not take root there.

The market system has its flaws, but it is alive. The distribution system that Polanyi describes as altruistic is actually cruel. And the pre-market times for which he is so nostalgic were by no means rosy; they were crueler and more heartless than anything existing in a market system. What was experienced by the generations of the 17th and 18th centuries was nothing like how Polanyi imagines it. The merchant's ethos (pursuing interests through peaceful means) is preferable to the clergyman's ethos (uncompromising concern for the welfare of others) or the soldier's ethos. As Montesquieu put it, "everywhere that there are gentle morals, there is commerce."

As Kapelyushnikov noted, "...in Polanyi's portrayal, the competitive system looks chaotic, unsystematic, and inefficient...in essence, it is a Hobbesian war of all against all. Therefore, I do not think it would be a terrible injustice to say that the author of *The Great Transformation* did not fully understand the nature and objective of market competition."

cccxix Polanyi believed that in a society free from market dictates, coercion would have as its goal a more equitable distribution of income, social guarantees, and leisure; the result of such coercion would be not less freedom, but more: freedom for the few would be replaced by freedom for all.

He admits that personal freedoms are more complicated. Civil liberties, private enterprise, mobility, the entire way of life that comes along with free markets has led to moral freedom and independence of spirit. He also admits that regulation will require small sacrifices in these areas and justifies them by promising that they will, indeed, be small. The kind of freedom described above is not valuable, and people understand it incorrectly. In other words, Polanyi resorts to linguistic recoding as he lays the foundations for a dominant state. He sees a market society as an imaginary realm of freedom that people aspired to not on their own, as a conscious goal, but merely as a by-product of the markets. In his understanding, the cart and the horse of history trade places: markets did not come into being because people wanted the freedom and prosperity and the could provide; instead, markets arose through a unique confluence of circumstances and fashioned in people's minds a picture of the freedom they (the markets) needed. And this, as Polanyi viewed it, was wrong. Therefore, markets should be put back under the power of the political.

Polanyi promised that the coercion would not be absolute; niches would be preserved where those who disagree with the authorities can retreat if they wish (did he foresee the digital polity discussed in Section 10.2.4?). After all, "[r]egulation both extends and restricts freedom." Polanyi also believed in courts that would stand up for freedoms, opening their doors to anyone who felt that their rights had been violated. It was his view that no one who "sincerely" strives greater freedom for all has cause to fear that the forces of power or planning will suddenly turn against them and deprive them of their own freedom.

And if freedom turns out to be unattainable in a tightly regulated society, we will simply have to make peace with that fact and stop our “childish, unavailing complaints.” With this quote from Robert Owen, Polanyi closes out *The Great Transformation*.

“This is the meaning of freedom in a complex society,” he summarizes. I would summarize the argument thus: the adults in a family put a stop to childish complaints. Hundreds of millions of people know the price of a sincere desire for freedom through the redistribution of goods. And many who disagree with the Jesuit interpretation of freedom as a necessity have been steamrolled by the irrational rationality of intellectuals who will do anything to be in the right. The Great Transformation serves as a telling example of the aberrations born of nostalgia for a primitive society that was supposedly whole, orderly, and free of conflict, if even a thinker like Karl Polanyi, with deeply democratic and humanistic convictions, could not avoid admiring Stalin’s collectivization, niches for nonconformists, and variations on the theme of freedom as a conscious necessity.

Kapelyshnikov R., “Deconstructing Polanyi: Notes on the Margins of The Great Transformation”, in Sociology Journal 3 (2005), 5–35.

I would add that, to the end of his life, Polanyi experienced mental anguish from the realization that he could not project what he saw as the only correct moral choice to its practical implementation. His lifetime coincided with the glory days of the planned economy, dictatorship over the proletariat, advanced socialism, and everything else that people endure when they exchange freedom for promises of equality and fraternity.

ccccxxxi I have not touched on negative donations here. Logically, however, if one can confer reputation then one should be able to withdraw it. This is both symmetrical and necessary, but it would be politically and ethically wiser to start with positive incentives rather than negative ones. Linking donations with reputations and recommendations is the starting point of the institutional agenda; once this is complete, the initiative can grow, becoming more complex and even double-edged.

I am not absolutely sure whether negative reputational signals encoded by money are necessary, or whether positive ones are sufficient. But if time shows them to be necessary, we will have something to think about: reputation can be conferred through donation, but how can it be withdrawn? Donating is a one-way action, so how could we create a multidirectional signal? After all, we can’t ask people to pay to raise a status but allow them to lower that same status for free. Chaos would ensue. Negative reputational signals must be monetary, like their positive counterparts. And we can’t act head-on and take the money back if the recipient gets out of line. Donations – like underwear – cannot be returned. Or can they?

