



Metaphysical Status of Money and Sustainable Organizations and Ecosystems

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Received: 16 October 2023 / Accepted: 11 April 2024
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Abstract

The current economic and societal production system gives money a magnified importance, overlooking other essential flows necessary for human survival and existence. It focuses on monetary indicators like profits, dividends, and GDPs to evaluate organizational production, while often disregarding outputs that harm the biosphere. Money is treated as the constitutive being (ousia) and attributed undemonstrated explanatory properties. Intangible flow theory helps eliminate this metaphysical status of money by recognizing that monetary flows are just one of many necessary flows for human survival and existence. Organizations deliver product-flows that require input-flows from and send output-flows back to the encompassing biosphere, whether they explicitly engage in environmentally friendly activities or not. Therefore, every organization is an ecological entity because it has a relationship with the biosphere, which participates in the manner through which humans integrate into their surrounding environment and relate to other living beings. Eliminating the metaphysical status of money integrates every organization in the biosphere, making organizations accountable for environmental harm caused by their activities. This can be achieved by deconstructing the metaphysical status of money in business models.

Keywords Externality · Biosphere · Ecological entity · Corporate social responsibility · Metaphysical status of money · Competitive advantage · Intangible flow theory · Profit motive · Circular economy · Business model

Introduction

The emergence of our climatic and environmental situation and the many forms of pollution caused by the production process are worsening, thereby traversing some of our planet's boundaries. Therefore, we must develop new ideas and theories.

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Sustainable and circular ecosystems have remarkable persuasiveness regarding pollution avoidance, recycling, and management of natural resources and waste.¹ Previous research has made a distinction between organizations that participate in activities such as reducing, reusing, recovering, or recycling, which are deemed circular economies, and those that do not, which are deemed linear economies.²

As circular economy studies move to a more integrated approach, the influence of socio-cultural aspects has become more evident. More attention is required on the equitable distribution of resources, transparency, and stakeholder responsibilities in circular economy discourses.³ Furthermore, there is a need for bridging technical, managerial, socio-economic, environmental, and political perspectives.⁴

Unfortunately, only a limited number of firms explicitly commit to reducing, reusing, recovering, or recycling, and an even smaller number implement effective measures to implement them productively. Furthermore, firms that are and are not committed to sustainable and circular ecosystems can send polluting flows that cause environmental degradation to the surrounding biosphere.⁵

Nevertheless, these negative outputs are often treated as externalities to the production process. We suggest that these polluting flows be fully incorporated in our understanding of economic and societal production. In other words, we suggest eliminating the alibi that polluting flows are externalities of the production process. We define this reasoning as an alibi in the sense that production is claimed elsewhere, not in pollution flows. Granted, using the concept of externality, observers may alert to pollution and its consequences. However, polluting flows are treated as external to production. Accordingly, they are externalities. This alibi, which excuses polluting organizations, is invoked by various governments, firms, and scholars.⁶

We suggest that polluting flows and environmental harm caused by organizations must be considered an integral part of their productive processes. To eliminate the externality alibi, we apply a conception of intangible flow theory,⁷ namely the deconstruction of the metaphysical status of money into an empirical status. The metaphysical status of money consists of the attribution of explanatory properties to money, which is not demonstrated beyond the world of concepts in the physical world. In the metaphysical status of money, monetary flows are given ontological and epistemic primacy over other flows necessary for human survival and existence, such as flows related to food, clothes, transport, housing, and healthcare. Furthermore, monetary flows are invoked to justify pseudo-phenomena. A pseudo-phenomenon is a non-existent phenomenon that is employed as demonstrated and verified.⁸

¹ Blomsma and Brennan (2017); Geng et al. (2019); George et al. (2015); Hecht et al. (2012); Kirchherr et al. (2023); Leipold et al. (2023); Lüdeke-Freund et al. (2019); Pedneault et al. (2023)

² See for example: Kopnina (2021); Dzhengiz et al. (2023); Morseletto (2023); Neves and Marques (2022).

³ Temesgen et al. (2021); Chedrak et al. (2023, p. 16).

⁴ Temesgen et al. (2021); Leipold et al. (2023).

⁵ Corvellec et al. (2022); Eppinger (2022); D'Itria and Aus (2023); Linder and Williander (2017); Lüdeke et al. (2019); Kirchherr et al. (2017); Sunny (2021); Niero et al. (2021); Roquebert and Debuquet (2022).

⁶ Van den Bergh (2010); Boudreaux and Meiners (2019); Figge et al. (2022); Owen et al. (2020); Liebowitz and Margolis (1994); Willman and Pepper (2020).

⁷ More details about this theory can be found in Cardao-Pito (2021a, 2012, 2016).

⁸ Cardao-Pito (2021a, Chapters 1 and 3).

To achieve this conceptual framework, one needs to consider the flows necessary for economic and societal production. Observe, for instance, the flows necessary for food to reach supermarket shelves or restaurant tables. Why should the flows of money be more important than the other flows necessary for the flows of food or the flows of food themselves? Alternatively, to put it another way, in the format of identifying the pseudo-phenomenon, why should monetary flows entirely explain the flows of food?

Monetary flows are held as the major purpose of production and as the creators/definers of commodities. Money is treated as the constitutive being (*ousia*⁹) and first cause of economic and societal phenomena. It is turned into the ontological basic entity. Money explains why the other things exist in management, organizational and economic phenomena, but money or monetary flows stand in no need of explaining.¹⁰ Consequently, production is defined through monetary indicators such as GDPs, profits, dividends, rents, interests, and related indicators.¹¹ The concept of externality is associated with outwardness regarding economic and societal production, defined through monetary flows treated as the constitutive being, which is reflected in these indicators. In the empirical status of money, monetary flows are only one type of flow that is currently necessary for human survival and existence. Human beings, organizations, and societies are immersed in the biosphere. By the biosphere, we not only understand living beings but also the requirements for their existence of living beings in our planet's atmosphere, hydrosphere, and geosphere.¹²

This study aims to demonstrate that when economic and societal production is conceptually integrated into the biosphere, the environmentally hostile concept of externality can be eliminated. Monetary flows are no longer treated as the constitutive being (*ousia*) and primary cause of economic and societal phenomena. Every business model is integrated into the biosphere because organizations are ecological entities that participate in the manner in which humans integrate into their surrounding environment and relate to other living beings. By ecology, we comprehend the study of the relationship between organisms and their surrounding environment, and to each other. This definition is also applicable to human beings (adapted from the Ecological Society of America 2023; Remmert 1980; Sarkar and Elliott-Graves 2016; Smith and Pimm 2023).

