CRYPTOCURRENCIES, WEB 3.0, ARTIFICIAL INTELLIGENCE — TOWARDS A NEW PHILOSOPHY OF MONEY?

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Abstract: *Computers and computing technology underwent unimaginable development in the second half of the last century, but all of this pales in comparison to what happened after the turn of the millennium. The 21st century, so far, showcased an unprecedented rise of new developments, like cryptocurrencies, Web 3.0, and artificial intelligence (AI), which besides turning our everyday life upside down, changed fundamentally the way we think about money and finances in general. Of all these, the most spectacular journey has been taken by AI, which after a humble beginning and a setback, is now practically conquering every facet of our lives. These three fiercely advanced technologies are now forcing us to reconsider ideas we have taken for granted for centuries or even millennia, such as the meaning of value in societies, the way trust operates in economies, or the role played by people in all of these processes. One of the most important tools that has been associated with these issues for a long time, partly expressing them, is money. Until less than two decades ago, the concept of money was traditionally linked to centralized institutions, like governments and banks, or even something more abstract like the gold standard. Money was also supposed to be neutral, a means to facilitate the exchange of goods and services or to serve capitalisation, but nowadays, with blockchains and programmable tokens, we are witnessing a radical shift in the core structure of finances. The effective functioning of a society requires that there be strong bonds of trust between its parts and individuals, and one of the most important of these is trust in money. Once being placed mostly in institutions, trust in money is turning now towards bare computer code, allowing people to enter into transactions directly with each other, without intermediaries. Web 3.0 is promoting the concomitant ideas of tokenization and decentralized control, which are shaking up older assumptions about ownership and identity. In such systems, where people can act pseudonymously, or even anonymously, value is being generated and exchanged in ways that radically differ from prior economic models. The third factor is the fulminant upheaval of AI, which adds another strange layer by fuelling machines that are now participating in economic systems, not just as tools but as creators or manipulators of value. That generates many difficult questions about who is doing the labour, who is responsible when an AI makes a decision, or what does authorship even mean. Thus, we are dealing with something bigger than just simple financial innovation, because these new technologies are reshaping the whole ecosystem in which people coexists with money. The once clear borders between work and automation, between value and information, between the individual and the system, are now getting blurry. It makes you wonder whether value is something inherent or just something conventional, or maybe even something that can be coded into existence. Our paper is a brief attempt to discern some of these paradigmatic shifts and the new kinds of philosophical questions they raise. We do not provide answers, we just try to line out how the scene is changing, and how money—once thought of as a stable, practical matter—is becoming something far more abstract, more fluid, and more tightly linked to the digital structures that increasingly shape how we live.*

Key words: *Philosophy of Money, Cryptocurrencies, Web 3.0, Artificial Intelligence, Paradigm Shift*

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1. Introduction

Money is one of the most sophisticated inventions ever made by human civilization, affecting nearly every aspect of life, from the mundane to the existential. It was always a highly important object of study for philosophy, economics, sociology, or even anthropology and often served as source of inspiration for diverse artworks from painting to music. Although being often reduced to an

oversimplified tool for trade and savings, the philosophy of money poses much deeper questions related to its ontological, epistemological, axiological, or ethical facets.

In the course of history, money has always been more than a bare medium of exchange, being a convoluted reflection of value, trust, power, and societal structure. The traditional, everyday conception of money, i.e., a state-backed, centralized, and tangible medium of exchange, is undergoing now a profound metamorphosis. The birth and development of cryptocurrencies, the rapid headway of Web 3.0, and the ubiquity of AI are not just bare technological trends, they generate unleashed philosophical forces, reshaping our knowledge on what money is, how value is created, and who controls it. The convergence of the three indicates a radical shift towards a new philosophy of money based on the concepts of decentralization, algorithmic trust, and post-human economic agency. These emerging technologies are not merely altering the usage of money, but they are reshaping its very philosophical foundations by challenging our traditional assumptions about value, authority, autonomy, and what it means to be part of an economy. In summary, they all together mark a shift from a centralized, institution-dependent paradigm to a decentralized, code-driven, and intelligent financial order.

2. Basic content

The Ontology of Money: What Is It?