I do not actually see an urgent need to figure this out; people will handle negative incentives without my instructions. After all, complaining is easier than offering praise, and that was the case before donations even existed. However, I will sketch out some ways to organize the plus/minus split. This is easier if a donation has already been made, requiring only a simple mechanism for revoking it as might happen in traditional charity. Revocation would result in a hit to the recipient’s reputation.

But how might we express our opinions of someone who talks nonsense? Naturally, we have never donated anything to this person, so there is nothing like a deposit that we might seek to revoke. We have to pay for the right to review the person, and not at a higher rate than normal. But we don’t want to pay the person we are negatively reviewing, do we? In this case, it would be reasonable to make the payment to a third party. Which party that is should be left up to the donor. This solution will arise when the time is right. The same is true of derivative instruments, various ways to expand on or provide greater detail about reputations, and ways to analyze the change in reputations. How people earn and spend their reputations will also be informative.

FIELD GUIDE

KEY PAPERS AND BOOKS

- Acemoglu D., Robinson J., *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (2012).
- Adler M., “*Stardom and Talent*”, in *The American Economic Review* 75(1) (1985), 208–212.
- Akerlof G., “*The Market for ‘Lemons’: Quality Uncertainty and the Market Mechanism*”, in *The Quarterly Journal of Economics* 84 (1970), 488–500.
- Azar O., “*The Social Norm of Tipping: A Review*”, in *Journal of Applied Social Psychology* 37 (2007), 380–402.
- Al6Z, *How to Win the Future: An Agenda for the Third Generation of the Internet* (2021).
- Bataille G., *The Accursed Share: An Essay on General Economy* (1949).
- Baudrillard J., *Symbolic Exchange and Death* (1993).
- Baudrillard J., *For a Critique of the Political Economy of the Sign* (1981).
- Becker G., *Economic Analysis and Human Behavior* (1987).
- Bell D., *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (1973).
- Bell D., *The Cultural Contradictions Of Capitalism* (1996).
- Benjamin W., *The Work of Art in the Age of Mechanical Reproduction* (1936).
- Berger P., Luckmann T., *The social construction of reality. A treatise in the sociology of knowledge* (1966).
- Chauvin P., “*La sociologie des réputations. Une définition et cinq questions*”, in *Communications*, 93 (2013), 131–145.
- Chen L. et al., *A Brief Introduction to Blockchain Economics* (2021).
- Csikszentmihalyi M., *Flow: The Psychology of Optimal Experience* (1990).
- Coase R., “*The Nature of the Firm*”, in *Economica* 4 (16) (1937), 386–405.
- Coase R., “*The Problem of Social Cost*”, in *Journal of Law and Economics* 3 (1960), 1–44.
- Coase R., “*The Market for Goods and the Market for Ideas*”, in *American Economic Review* 64 (1974), 384–391.
- Dolgin A., *Manifesto of the New Economy: Institutions and Business Models of the Digital Society* (2012).
- Dolgin A., *The Economics of Symbolic Exchange* (2009).
- Dragu T., Lupu Y., *Does Technology Undermine Authoritarian Governments?* (2017).
- Friedman M., *Capitalism and Freedom* (1962).
- Friedman M., Schwartz A., “*Has Government Any Role in Money?*” (1987).
- Goffman E., *The Presentation of Self in Everyday Life* (1956).
- Guriev S., Treisman D., “*Informational Autocrats*”, in *Journal of Economic Perspectives* 33(4) (2019), 100–127.
- Hayek F., *The Denationalization of Money* (1976).
- Hayek F., *The Fatal Conceit: The Errors of Socialism* (1988).
- Hayek F., *The Road to Serfdom* (1944).
- Herbert M., “*Repressive Tolerance*”, in *A Critique of Pure Tolerance* (1965).
- Hirsch F., *Social Limits to Growth* (1976).
- Homans G., *Social Behavior: Its Elementary Forms* (1974).