Although they are certainly heterodox, these contributions can have significant implications because most environmental degradation appears to be caused by production outputs. These damaging outputs are generally created to generate flows of money in the direction of specific organizations, states, and individuals. By eliminating the concept of externality and integrating every business model in the biosphere, we can better understand the urgency of adopting effective productive measures for reducing, reusing, recovering, and recycling for improving the relationship that every organization has with the biosphere.

⁹ *Ousia* (*οὐσία*) is a term used since ancient Greek metaphysics when it was employed by philosophers such as Plato and Aristotle. In contemporary philosophy this term is often understood as being and ontic. There was not a direct translation of the word to Latin, and thus Roman philosophers as Seneca or Cicero, and subsequent scholastic philosophers who wrote in Latin as Saint Augustine used alternatives such as substance or essence to define this term. These translations subsisted during many centuries and are still employed. However, we adopt the contemporary interpretation that the translation for *ousia* in the study of metaphysics is that of the study of being or ontology. As defined by Aristotle, constitutive or primary *ousia* are "the ontological basic entities. They are the things by reference to which we explain why the other things exist, but whose existence itself stands in no need of explaining" (Loux 2008, p. 2).

¹⁰ Idem.

¹¹ Cardao-Pito (2021a, Chapters 1 and 3; 2016; 2012).

¹² Cardao-Pito (2021a, p. 3).

The deconstruction of the metaphysical status of money produced in this article must not be confused with an anti-metaphysical stance, such as that of logical positivism or relativism in postmodernism/poststructuralism. On the contrary, it directly results from a metaphysical analysis, which demonstrates the relevance of inquiring about the basis, foundations, and possibilities for knowledge. The denial of metaphysical components in dominant theories or the denial of the very possibility of metaphysical analysis contribute to sabotaging the possibility of new theories that can contest dominant theories in management, economics, and other social sciences. Hence, these denials against metaphysical inquires contribute to the status quo and lack of renewal in these discipline.¹³

The rest of the paper is structured as follows. The next section describes the explanation for the existence of organizations that results from the metaphysical status of money. The third section describes the difficulty of finding alternative explanations for the existence of organizations while maintaining the metaphysical status of money. The fourth section reviews evidence that various of the firms that generate the largest monetary revenues have vast impacts upon the biosphere. The fifth section discusses how the empirical status of money can contribute to integrating every organization in the biosphere. The sixth section identifies directions for future research. It notes that the identification of the metaphysical status of money raises other interesting research questions, such as: [a] Why did the treatment of money as constitutive being (ousia) of economic and societal activity be under noticed and understudied in various disciplines? [b] When did the treatment of money as the constitutive being (ousia) of economic and societal activity originate? Furthermore, this section describes a specific example of possible future research, namely the recognition that many contemporary universities and academics are deeply affected by the metaphysical status of money. The last section concludes the study.

The Profit Motive that Results from the Metaphysical Status of Money

Metaphysical components are employed in contemporary theories to describe societies, markets and organizations.¹⁴ As described above, the metaphysical status of money is a concept derived from intangible flow theory. It describes situations in which monetary flows are treated as the constitutive being (ousia) and attributed superior explanatory capacity compared to other flows in economic and societal production. It commands organizational production to be primarily evaluated through monetary indicators such as profits, dividends, or GDPs.

The contemporarily dominant explanation for the existence of an organization is derived from this metaphysical status of money. Accordingly, organizations exist to increase monetary profits and, consequently, the wealth of their shareholders/owners¹⁵ (. This explanation is not only attributed to firms (or corporations) but also to governments and non-government organizations (NGOs) because we often hear and read that they should also be run as for-profit organizations.¹⁶

¹³ Adapted from (2021a).

¹⁴ As noted by Schwarzkopf (2012).

¹⁵ Friedman (1970); Cardao-Pito (2021b); George et al. (2021); Flew (1976); Lux (2003)

¹⁶ See for instance Gray (1991); Deem and Brehony (2005); Lane (2002); Reiter and Klenk (2019).

This explanation for the existence of organizations can be found in most areas of economics.¹⁷ In business, organizational, and management research derived from economics, the concept of competitive advantage translates to it. Accordingly, competitive advantage implies controlling factors that enable an increase in profit/shareholder wealth, either temporarily or in the long run.¹⁸ For instance, both the resource-based view¹⁹ and position view of firms²⁰ claim that holding either key resources or industry positioning is the best route to attaining competitive advantage. Hence, these are described as the driving motives of organizations to increase monetary profit and shareholder wealth. Even a few recent attempts to discuss alternative purposes for the existence of an organization are constrained by the reasoning that any other possible organizational purpose must be subordinated to that of increasing profits/owners' wealth.²¹

Nonetheless, the metaphysical status of money leads to overreliance on monetary motives, which can fundamentally detach organizations and societies from the biosphere upon which we are immersed. In research and in the news and over the internet there are plenty of examples of how a voracious thirst for profit threatens climate change, biodiversity, health, hunger, poverty, inequality, war, and so forth.²²

Although some of these tribulations appear to have been on the increase, they are often deemed by many scholars to be externalities of functioning markets and the organizations that participate in them,²³ as if the consequences arising in the biosphere from the monetary profit motive could be disconnected from the activities performed by organizations.