According to an opinion that echoes countless times throughout history, at its crux, money is only a social construct without any intrinsic value, whose value emerges from mutual agreement. This opinion has its roots in Aristotle's *Nicomachean Ethics*, where by exploring the question of justness in exchange and the role of money in granting equitable transactions, he differentiates between **natural wealth** (consisting of life supporting things, like food) and **artificial wealth** (money). From this point of view the value of money is a symbolic one, because it is a conventional item, an invention (nomos), rather than a natural product. The role of money is to serve as a measure and a medium, linking different needs and goods, allowing unlike things to become commensurable and thus enabling fair exchange. He deals with the problematics of money in his *Politics* too, where he differentiates between **natural exchange**, like barter for necessities, and **chrematistics**, as the art of wealth acquisition, especially through trade for profit.

In 1900, Georg Simmel published one of his major pieces of work, *The Philosophy of Money*, a treaty that proved to be foundational in both sociology and philosophy. It explores the nature of money not just as an economic tool, but also as a cultural and psychological force that shapes modern life, arguing that money is a pure expression of abstract value—a **neutral intermediary** that makes all things commensurable. This abstraction brings power and paradox, on one hand enabling efficient exchange and complex economies, on the other one reducing qualitative differences to quantitative sameness, thus collapsing feelings, time, or labour into a price tag.

In Simmel's vision, exchange is not just an economic phenomenon, but a form of interaction between individuals that builds society. Due to its **abstract nature**, money transforms direct, personal exchanges into impersonal, mediated ones, altering the nature of human relationships, creating social distance, while increasing individual freedom and objectivity. According to our everyday perspective, money fosters individual autonomy by expanding the scale of personal choice and reducing personal dependence on specific people or institutions. Paradoxically, this increased degree of individual freedom is accompanied by alienation, due to the fact that interpersonal bounds and relationships between individuals and institutions become transactional and people are often valued in terms of economic utility.

It has now become a commonplace, that money promotes the **quantification of values**, thus making everything measurable and comparable in monetary terms. As a consequence, a shift from qualitative to quantitative thinking emerged, affecting everything, arts, ethics, relationships, and even identity included. One psychological effect of money, especially in the realm of urban life, is the *blasé* attitude—a form of emotional detachment, disengagement or indifference, generated by the

overexposure to stimuli, competition and the compulsion to comply. Using monetary valuation desensitizes people, leading to a loss of appreciation or emotional connection. What matters increasingly is not what something is, but what it costs and not who somebody is, but how much "worth" she/he is.

In Simmel's view, money is not as much a static store of value as something whose value lies in its circulation. Modern economy evolved into a complex network of interactions, where money acts like blood in a circulatory system, becoming a symbol of the fluidity of modern life, characterized by a constant movement.

Money and Morality: Can It Be Good or Evil?

Philosophers have wrestled with the moral implications of money since ancient times. Aristotle criticises excessive wealth-seeking and the unnatural accumulation of money, disapproving **usury** (charging interest), calling it "unnatural" because money is being used to reproduce itself, rather than facilitate exchange of real goods.

Christian thought often treated money with suspicion, associating it with one of the seven deadly sins—**greed** (avaritia), and the sin of usury. Thomas Aquinas addressed money primarily within the framework of Christian ethics, natural law, and Aristotelian philosophy. His key ideas are scattered throughout his major works, especially the *Summa Theologiae* and *Commentary on Aristotle's Politics*. Following Aristotle, he considered money being a **human invention** (artificiale) designed to facilitate exchange—instead of a natural good, its proper role residing in serving as a **medium of exchange** and **measure of value**, not as a good to be accumulated or augment. As a good catholic, he firmly castigated usury—the practice of charging interest on a loan—as preposterous and wrongful, contending that money is sterile, because it cannot "produce" more money by itself. Charging interest for its use is thus exploiting the borrower and violating the principle of commutative justice—the idea that exchanges must be equal. Aquinas also developed the idea of a **just price**, a moral, not merely market-determined, value that reflects the worth of the good and maintains social harmony. Excessive profit beyond the just price is unethical unless justified by risk, necessity, or effort. Although wealth and money are not inherently evil but they must be used in accordance with virtue, encouraging charity, moderation, and stewardship, hence wealth should not be hoarded but used ethically. Aquinas classified **avarice** (greed for money) as a capital sin that estranges people from God and disrupts social justice.