- Horkheimer M., Adorno T., *Dialectic of Enlightenment* (1947).
- Kahneman D., Tversky A., “*Prospect Theory: An Analysis of Decision under Risk*”, in *Econometrica* 47(2) (1979), 263–291.
- Kahneman D., Tversky A., “*Advances in prospect theory: cumulative representation of uncertainty*”, in *Journal of Risk and Uncertainty* 5 (1992), 297–232.
- Knight, F., Friedman, M., *The Ethics of Competition: And Other Essays* (1969).
- Kolonin A. et al., “*A Reputation System for Artificial Societies*”, in ArXiv (2018).
- Lakoff G., *Moral Politics: How Liberals and Conservatives Think* (1996).
- Lakoff G., Johnson M., *Metaphors We Live By* (1980).
- MacIntyre A., *After Virtue: A Study in Moral Theory* (1981).
- Markovits D., *The Meritocracy Trap: How America’s Foundational Myth Feeds Inequality, Dismantles the Middle Class, and Devours the Elite* (2019).
- Marlinspike M., “*My first impressions of web3*”, blog (2022).
- Mauss M., *The Gift: Forms and Functions of Exchange in Archaic Societies* (1965).
- North D., *Institutions, Institutional Change and Economic Performance* (1990).
- North D., *Understanding the Process of Economic Change* (2010).
- North D., Wallis J., Weingast B., *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History* (2009).
- Nozick R., *Anarchy, State, and Utopia* (1974).
- Nozick R., “*Why Do Intellectuals Oppose Capitalism?*”, in Cato Policy Report XX(1) (1998), 1.
- Paumgarten N., “*The Prophets of Cryptocurrency Survey the Boom and Bust*”, in *The New Yorker* (2018).
- Polanyi K., *The Great Transformation: The Political and Economic Origins of Our Time* (2001).
- Posner R., *Utilitarianism, economics and legal theory* (1979).
- Rawls J., *Theory of Justice* (1971).
- Rigney D., *The Matthew Effect: How Advantage Begets Further Advantage* (2010).
- Roitblat H. *Algorithms Are Not Enough: Creating General Artificial Intelligence* (2020).
- Rosen S., “*The economics of superstars*”, in *The American Economic Review* 71(5) (1981), 845–858.
- Roubini N., *Exploring the Cryptocurrency and Blockchain Ecosystem* (2018).
- Sandel M., *What Money Can’t Buy: The Moral Limits of Markets* (2012).
- Sandel M., *The Tyranny of Merit: What’s Become of the Common Good?* (2020).
- Schütz A., “*On multiple realities*”, in *Philosophy and Phenomenological Research* 5(4) (1945), 533–576.
- Seligman M., *Learned Optimism: How to Change Your Mind and Your Life* (1991).
- Sowell T., *Knowledge and Decisions* (1980).
- Sowell T., *A Conflict of Visions: Ideological Origins of Political Struggles* (1987).
- Tocqueville A., *Democracy in America* (1835).
- Veblen T., *The Theory of the Leisure Class: An Economic Study of Institutions* (1899).
- Wei E., “*Status as a Service (StaaS)*”, blog (2019).
- Weyl E., Ohlhaber P., Buterin V., “*Decentralized Society: Finding Web3’s Soul*”, in SSRN (2022).

TERMS AND CONCEPTS

An asterisk (*) denotes terms introduced by the author

Economics

<i>addictive goods</i>	<i>interest groups</i>
<i>adverse selection</i>	<i>invisible hand</i>
<i>affirmative action</i>	<i>laissez-faire</i>
<i>Angus Maddison's tables</i>	<i>law of diminishing marginal utility (Gossen's first law)</i>
<i>barriers to entry</i>	<i>libertarian paternalism</i>
<i>behavioral economics</i>	<i>marginalist economists</i>
<i>bundle of property rights</i>	<i>mercantilist</i>
<i>central planner (Hayek)</i>	<i>middle income trap</i>
<i>cheap talk</i>	<i>moral economy</i>
<i>club theory</i>	<i>moral hazard</i>
<i>creative industries</i>	<i>new institutional economics</i>
<i>conspicuous consumption</i>	<i>network effect</i>
<i>consumer surplus</i>	<i>new (libertarian) paternalism</i>
<i>creative destruction</i>	<i>non-utilitarian economics*</i>
<i>Easterlin paradox</i>	<i>nudge theory</i>
<i>economic imperialism</i>	<i>opportunism</i>
<i>evolutionary economics</i>	<i>paradox of value</i>
<i>expected utility</i>	<i>picoeconomics</i>
<i>externality</i>	<i>Ponzi scheme</i>
<i>economies of scale</i>	<i>price discrimination</i>
<i>economy of symbolic exchange*</i>	<i>price mechanism</i>
<i>factors of production</i>	<i>public goods</i>
<i>failure of the state / market failure</i>	<i>QWERTY effect (lock-in effect)</i>
<i>free-rider problem</i>	<i>rational addiction theory</i>
<i>GDP</i>	<i>rational irrationality</i>
<i>general equilibrium theory</i>	<i>relational contracts</i>
<i>gift economy</i>	<i>search goods / experience goods / credence goods</i>
<i>gold standard</i>	<i>sin taxes</i>
<i>Gossen's First Law</i>	<i>specification of property rights</i>
<i>happiness economics</i>	<i>symbolic capital</i>
<i>human capital</i>	<i>transaction cost</i>
<i>human development index</i>	<i>utility theory</i>
<i>incomplete contracting</i>	<i>value of life</i>
<i>information asymmetry</i>	