However, the widely advocated monetary profit motive treats organizations as black boxes that are (openly or covertly) obsessed with financial results (or the bottom line). In this context, organizations are automatically classified as being for profit, regardless of their structures, systems, and processes. Similarly, important initiatives from the circular economy can be understood as alien to the productive process when they do not impact firms' profits (or financial performance, or the bottom line).

Paradoxically, this monetary profit motive does not really distinguish organizations nor does it explain how profits are attained. Furthermore, this profit motive also conveys a profound lack of sympathy toward understanding complex problems solved by contemporary organizations and their vital role in human survival and existence.²⁴ Additionally, the profit motive obfuscates forms of organizing that occur outside the formal firm²⁵ and recent technological forms of organizing that compete with traditional firms.²⁶

¹⁷ Cardao-Pito (2017, 2021a, b, c); Flew (1976); Lux (2003)

¹⁸ Azeem et al. (2021); Bocken and Geradts (2020); Dagnino et al. (2021); Porter (1985a, b); Christensen (2001); Coyne (1986); Barney (1995); Powell (2001); Wu and Li (forthcoming).

¹⁹ Penrose (1959); Wernerfelt (1984); Barney (1991); Freeman et al. (2021).

²⁰ Porter (1985a, 1996); Clegg et al. (2020)

²¹ See for instance: George et al. (2021); Gartenberg et al. (2019); Mayer (2021).

²² Mahoney and McGahan (2007); George et al. (2016); Howard-Grenville et al. (2019), Kunisch et al. (2020); Sadler-Smith and Akstinaite (2022); Willman and Pepper (2020).

²³ Van den Bergh (2010); Boudreaux and Meiners (2019); Owen et al. (2020); Liebowitz and Margolis (1994); Willman and Pepper (2020).

²⁴ Cardao-Pito (2017, 2021a, b).

²⁵ Ahrne and Brunsson (2019); Mahoney et al. (2009); Kaul and Luo (2018); Mair and Rathert (2021); Josifidis and Supic (2021).

²⁶ Davis (2016); Marquis (2020); Billinger and Workiewicz (2019).

Nevertheless, to tackle societal and environmental challenges and advance a sustainable economy, robust action seems to be required in the quest for alternatives to the profit motive.²⁷ We need alternative explanations that can address the interrelatedness of economic, social, and environmental systems, and advance the relation between organizations and the biosphere.²⁸

Difficulty of Detaching the Organizational Aim from the Metaphysical Status of Money

Nonetheless, alternatives to the monetary profit motive, derived from the metaphysical status of money, have been elusive. Remarkably, the stakeholder view of the organization has restored Aristotle's (350, BC) ancient formulation that economic and social activity must be based on virtue and placed within the community (polis) of human beings²⁹ and Polanyi's (1944, 2001, 1977) view that markets are embedded in human societies. The stakeholder's view has argued that various persons and groups (stakeholders) all have concerns related to organizations, beyond those of making money for shareholders/owners. Besides being created by humans, organizations can interact with many other humans, including workers, customers, suppliers, governments, neighbours, and interest groups and so forth.³⁰

Furthermore, various studies have presented a theoretical and empirical argument favoring corporate social responsibility (CSR) and sustainable initiatives by for-profit firms.³¹ The United Nations proposed Sustainable Development Goals (SDG), which have wide-reaching implications for organizations.³² In addition, attempts at sustainable investing have been linked to the development of Environmental, Governance and Social (ESG) Investing and Standards, with the aim of proposing a triple bottom line involving the environment, economy, and society.³³

However, despite the many positive contributions of these initiatives, they are still not entirely compelling. Undeniably, they are still subordinate to the concept that organizations exist because of the monetary profit motive, which results from the metaphysical status of money that attributes superior explanatory power to monetary flows over other flows necessary for human existence and survival.

²⁷ Blok (2021); Dzhengiz et al. (2023); Ferraro et al. (2015); Feger and Mermet (2022); George et al. (2016); Mair and Rathert (2021); Jammulamadaka et al. (2021); Painter-Morland (2015); Russo-Spena et al. (2021); Thomas and Ritala (2022).

²⁸ Bhar et al. (2022); Stough et al. (2022); Blomsma et al. (2023); Feger and Mermet (2022); George et al. (2016); Hiquet et al. (2023); Mair and Rathert (2021); Heikkurinen et al. (2021); Jammulamadaka et al. (2021); Nyberg and Wright (2016); Nyberg et al. (2022); Raworth (2017); Russo-Spena et al. (2021); Pek (2023); Perey et al. (2018); Panwar et al. (2022); Thomas and Ritala (2022); Kurucz et al. (2014); Marcus et al. (2010); Sunny (2021); Waddock (2022).

²⁹ Aristotle (350 BC); Hühn and Meyer (2023).

³⁰ See for instance Laplume et al. (2008); Freeman et al. (2004); Freeman et al. (2007); Gibson (2000); Fassin (2009).

³¹ Margolis and Walsh (2003); Flammer (2015); Kaul and Luo (2018); Goodell (1972); Latapí Agudelo et al. (2019).

³² Xu et al. (2021); Obel and Kallehave (2022); Jamali et al. (2022); Lemaire and Limbourg (2019).

³³ Sherwood and Pollard (2018); Arvidsson and Dumay (2022); Kapil and Rawal *forthcoming*; Glavas and Mish (2015).

Despite many valid and important contributions, to date, the stakeholder view does not clearly explain what binds all these people together around the organization.³⁴ Furthermore, recent variations in stakeholder theory have attempted to reorient it toward the monetary profit motive, arguing that organizations' concern for stakeholders is mainly instrumental for the drive to attain greater profitability.³⁵ Likewise, several studies have attempted to link CSR programs to enhanced financial performance.³⁶

Furthermore, there may be grey zones in distinguishing corporate social responsibility from corporate social irresponsibility.³⁷ In August 2022, António Guterres, United Nations Secretary-General, criticized the greed of firms that had excessive profits while taking advantage of the energy crisis arising from inflation and war in Ukraine. He has urged Governments to "tax these excessive profits, and use the funds to support the most vulnerable people through these difficult times".³⁸ However, it would not be difficult to identify firms proclaiming a commitment to the UN's Sustainable Development Goals among the firms criticized by the Secretary-General.