At the time of the Industrial Revolution, German philosopher Karl Marx developed a profound critique of money as part of his broader analysis of capitalism. His ideas about money appear mainly in the *Economic and Philosophic Manuscripts of 1844* and later in the first volume of his *Capital*. By contrast to Christian ethics, he sees money not as morally flawed in itself, but as a vehicle of alienation under capitalism. In his **labour theory of value**, Marx asserts that all commodities have an intrinsic value because of the socially required labour-time embodied in them, so in his view, money transforms human labour into an asset, severing workers from the value they create. Money operates as the standard medium for measuring and conveying the worth of commodities, allowing exchange by abstracting from **use-values** (specific needs) and focusing on **exchange-values** (quantified labour). Because under capitalism, labour produces for wages, not for personal need or fulfilment, the worker is separated from the product, the act of production and their own potential, and money, as the form of wage payment, becomes the mediator of this **alienation**. As such, money is not just a means of exchange, but becomes self-expanding capital by buying a commodity (labour, inputs) only to generate more money (surplus value). This is the core idea of **exploitation** in Marx's critique: surplus value is extracted from workers' labour but appropriated by capitalists.

In contemporary ethics, scholars like Michael Sandel alerts of the **moral limits of markets**, by arguing that if everything is for sale, then even education, health, or prison cell upgrades, will become commodities. He exposes the main claim of his critique of the moral limits of markets, i.e., that money tends to corrupt the social good, turning civic duties into market preferences, especially in his 2012 book *What Money Can't Buy: The Moral Limits of Markets*. According to this, markets don't just

allocate goods, they also frame attitudes, values, and relationships, thus the penetration of money and market thinking into every sphere of life can corrupt or crowd out non-market norms, such as altruism, civic duty, or fairness. He makes a clear distinction between **market economy**, a tool for organizing productive activity, and **market society**, a society in which everything is for sale. He warns that our society ambles toward a market society, where money increasingly governs access to resources like education, health, political influence, and even procreation or human organs. In his opinion, **commodification** can corrupt people and generate injustice, especially when it meets inequality, because not every efficient or consensual act of exchange is also just or ethical.

Money and Identity: How Does It Shape Us?

In contemporary capitalist societies, our sense of self is deeply influences by money, due to the fact that a person's social worth is often appreciated by her/his financial success. Erich Fromm critiqued this attitude in his very popular book *To Have or To Be?*. He is arguing that modern individuals are often defined by what they own, rather than who they are. According to his opinion, there are two basic modes of existence: **having**, as defining oneself by possessions, including money, status, and things, respectively **being**, as defining oneself by experience, creativity, love, and authentic expression. Influenced by Marx, Fromm saw money as a symbol of alienation, a means which transforms personal qualities and relationships into impersonal, exchangeable values. Thus, human beings are turned into assets judged solely by their economic value, while love, creativity or dignity are devalued because they cannot be monetized.

In *Escape from Freedom*, Fromm explains how modern individuals despite getting free from traditional authority, do still feel insecure and rootless. Under such circumstances, money may offer an illusion of security and identity and that is why people define themselves by income or consumption because deeper, intrinsic values are not fostered. Moreover, the pursuit of money can lead to existential contradictions by, on the one hand, promising freedom, on the other, imposing conformity. The modern condition is one where money is both a tool of autonomy and a source of dependence; while it enables choice, it can lead to obsession and anxiety. In *Man for Himself* and *The Sane Society*, Fromm describes the **marketing orientation** of man, when money becomes the primary means of self-evaluation, thus people come to see themselves as brands. As a consequence, identity is based on social approval and marketability, not inner values or truth.