Psychology

<i>autobiographical memory</i>	<i>marshmallow experiment</i>
<i>basic emotions</i>	<i>Maslow's hierarchy of needs</i>
<i>coping</i>	<i>mirror neurons</i>
<i>critical period hypothesis of human development</i>	<i>motivation for achievement</i>
<i>deprivation</i>	<i>personal resources</i>
<i>digital authoritarianism</i>	<i>positive psychology</i>
<i>diminishing marginal utility</i>	<i>quality of subjective time*</i>
<i>dirigisme</i>	<i>self-actualization / self-realization</i>
<i>emotional asymmetry*</i>	<i>self-concept</i>
<i>emotional intelligence</i>	<i>self-determination theory</i>
<i>emotional orientation</i>	<i>self-image</i>
<i>flow (psychology)</i>	<i>self-reflection</i>
<i>instructional scaffolding</i>	<i>self-regulation</i>
<i>intra-personal externalities*</i>	<i>self-reputation*</i>
<i>intrapersonal exchange*</i>	<i>self-sovereign identity</i>
<i>learned helplessness</i>	<i>shared emotions</i>
<i>locus of control</i>	<i>structure of feeling</i>
<i>looking-glass self</i>	<i>subjective (psychological) time</i>
<i>loss aversion</i>	<i>subpersonality</i>
	<i>zone of proximal development</i>

Business, IT, Internet, Crypto

<i>angel investor</i>	<i>decentralization</i>
<i>artificial general intelligence (AGI)</i>	<i>decentralized autonomous organization (DAO)</i>
<i>artificial superintelligence (ASI)</i>	<i>deepfake</i>
<i>blockchain fork</i>	<i>DeFi</i>
<i>cash cow</i>	<i>DeSoc</i>
<i>central bank digital currencies (CBDC)</i>	<i>dictator game</i>
<i>cold start problem</i>	<i>disruptor</i>
<i>collaborative filtering</i>	<i>distributed ledger technology (DLT)</i>
<i>consensus</i>	<i>echo chamber</i>
<i>consensus algorithm based on reputation</i>	<i>filter bubble</i>
<i>consensus proofs</i>	<i>free airdrops of cryptocurrencies</i>
<i>corporate spin-off</i>	<i>hallucinations</i>
<i>copyleft</i>	<i>initial coin offering (ICO)</i>
<i>crowdfunding</i>	<i>killer application</i>
<i>DApps</i>	<i>last mile channels</i>

lead
link rot
long tail
loot boxes
natural language
*NFT sponsorship**
non-fungible token (NFT)
PageRank
Patron Relationship Management
paywalls
peer-to-peer networks
blockchain consensus mechanisms:
proof of attendance protocol
proof of capacity
proof of elapsed time
proof of history
proof of humanity
proof of importance
proof-of-Reputation
proof of stake
proof of work
reinforcement learning
reputation engine
second generation blockchains
semantic web
sharding
sharing economy
single point of failure
smart contracts
sparse matrices
Street Performer Protocol
Subscription Economy Index
supervised learning
sybil attack
teal organizations
the scalability trilemma
token
Turing test
*ucc (user-certificated content)**
ugc (user generated content)
ultimatum game
virality
Web 2.0 (user generated content)
Web 3.0 (Semantic Web)
*Web 3.0 (user-certificated content)**
Web3 (crypto)
51% attacks