The Economist (2022) newspaper recently summarized a set of criticisms that are frequently lodged against ESG Investing and Standards, which include the following: a) lack of a coherent guide for firms to make trade-offs that are inevitable in any society, b) not being straight about incentives because they imply that good behavior is always more lucrative when this might be false (for instance, pollution and crime might be very lucrative), c) inconsistencies in the scoring system that are easily gamed, from which we can also deduct d) greenwashing, and e) the equivalent socialwashing.³⁹

Firms Generating Large Monetary Flows can have Great Impacts Upon the Biosphere

This Section describes recent evidence that firms generating the largest amounts of monetary flow revenues have a significant impact on the biosphere. Monetary flows are not the constitutive being (ousia) but one type of flows among others currently necessary for human survival and existence. Cardao-Pito (2021a, Chapter 5) studied all firms that were listed during [2000–2017] in the stock markets of five large countries: China [36,790 observations, 3,520 organizations], Germany [10,648 observations, 968 organizations], Japan [58,115, 4,563], the UK [29,748, 3,115], and the US [29,948, 2,104].⁴⁰

The sample comprises 14,217 firms in total. Among these firms, Cardao-Pito identified the 20 firms in each country's subsample with the largest mean yearly monetary revenue. In total, he identified 100 firms. Rather than adopting the more common approach of comparing their stock market valuation (which is not yet entirely understood), this recent study analyzed exactly how much revenue these firms generated.

³⁴ See for instance Lepak and Snell (1999); Mahoney and Kor (2015); Post et al. (2002); Russo and Perrini (2010).

³⁵ See for instance McGahan (2021); He and Chittoor (2022); Cohen (2023); Freeman et al. (2021); Barnett (2022).

³⁶ See for instance Okafor et al. (2021); Brooks and Kumar (2023); Gao et al. *forthcoming*; Barnett (2022); Awaysheh et al. (2020); Ho et al. (2021).

³⁷ Clarck et al. (2022).

³⁸ Cited in Nicholls (2022).

³⁹ Adapted from Economist (2022); see also Arvidsson and Dumay (2022); Abhayawansa and Tyagi (2021); Cort and Esty (2020); Crace and Gehman (2023); van Bommel et al. (2023).

⁴⁰ For China and Japan the period was [2002–2017] because the data was unavailable for 2000 and 2001.

Table 1 The 20 highest-revenue listed firms in China, Germany, Japan, the UK, and the US [2000–2017] classified by their major activities

	China sample	Germany sample	Japan sample	UK sample	US sample
Airline and travel companies		Lufthansa		Tui Travel	
Automobile and transport machinery manufacturers	Saic Motor, China CNR	Volkswagen, Daimler, BMW, Audi, Continental	Toyota Motor, Honda Motor, Nissan Motor, Mitsubishi		General Motors, Ford
Communication firms involving commodities and physical structure	China United Communication Network	Deutsche Telekom, Deutsche Post	Japan Post, Nippon Telegraph and Telephone, NTT DoCoMo	Vodafone Group	AT&T, Verizon Communications
Construction and building structures related organizations	China State Construction and Engineering, China Vanke, Xiamen C&D, Xanghai Construction Group				
Energy related, mining/extractive and chemical companies	China Petroleum and Chemicals, Minmetals, China Electric Power Equipment and Technology,	Uniper, E.ON, Basf, Innogi, Rwe, Bayer	JXTG Holdings, Nippon Oil	BP, Glencore, Shell Transport and Trading, SSE, Anglo American	Exxon Mobil, Chevron, Philips 66, ConocoPhillips, Valero Energy
Insurance organizations	China Pac, New China Life	Allianz, Muenchener Ruck	Japan Post Insurance, Nippon Life Insurance, Dai-ichi Life Holdings	Prudential, Aviva, Legal and General, Standard Life Aberdeen	AIG
Intangible intensive companies				WPP	
Other industrial manufacturing and conglomerates with several manufacturing operations	Baoshan Iron and Steel, HBIS Company	Siemens, ThyssenKrupp	Hitaichi	Unilever, Imperial Brands	General Electric, Berkshire Hathaway,
Physical machines and appliances manufacturers	Huawei Investment, Midea Group, Green Electric Appliances		Panasonic, Sony, Toshiba, Toyota Tsusho, Fujitsu		Apple, IBM, HP

Table 1 (continued)

	China sample	Germany sample	Japan sample	UK sample	US sample
Producers and distributors of health related products				Glaxosmithkline, AstraZeneca, Alliance Boots	McKesson, United Health Group, CVS Health, Cardinal Health
Retailers and intermediaries storing and delivering physical goods (commodities)	JD.Com, Suning.com, Power Diversity Auto-mobile Trade	Coconomy, Metro	Seven & I Holdings, Aeon	Tesco, Sainsbury, Morris Supermarkets	Wall-Mart

This table demonstrates that monetary flow generation can be highly dependent and impactful on the biosphere, which provides conditions for human survival and existence. The table approximately classifies by the activities performed the 20 listed firms that generated the largest revenue monetary inflows in five large countries, namely, China, Germany, Japan, the UK, and the US. The samples were obtained from the Refinitiv DATASTREAM Database. It contained 14,217 clearly identifiable organizations in the five country sub-samples: China [36,790 observations; 3,520 organizations], Germany [10,648 observations; 968 organizations], Japan [58,115; 4,563; the UK [29,748; 3,115], and the US [29,948; 2,104]. The sample covers a specific period for Germany, the UK, and the US [2000-2017] and for China and Japan [2002-2017, where data were unavailable for 2000 and 2001]

Cardao-Pito (2021a, Chapter 5)

Table 1, which is divided by country, classifies these 100 firms according to their major activities. Although these organizations' revenues are obtained from around the world, they are equivalent to a large proportion of their country's average GDP. For instance, in Germany, the 20 largest average firms in terms of revenue represent approximately 48% of the average GDP. The equivalent percentage for China was 12%, with 35% for Japan, 51% for the UK, and 19% for the US.⁴¹ Hence, these organizations generate substantial monetary flows. By studying them, it is possible to better appreciate the relationship between monetary flows, product flows, and biosphere phenomena.