Cryptocurrencies: Challenging State Monopoly and Decentralizing Trust

Historically, money has derived its legitimacy from sovereign institutions. However, Bitcoin and other blockchain-based currencies challenge this model by offering decentralized trust. Instead of central banks, cryptocurrencies use distributed consensus and cryptographic proof. As philosopher David Golumbia argues, Bitcoin's appeal lies in its radical departure from state-centric finance (Golumbia, 2016). But this philosophical break raises new questions, on the one hand, regarding the potential replacement of the trust in institutions by the trust in code, on the other, regarding how value systems governed by decentralized algorithms can be more ethical or inclusive than those controlled by human institutions. These topics invite to reconsider the originator of monetary legitimacy, which is no longer the sovereign or the state, but the ubiquitous network.

At the heart of cryptocurrency stays the radical idea of trust without intermediaries. Bitcoin was introduced in 2009 by the fictitious Satoshi Nakamoto, who recommended a peer-to-peer electronic cash system secured not by banks or governments, but by mathematical proof and distributed consensus. (Nakamoto, 2008) Philosophically, this introduces the idea that value can emerge from community consensus and algorithmic governance, severing money from state control. This process of decentralization aligns with Foucault's idea of **governmentality**, i.e., that economic control can shape how power is exercised. (Foucault, 1991) By replacing trust in institutions with trust in data and code, cryptocurrencies develop into a new locus of economic sovereignty, sparking debates over legitimacy, regarding who is entitled to define what money is: central banks or code, governments or communities?

Web 3.0: Redefining Ownership, Participation, and Value Creation

Web 3.0 embodies the vision of a blockchain technology-based, user-owned, decentralized Internet, capable of shifting power from platforms to individuals and communities. Through tools like non-fungible tokens (NFT), decentralized autonomous organizations (DAO), and decentralized finance (DeFi), Web 3.0 enables users to own and monetize their digital assets and even their online identities, and as philosopher Jaron Lanier has long argued, they may be compensated for the data they generate (Lanier, 2013). Now this is becoming feasible, in this new environment, because value can be directly tied to participation, instead of institutional affiliation or employment. The philosophical transformation in how money is earned, distributed, and tied to identity, generates a gradient movement from labour-based income to attention-, ownership-, and contribution-based economies. That poses several new questions regarding how individuals should be paid for their data or in what degree economic value is becoming more relational and communal than transactional. (Lanier, 2013)
Web 3.0 envisions a decentralized Internet powered by blockchain, smart contracts, and token economies. Unlike Web 2.0, where users generate content for centralized platforms, Web 3.0 offers users actual ownership of their data and digital assets, often via non-fungible tokens (NFT) or governance tokens in decentralized autonomous organizations (DAO). This model reconfigures the philosophy of money by tying value to participation and contribution, not just scarcity or labour. In this world, being part of a network—voting, curating content, staking resources— generates value, echoing Marxist critiques of alienated labour, yet with a techno-utopian twist: value is now co-created and co-owned. (Buterin, 2014, Tapscott & Tapscott, 2016)

AI: Rethinking Trust and Control

Nowadays, AI challenges traditional monetary systems by automating decision-making in finance, thus reducing the need for human trust in institutions. Smart contracts and algorithmic trust (e.g., in DeFi) move authority from human intermediaries (banks, regulators) to code. This raises philosophical questions about the legitimacy and ethics of machine-governed value systems: Who decides what the code values? What if it reinforces bias or instability? (Schär, 2021)
AI is a means of central importance to the so-called digital surveillance capitalism, where personal data is monetized through algorithmic profiling and behavioural prediction. Philosopher Shoshana Zuboff argues that this monetization of attention and behaviour redefines the meaning of money itself, which is now tied to its predictive power rather than stored labour or material exchange. This transformation raises several questions related to autonomy, consent, and the commodification of human experience. (Zuboff, 2019)
Contemporary AI-driven financial markets and automated decision-making systems raise profound ethical concerns due to their potential to amplify wealth inequality by reinforcing biased algorithms or concentrating profits. The philosophy of distributive justice, as explored by John Rawls or Amartya Sen gains new urgency in answering the question of ensuring fairness in AI-shaped economies. This brings attention to algorithmic ethics, labour valuation, and whether money still reflects fair compensation in an automated age. (Eubanks, 2018; O'Neil, 2016) There is a serious debate among economists and philosophers regarding the potential of these technologies to empower everyone, or just an elite. The democratizing capacity of Crypto and AI are often praised, but one should not forget that access, literacy, and capital are unevenly distributed in society, so there is always a risk of deepening inequality, exclusion, or algorithmic discrimination.