Society and Humanitarian Knowledge

cancel culture
complexity theory
creative consumption
critical mass
cultural appropriation
diffusion of innovations curve
Digital Humanities
disruptive innovation
Diversity & Inclusion
Dunbar's number
e-government
electoral systems
early adopters
eudaimonia
evaporating cooling effect
evaporative cooling of group preferences
FOMO
framing effect
Frankfurt School
gift economy
Gini coefficient
habitus

hau spirit
Hawthorne experiment
h-index
informational autocracies
instrumental values
intrinsic value
karma
Kula ring
Le Chatelier's Principle
linguistic appropriation
matching
Matthew Effect (theory of «stars»)
M'Naghten case / M'Naghten rules
meritocracy
NEET generation
polity
positive freedom
*post-factum gratitude payments (donations)**
post-truth
progressivism
reciprocity
reputation
repressive tolerance
reputational capital
ressentiment
revealed preferences
role conflict
self-fulfilling prophecy
semantic differential method
simulacrum
slippery slope
snowball effect
social capital
social credit system
social exchange theory
social graph
social grooming
social roles, interpersonal roles
social stratification
socially constructed reality
spontaneous order
statism (etatism)
straw man fallacy
tacit knowledge
technology shock
terminal values
The Giving Pledge
tokenism
transhumanism
trolley problem (Fat man dilemma)
tyranny of the majority
universal basic income
utilitarianism
welfare states
Westphalian system
world government

SELECTED NAMES

*Acemoglu, Daron**Adorno, Theodor**Ainslie, George**Akerlof, George**Altman, Sam**Anderson, Chris**Arrow, Kenneth**Assagioli, Roberto**Bastiat, Frederic**Bataille, Georges**Becker, Gary**Benjamin, Walter**Bentham, Jeremy**Berger, Peter Ludwig**Berlin, Isaiah**Berners-Lee, Tim**Bourdieu, Pierre**Bozhovich, Lidia**Bruner, Jerome**Buchanan, James**Buterin, Vitalik**Canetti, Elias**Carlyle, Thomas**Coase, Ronald**Coleman, James**Collins, Randall**Conte, Jack**Cowen, Tyler**Csikszentmihalyi, Mihaly**Deaton, Angus**Deci, Edward**Easterlin, Richard**Fanning, Shawn**Farr, William**Florida, Richard**Freud, Sigmund**Friedman, Milton**Fromm, Erich**Fukuyama, Francis**Galiani, Ferdinando**Garfinkel, Harold**Goffman, Erving**Gossen, Hermann**Graeber, David**Guriev, Sergei**Hayek, Friedrich**Heckman, James**Hesmondhalgh, David**Homans, George Casper**Hood, Bruce**Horkheimer, Max**James, William**Jorgenson, Dale**Kahneman, Daniel**Kelly, Kevin**Kendrick, John Whitefield**Knight, Frank**Lakoff, George**Latour, Bruno**Le Bon, Gustave**LeCun, Yann**Leontiev, Alexei**Lessig, Lawrence**Loftus, Elizabeth**Luckmann, Thomas**MacIntyre, Alasdair**Maddison, Angus**Malinowski, Bronislaw**Marcuse, Herbert**Markovits, Daniel**Marlinspike, Moxie**Marshall, Alfred*

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About Alexander Dolgin

Alexander Dolgin is a social theorist and entrepreneur working at the intersection of economics, sociology, psychology, and cultural studies. His work is defined by a close integration of theory and practice: business and social ventures serve as testing grounds for institutional hypotheses, while academic research is translated into real market mechanisms. At the center of his thinking is the “economy of higher needs” — a framework for understanding value creation beyond price alone.

Dolgin is the author of “The Economics of Symbolic Exchange” (2008), a foundational study of how information and reputation function in modern markets, and “Manifesto of the New Economy: Institutions and Business Models of the Digital Society” (2012), which introduced a new language for describing money as a mechanism of collective evaluation rather than merely a means of payment. Across his work, Dolgin has consistently explored how markets can be designed to incorporate trust, meaning, and social evaluation.

In “The Future of Money”, Dolgin brings these ideas together in their most mature form. He develops a theory of public donations as informational signals of quality, proposing a social metric of value based on post-factum payments. In this framework, donations are not charity but “cultural money” — aggregated signals that enable reputation-based navigation, address adverse selection in information markets, and lay the institutional foundations for an economy of reciprocity.

This book was designed for both print and digital reading.

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Why do we pay for what we can get for free?
Can money measure human dignity?
Which is worth more — material
or symbolic status?
How to monetize creativity without ads?
Why do people donate to strangers?
How much is a human life worth?
Can the value of symbolic goods be measured?
What happens to the economy at the top
of Maslow's pyramid?
Why give away money?
How does altruism change economics?
What happens when everything becomes free?
Why is a gift more valuable than a purchase?
How to measure human capital?
Is consumer inequality rising?
What is the economy beyond scarcity?

Alexander Dolgin is a social theorist and entrepreneur working at the intersection of economics, sociology, and cultural studies. His work integrates theory and practice, treating real-world ventures as laboratories for institutional design.

This book builds on his long-standing research into symbolic exchange, reputation, and the economic role of meaning beyond price.



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