Commodity intensity [i.e., physical-good intensity in the intangible flow theory framework] does not immediately imply greater revenues. For example, a simple 7–11 convenience store can have a large commodity intensity because it mostly delivers commodity flows to customers. However, the ensuing revenue may be modest. Notwithstanding, the organizations that generated the largest monetary flows in these country subsamples seem to be generally based on tangible flows that are utterly reliant on natural resources and the bio-physical world.

In this period, the firms that generated the greatest monetary revenues in the five samples were two companies related to energy, extractive, and chemical operations: China Petroleum and Chemicals, and BP in the UK; two car manufacturers, Toyota Motor in Japan and Volkswagen in Germany; and a large supermarket chain that is highly based on physical good (commodity) flows: Wall-Mart in the US. Clearly, all of these firms produce highly tangible (commodity intensive) product flows. With very few exceptions, the largest money-generating firms tend to have higher commodity flow tangibility.

Among these 100 firms, there are several organizations related to energy, extractive, and chemical manufacturing that require natural physical resources to produce and deliver their product flows. These findings appear to demonstrate contemporary societies' reliance on energy, minerals, and raw materials that are extracted, transformed, transported, stored, and then delivered by these organizations.

All five samples contain conglomerates with physical manufacturing operations as the largest monetary flow generators. The prevalent type of organization present in each sample are organizations involved in enhancing human communication and Internet services, such as Vodafone in the UK, Deutsche Telekom in Germany, and NTT Docomo in Japan. Although human communication and Internet flows are largely intangible, geographically distant communication and the Internet both require commodities and hard physical infrastructures to be able to operate. In addition, apart from the UK sample, all samples contain highly tangible car manufacturers among the largest monetary flow generators, examples being organizations such as the SAIC motor in China, Nissan Motor in Japan, or Ford in the US.

The China, Japan, and US samples all contain several physical machine and appliance manufacturers among the largest monetary flow-generating firms, such as the Green Electric Appliance Group, Toshiba, or Apple. China is the only sample that contains organizations directly related to construction and building structures among the top 20 largest monetary flow-generating firms. The UK and US are the two samples that contain firms connected to human health, which could be related to their domestic health systems. However, medicines and medical machines require several inputs from

⁴¹ Cardao-Pito (2021a, Chapter 5).

the bio-physical world. Furthermore, organizations that provide health services require highly tangible hospitals, machines, furniture, ambulances, etc., as do pharmaceutical companies such as Glaxosmithkline and Astrazeneca in the UK, which are related to some degree of intangibility with R&D, patents, or marketing. Moreover, medicines and medical machines have different physical forms.

Among these 100 large monetary flow generators, a few organizations can traditionally be classified as intangible intensive. Nonetheless, intangible flow theory explains that this could be a misconception, because these firms are highly reliant on tangibility for their product flows. Examples include an airline (Lufthansa in Germany) and a travel company that owns planes in addition to hotels (Tui Travel in the UK). These two organizations can traditionally be classified as mere service providers; however, airways are highly dependent on tangible jet fuel, planes, airports, etc. Likewise, hotels require highly tangible physical structures, such as buildings, furniture, and machines.

Similarly, organizations that store and deliver physical goods can also be traditionally classified as mere service providers and thus as intangible intensive. In fact, their product flows are based on commodities; therefore, their product outflows are highly tangible. Examples include supermarket and retail store chains, such as JD.Com, Suning.com, Power Diversity Automobile Trade (in China), Ceconomy (in Germany), Seven & I Holdings and AEON (in Japan), Tesco, Sainsbury, Morris Supermarkets (in the UK), Wall-Mart (in the US), and gross wholesaler suppliers to supermarkets, retailers, and other shops, such as Metro (in Germany).

In each country subsample, there was at least one insurance company among the largest cash flow generator set. Clearly, a key resource for insurance organizations is money, in which monetary flows are highly tangible. Furthermore, insurance contracts can be classified as either (human) life (eg. term contracts, cash value contracts or hybrid contracts) or non-life (as property, houses, cars, factories, etc.). Most insurance contracts involve tangible fixtures and conditions.

The one organization among these 100 firms that could be considered to produce product flows with higher intangibility is WPP, a large advertising and communication company (in the UK). However, its operations are far from entirely intangible. According to its 2017 annual report, the WPP employed 203,000 in 3,000 (physical) offices located in 112 countries around the world. These employees require highly tangible physical flows to survive and exist, let alone work.

Table 1 further confirms the association between monetary flow generation and tangible flows, both of which rely on natural resources and the biophysical world. Furthermore, those tangible flows rely on human-related intangible flow dynamics to be produced and delivered. The data from these samples were terminated in 2017. In recent years, however, large technological firms such as Alphabet (Google's parent company), Apple, Amazon, Microsoft, Tencent, and Alibaba have all been increasing their flows of products, and consequently, their monetary inflows. Nevertheless, their relationship with tangibility can be proven by the many commodities delivered by Apple, Amazon, or Alibaba to members of society, and the hundreds of thousands of employees that these six firms employ around the world.⁴²

⁴² For instance, in March 2024, according to Google Finance, Alphabet (the parent of Google) employed 182,502 members of staff, Microsoft employed 221,000 members of staff, Meta (Facebook, Whatsapp and Instagram) employed 67,317 members of staff, and Ali Baba 219,260 members of staff.