AI and Post-Human Agency

Day by day, AI automates more tasks previously performed by humans, sparking intense philosophical debates over what money should reward: labour, creativity, attention, or data? These controversies raise the idea that Universal Basic Income (UBI) or data dividends may become necessary, shifting the moral basis of money from labour to citizenship or participation. (Susskind, 2020; Lanier, 2013)
With AI systems making trades, offering financial advice, or generating digital content that can be monetized, they act as quasi-economic agents. This raises a question regarding the rights and/or responsibilities that AI should/could have in economic transactions. Thus, we witness a shift in the

philosophy of money from an essentially human-centric state to a post-human machine-inclusive one. (Danaher, 2016; Pasquale, 2020) AI rattles the philosophy of money by automating the means of production. As it takes over tasks in finance, creative industries, and service sectors, traditional ideas of labour-for-wages are being undermined. In his *World Without Work*, economist Daniel Susskind envisions a future where human labour becomes economically obsolete (Susskind, 2020). This raises an uncanny question: if money has historically been a reward for human effort, what happens when machines take over labour, i.e., the process of generating value? Moreover, AI's evolving role in high-frequency trading, credit scoring, and DeFi governance raise uncountable troops of algorithmic economic agents—entities that make decisions about wealth without human oversight. This leads to deeper philosophical issues about economic agency and/or rights of AI agents and about the way human needs, algorithmic prediction, or network consensus determines value.

AI and the Automation of Value and Decision-Making

The rapidly growing army of AI-powered trading systems, robo-advisors, and decentralized prediction markets further disrupts the monetary paradigm by automating not just labour, but economic decision-making itself. The process raises profound questions with regard to the responsibility for an AI's financial decisions or, more generally, the way non-human agents hold or transfer value. Moreover, AI is now capable to create new forms of economic value, such as synthetic media, generative art, and algorithmically curated knowledge. This addresses another philosophical question regarding value in a world where machines produce content, make investments, and even generate money without human input. Some thinkers argue this leads to a post-capitalist future where traditional labour is irrelevant, and income must be rethought, perhaps through UBI or data dividends (Susskind, 2020; Lanier, 2013). AI thus challenges the labour theory of value and invites humans to reimagine money not as earned commodity, but as entitlement or digital citizenship.

Emerging Ethical and Existential Questions

Emerging new technologies like cryptocurrencies, Web 3.0, and AI are profoundly reshaping not only our economies and societies but also raising deep ethical and existential questions. Many of these investigations cut across economics, philosophy, law, and human identity, challenging foundational assumptions about identity, agency, value, autonomy, and meaning in human life. They not only reshape systems of power and value, but also challenge what it means to be human in a decentralized, automated, and hyper-digital world.

Web 3.0 enables trustless, decentralized networks (e.g., DAOs, smart contracts), which can democratize power but also obscure responsibility, raising the question of accountability (e.g., for frauds, biases, or exploitation) in decentralized systems without central authorities. AI systems can act autonomously in areas like financial trading, medical diagnostics, or warfare. They displace human judgment, but the question of deciding who will be morally accountable for the damages and/or casualties is still open. (Floridi, 2014) Smart contracts and DAOs can significantly reduce human oversight, but the issue of moral intention of the code is unsolved. AI and blockchain technologies often claim neutrality, but as scholars like Cathy O'Neil and Shoshana Zuboff argue, they frequently reproduce existing power dynamics under a veneer of objectivity. Thus, the new philosophy of money must be critical as well as innovative—recognizing that code is not law, but politics in disguise. (O'Neil, 2016; Zuboff, 2019)

One of the most frightening existential questions raised by the confluence of these new technologies is one referring to the meaning of being human in an economy of data and automation. Crypto incentivizes new digital identities (e.g., pseudonymity, tokenized personas), challenging traditional ideas of work, value, and identity. Web 3.0 enables self-sovereign identity—users can control their own data and digital reputation, but does this strengthen identity, or fragment it? AI-generated avatars, bots, and deepfakes challenge traditional boundaries between real and simulated selves. Web 3.0 and NFTs may promote a culture of hyperfinancialization of life, where everything, from art to reputation, develops into a financial asset, tokenized or monetized. Such processes raise serious concerns about the moral limits of markets and the commodification of life. (Sandel, 2012)