Table 2 Deconstruction of the metaphysical status of money into an empirical status: organizations are ecological entities

	Metaphysical status of money	Empirical status of money
Status of monetary flows	Economic and societal production is defined in terms of monetary flows, and related measures such as GDPs, profits, dividends, rents, interests and so forth	Monetary flows are only one type of flows amongst the flows currently necessary for human survival and existence
Concept of externality	Impacts of production in the biosphere are treated as externalities when they are not explicitly reflected on the organization's monetary flows, or have only negative consequences (e.g., pollution)	The concept of externality is eliminated. Economic and societal production is integrated in the biosphere
Circular and linear economy	Circular economy is defined in terms of a limited number of important activities such as reducing, reusing, recovering, and recycling. Organizations that do not engage in these activities are said to be part of a linear economy. Nevertheless, these activities risk being considered as externalities of production	Every organization has a relationship with the biosphere. Important key roles in improving that relationship Still, organizations that do not engage in those activities also have a relationship with the biosphere. The artificial separation between circular and linear economy is removed
Business models	Business models for the circular economy generally consider only those organizations that explicitly adhere to activities such as reducing, reusing, recovering, and recycling	Every business model has a relationship with the surrounding biosphere

The authors

As exhibited in this section, some of the firms in China, Germany, Japan, the UK, and the US, whose product flows currently generate the most severe impacts on the environment, are also those that generate some of the largest annual monetary revenues (e.g., energy-related firms, mining/extractive and chemical companies, airline and travel companies, and automobile and transport machinery manufacturers that deliver machines based on combustion engines).

Organizations are Ecological Entities

In the metaphysical status of money where money is treated as the constitutive being (ousia), monetary metrics have an explanatory prevalence over other flows in economic and societal production. In the empirical status of money suggested by intangible flow theory, monetary flows are only one type of flow currently required for human survival and existence. Monetary flows have no explanatory primacy over the other flows necessary for human survival and existence. This section explains how the elimination of the metaphysical status of money contributes to the advancement of sustainable ecosystems. Table 2 summarizes the major contributions of this study.

In their recent review, Dzhengiz et al. (2023) proposed that an important requirement to advance the case for the circular economy is identifying and analyzing in-house assumptions, root-metaphor assumptions, and ideological assumptions in circular economy research. We agree. Nevertheless, we add that there is also a need to inquire about other assumptions that are broadly imbued in business, management, organizational, and economic (BMOE) research. These assumptions can also pose obstacles to sustainable ecosystem agendas. One of these obstacles is the metaphysical status of money in BMOE research.

Indeed, the understanding of sustainable and circular ecosystems is not entirely consensual among organizations and among researchers.⁴³ Furthermore, circular economy initiatives by firms require political support from governments,⁴⁴ organizational ecosystems,⁴⁵ and consumers and other stakeholders.⁴⁶

Because of money's metaphysical status, however, monetary flows are given an explanatory prevalence over other production flows. As noted earlier, economic and societal production are often considered in terms of monetary indicators (e.g., GDPs, profits, dividends, rents, interests, and related indicators). Invoking the profit motive to explain the existence of organizations is a consequence of the metaphysical status of monetary flows. Likewise, output flows that are not directly reflected in the generation of monetary flows are often treated as externalities regardless of how harmful they can be to the biosphere.

We suggest that the empirical status of money provides grounds for eliminating the concept of externalities. In fact, monetary flow generation might be the major cause of the various tribulations that human societies currently suffer in their relationships with a

⁴³ Corvellec et al. (2020); D'Itria and Aus (2023); Dzhengiz et al. (2023); Kirchherr et al. (2017); Lieder and Rashid (2016); Leipold et al. (2023); Ghisellini et al. (2016); Tanguy et al. (2023).

⁴⁴ Amengual and Bartley (2022); Bauwens et al. (2020); Droege et al. (2023); Patala et al. (2022); Salmivaara and Kibler (2020); Ranta et al. (2018); Schultz and Reinhardt (2022).

⁴⁵ Thomas and Ritala (2022); Kapoor (2018); Jacobides et al. (2018); Shipilov and Gawer (2020); Yonatan (2017).

⁴⁶ Kuhlmann et al. (2023); Pretner et al. (2021); Bocken and Konietzko (2022); Schillebeeckx et al. (2022).

degrading environment. Several firms whose product flows currently generate the most severe impacts on the environment are also those that generate some of the largest annual monetary revenues (e.g., energy-related firms, mining/extractive and chemical companies, and automobile and transport machinery manufacturers that deliver machines based on combustion engines).

Various of these firms can have meritorious initiatives involving, for example, what is deemed a circular economy, corporate social responsibility programs, ESG reporting programs, or adoption of renewable energy/emission-saving technologies. However, many of their product flows systematically contribute to large-scale damage to the environment. Isolated financial analyses of profits (or monetary value created) cannot allow us to grasp the many negative impacts of these firms' activities. On the other hand, their flow of products contributes to further explaining their profit generation systems and impacts on the environment. We propose that damage to the environment caused by these firms is an integral part of their business model. Thus, the artificial separation between so-called circular and linear economies is not only redundant but also dangerous in that it can be used to excuse serial organizational wrongdoers.

Undeniably, the adaptation of business models to sustainable initiatives is remarkably important.⁴⁷ Yet, some scholars have noted that there may not always be a business case for these initiatives because they bring costs and trade-offs.⁴⁸ Furthermore, this business model approach risks the addition of maintaining the current productive system remarkably intact despite the serious crises we face.⁴⁹

Firms have arisen in a historical context. A more advanced form of organizing may be developed in the future, which can replace corporations. However, these new organizational forms must still solve the problem of how the flow of products can be delivered to members of society in an efficient, effective, and environmentally sustainable manner. Contemporarily, firms (corporations) are probably the most effective and efficient organizational forms for handling several complex flows of products. These product flows are highly relevant to contemporary human societies. For instance, in a supermarket chain, we can find food, drinks, cooking utensils, hygiene products, cleaning products, and many other items vital to our current existence and survival. The numerous flows in economic and societal production offer opportunities for future research.

The business model approach, derived from the metaphysical status of money, can have negative side effects on the environment and climate. We suggest that the concept of a business model related to sustainable ecosystems should not consider monetary flow as the definitive flow of economic and societal production. Rather, monetary flows must be treated as a type of empirical flow that is currently necessary for human survival and existence. This transformation integrates every organization in the biosphere. Firms that engage and do not engage in activities to reduce, reuse, recover, or recycle require input flows from and send output flows back to the biosphere. Therefore, to a substantial extent,

⁴⁷ Bocken and Short (2016); Centobelli et al. (2020); De Angelis and Ianulardo (2020); Eikelenboom and de Jong, (2022); DiVito et al. (2022); Ferasso et al. (2020); Frishammar and Parida (2019); Lüdeke-Freund et al. (2018); Neligan et al. (2023); Parida et al. (2019); Plewnia and Guenther (2021).

⁴⁸ Eppinger (2022); Frei et al. (2020); Castro and Lopes, (2024); Dentoni et al. (2021); Garcia-Quevedo et al. (2019); Hahn and Pinkse (2022); Kopnina (2021); Linder and Williander (2017); Olesson et al. (2023); Neesham et al. (2023); Piila et al. (2022); Van Loon et al. (2018)

⁴⁹ Corvellec et al. (2022); de Bakker et al. (2020); Dzhengiz et al. (2023); Kjaer et al. (2019); Mikkelsen (2021); Panwar et al. (2022); Norris (2019); Sadler-Smith and Akstinaite (2022).

every organization has a circular relationship with the biosphere, which we suggest should be acknowledged in every business model. Every organization is an ecological entity. To a significant extent, some of the most demanding problems for humankind are ecological, such as food and energy sources, climatic crises, species extinctions, pollution, and many other political and sociological problems (Bodin et al. 2019; Smith and Pimm 2023). Depending on the manner in which they are managed, organizations can either help solve or worsen these demanding problems.

Monetary Flows are not the Constitutive Being (*Ousia*) of Economic, Organizational, and Societal Phenomena: the Necessary Reoccurrence of Metaphysics

The demonstration that monetary flows are considered the constitutive beings (*ousia*) in much economic, management, and related research is not an anti-metaphysical stance. Rather, it is the output of a metaphysical analysis that exhibits the relevance of metaphysical inquiries regarding the conditions and possibilities for knowledge in social science disciplines.

From these findings, at least, two additional questions that need to be addressed in future research: [a] Why did the treatment of money as constitutive being of economic and societal activity remain under identified and understudied in various disciplines? [b] When did the treatment of money as the constitutive being of economic and societal activity originate? After discussing these questions, we will present an example of possible research involving the metaphysical status of money: The contemporary university.

Why did the Metaphysical Status of Money Remain Unnoticed for so Long?

Although this possibility needs further investigation in future research with much-appreciated help from other researchers, it seems possible that question ([a]) is related to antimetaphysics schools prevalent in the twentieth and twenty-first centuries, namely, the logical positivist/empiricist school and relativism in postmodernism/poststructuralism.

Logical positivism/empiricism claims to exclude metaphysical speculation from the realm of meaningful discourse because knowledge can only result from experience.⁵⁰ This school is highly influential in economics and economic-oriented research in other disciplines.⁵¹ For instance, the late Milton Friedman, one of the most well-known advocates that firms exist to generate monetary income to their owners/shareholders,⁵² clearly promotes this perspective in his “Methodology of Positive Economics”.⁵³ He assumed the positivist/empiricist view that economic models and theories do not matter if they have predictive ability over empirical phenomena (“predictive power for the class of phenomena which it is intended”, p. 9). Thus, he refuses inquiries about the legitimacy of metaphysical claims in economic models and theories under the auspices of alleged empirical confirmation. In our view, the importance of empirical evidence is undeniable. However,

⁵⁰ Gohner and Schrenk (2024) provide an introduction about this school.

⁵¹ See for instance McCloskey (2022); Drakopoulos (2024)

⁵² See for instance Friedman (1970)

⁵³ Friedman (1953).

the positivist/empiricist school's position is untenable because without inquiring about the conditions and possibility of knowledge, it is not viable to demonstrate either causality or consequence of models and theories.

Postmodernist/poststructuralist research is popular in many critical management studies.⁵⁴ It is often deemed as major alternative and hope against mainstream economic and management theories. However, this school of thought has been associated with relativism.⁵⁵ It is possible to find some of its writers aligning with at least one of three forms of relativism⁵⁶: (i) metaphysical (transcendental) relativism for doubting the existence of a real world (of, say, objects, properties and relations outside our social and bio-mental constructions); (ii) epistemological (or scientific) relativism for advocating that science cannot have empirical instruments to describe a real world besides our human constructions; and (iii) semantic relativism for suggesting that human languages cannot describe a real world apart from our human constructions. Semantic relativism may also entail claims on how institutions and social arrangements enable discourses into being.

For instance, one influential postmodernist/poststructuralist writer went so far as to declare the end of the formation of new theories (that he deemed as mere metanarratives or grand narratives),⁵⁷ denying the possibility of a means for sensing and perceiving (aesthesis⁵⁸) the world outside the human being. Thus, while postmodernist/poststructuralist researchers behave as rivals to mainstream positivist theorists, the latter and former are allies in their antimetaphysics stance. The disdain of metaphysical analysis in both schools might be an important cause of the perpetuation of the metaphysical status of money.

Indeed, in vast sections of our world, as noted by Adorno in a lecture in 1965, metaphysics has become "a term of abuse, a synonym for idle speculation, mere nonsense and heaven knows what other intellectual vices".⁵⁹ Nevertheless, the anti-metaphysics stance has specific consequences, because it denies admission to the conditions and possibilities of knowledge. Thus, it is highly protective of currently dominant theories and philosophies because anti-metaphysics sabotages the possibility of alternative theoretical formulations.⁶⁰ When not entirely understood phenomena are in need of explaining, denial of new theory creation implies the resource to current theories. Hence, anti-metaphysics tacitly supports economic systems and social groups protected by dominant social theories.