A main source of concern is how individuals can maintain autonomy in systems designed to extract value from data. Although Crypto promotes pseudonymity, AI and Web 3.0 platforms still aggregate and monetize data, raising questions of informed consent, surveillance, and the right to digital self-determination. When algorithms curate our information and wealth, what happens to democratic choice and truth? AI recommendation systems and algorithmic bias can entrench social inequality and misinformation. Decentralized networks aim to reduce centralized power, but often concentrate influence in hidden ways (e.g., via token whales or governance capture).

We also have to take into consideration the environmental ethics and tech responsibility aspects of the problem, namely: how can we justify high-energy tech like Bitcoin or large language models in a climate crisis? Cryptocurrencies (especially Bitcoin) have been criticized for their massive carbon footprint and AI training also consumes huge energy resources. All this leads to a more general and comprehensive question: is innovation morally sustainable if it harms the planet?

New Philosophical Pathways and Paradigm Shifts

Cryptocurrencies like Bitcoin reawaken old philosophical debates. What gives money its legitimacy? Is it trust in a state, a technology, or a shared narrative? These innovations challenge centralized monetary systems and raise new ethical issues about transparency, inequality, and environmental cost. At the same time, universal basic income, cashless societies, and digital banking provoke us to rethink not just how money functions, but what role it should play in a just and humane society. In the next table, these evolutionary paths and their corresponding philosophical themes are presented in a concise manner.

Path	**Philosophical Themes**
Trust & automation	Legitimacy of non-human agents
Economic agency	Post-human ethics
Data monetization	Autonomy, consent, commodification
Inequality	Distributive justice
Labour redefinition	Value, purpose, and UBI

The emergence of cryptocurrencies, Web 3.0, and AI has produced a significant paradigm shift in the philosophy of money, challenging foundational ideas about what money is, how it acquires value, which controls it, and what it means for human identity, trust, and social order. The following table synthesises these transformations.

Dimension	**Old Paradigm**	**New Paradigm**	**Key Philosophical Shift**
Trust	Institutional	Decentralized algorithmic	From authority to code
Value	Static and symbolic	Programmable and dynamic	Money as process
Identity	Human-labour tied	Tokenized, datafied	Self as asset
Labour	Source of value	AI/automation driven	Post-labour economy
Sovereignty	National	Global peer-to-peer	Stateless economics

These shifts reflect what Georg Simmel foresaw in his *Philosophy of Money*: money is not static—it evolves with our social relationships, technologies, and moral frameworks.

3. Conclusions: Towards a New Philosophy of Money

Philosophical enquiries about money reveal that this ancient phenomenon is not just an economic tool but also a mirror of human values and contradictions. It reflects human desires, fears, and social arrangements. Examining money from a philosophical perspective means not only to ask what it is, but also to question what humans are becoming in relation to it. As technology and society evolve, so must the ethical and conceptual understanding of this powerful abstraction evolve too. As humanity moves forward, philosophers, technologists, and policymakers must collaborate to safeguard that the powerful new systems built do not only boost performance, but also uphold justice, promote dignity, and endorse human well-being in this thoroughly reinvented monetary future.

Cryptocurrencies, Web 3.0, and AI are not simply financial or technological innovations, but they mark a philosophical shift in how we understand money, value, and human agency. By decoupling money from the state, reassigning ownership of data, and automating value creation, these systems force us to rethink the foundational questions of economics and ethics.

These technologies together suggest that we are moving toward a post-human or post-institutional philosophy of money—one where value is defined not solely by governments or gold, but by networks, algorithms, and participation. This shift offers exciting possibilities for democratization and innovation, but also dangers, like the loss of regulatory oversight, deepening inequality, and the rise of opaque techno-authorities.

As these technologies mature, philosophers, economists, and technologists must work together to answer not just what money is, but what it should be. In doing so, we move beyond money as currency, toward money as a mirror of human—and artificial—values. Bringing together these technological revolutions, we will be able to outline several emergent principles in the new philosophy of money:

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