The treatment of money as the constitutive being (ousia) of economic and societal phenomena is highly protective for those who have a lot of money. Nevertheless, anti-metaphysics is a self-contradictory stance because it is undeniably a metaphysical position. Likewise, the claim that everything is relative is unsustainable, because this sentence is only true if it is absolute (non-relative). On the other hand, if the sentence is false then something is not relative as claimed by relativism.⁶¹

⁵⁴ See for instance Adler et al. (2007, p. 140–142); Bowden (2021); Hassard (1999).

⁵⁵ Postmodernism/poststructuralism are often directly associated to either relativism or skepticism in reference to the ancient relativist school with that name. See for instance Baghrarian (2004); Cardao-Pito (2021a); Kukla (2000); Norris (1997); Plotnitsky (2017); Ward (1997); Zagorin (1999).

⁵⁶ We are following here the Kukla's (2000) typology of relativism.

⁵⁷ Lyotard (1984, 1997 p. xxiv).

⁵⁸ Although the philosopher Immanuel Kant is often attributed the formulation of sensing and understanding, the related formulation of sensing and perceiving was discussed for thousands of years. In the ancient Greek world it had a specific word for it, namely, 'aesthesis'. See for instance Shields and Hardy (2024).

⁵⁹ Adorno (1965, 2001).

⁶⁰ Adapted from Cardao-Pito (2021a).

⁶¹ In the ancient world, the problem of relativism being self-refuting was demonstrated by Plato (In Theaetetus) (Plato 2013), Democritus, Aristoteles and several Stoic philosophers (Burnyeat 1976a, b; Lee 2005; Cardao-Pito 2021a).

When did the Metaphysical Status of Money Originate?

Question [b] regarding the origins of the treatment of money as the constitutive being of economic and societal activity likewise needs to be further investigated in future research. This question is likely related to the origin of economic ideas. In our society, as noted by Gare (2013, p. 122), it is not the philosophers who provide ideas that define right and wrong action or ways of living, but economists.⁶² Their effective ethical discourse implies that greed, egoism and using others as mere instruments⁶³ are now considered virtues. Unlike ethical philosophers, economists are amply influential. Their ideas constrain every sphere of public and private life.⁶⁴

Gare⁶⁵ and Adorno⁶⁶ find that the metaphysical ideas of our time still follow in the footsteps of the framework laid out by the ancient Greek philosopher Plato. As described by Adorno, criticisms of Plato's philosophy are also ways to rescue his ideas. Hence, it could be conceivable that the metaphysical status of money results from a certain extent of Neoplatonism that could pervade economic thinking. Plato identified universal beings before particular things (*universalia ante rem*), which however define particular things. For instance, all dogs have common universal features that exist before each particular dog. Thus, one could raise the hypothesis that in management, economics, and other interrelated sciences, money is treated as the Platonic universal being of economic and societal activity, its perfect form.

Nonetheless, this hypothesis does not sit well with the treatment Plato himself gave to money. In his political philosophy, Plato had a highly stratified view of society, which he often expressed in the Republic.⁶⁷ Plato divided an archetypal society into three groups, namely, the rulers (philosopher-kings that should be driven by reason), guardians (soldiers, driven by the spirit), and common people of producers (who he somewhat disdained and include labourers, peasants, merchants, or slaves driven by appetites and impulses). In Plato's hierarchy, reason ought to rule over spirit, appetites, and impulses.

However, Plato despised the use of money, which he considered an illusory form to be allowed only for what he deemed as lower classes. Plato locates money-loving in appetitive/impulsive soul along with physical cravings like hunger and lust. For Plato, property and money are corruptors and represent a threat to social cohesion.⁶⁸ Thus, to avoid the corruption of rulers and guardians, these members of society should have their needs attended, but they should not own property or handle gold or silver (money).⁶⁹ Hence, while Plato supposed the existence of universal beings that exist before particular beings, he did not attribute the role of universal constitutive being (*ousia*) to money.

An alternative hypothesis is that the metaphysical status of money resulted as an unintended consequence of the metaphysical and economic ideas of Plato's disciple Aristotle. Although often presented in rivalry with Plato, Aristotle's metaphysics accepted much of the framework laid out by his professor.⁷⁰ However, Aristotle rejected the existence of

⁶² Gare (2013) also presents the argument that the economists are assisted by their "offsiders the psychologists", which for reasons of space we do not examine in here.

⁶³ Greed was added in adaptation Gare reference to egoism and using others.

⁶⁴ Gare (2013)

⁶⁵ Gare (2013); Adorno (1965, 2001, Lecture four).

⁶⁶ Adorno (1965, 2001).

⁶⁷ Often through the position of his Socrates.

⁶⁸ See Plato (375 BC); Dupont (2017); Gooch (2000); Blackhouse (2002); Rothbard (2006).

⁶⁹ Idem.

⁷⁰ Adorno (1965, 2001); Sach (2024)

universal beings before the particular beings, preferring to look out for universal beings in the particular things (*universalia in re* or *in rebus*). This conception is related to Aristotle's view of money, which attempts to distinguish between natural and non-natural use of money.⁷¹

The natural kind would be the one where money is used as an instrument for attending to human needs such as food, shelter, childbearing, or comfort. On the other hand, in the non-natural type, money is employed with the purpose of accumulating more monetary wealth in itself. These two concepts are related to two other concepts, namely: household and state management (*oikonomy*), and exchange (*chrematistics*). Aristotle understood the household and community (*polis*) as deeply linked. The community starts in households, and the household is the model for state management of a community (*polis*).

To Aristotle, *oikonomy* ought to be based on natural activities to meet human needs, whereby in some cases money might not even be necessary. Nonetheless, money was necessary in exchange (*chrematistics*). For Aristotle, money has both the property of being a natural and non-natural constitutive being (*ousia*). In both definitions, we can verify the attribution of a metaphysical status of money. However, there is nothing natural about the use of money. Money is a purely human creation.

Although a formidable philosopher, Aristotle was a man of his time. His concept of the natural use of money can be equated to his other concept of the natural slave, where he defined that some people are naturally born to be slaves.⁷² There is no proof that money or slaves are naturally constituted. Even in what Aristotle called the natural use of money, he often treated money as the constitutive being (*ousia*) that explains other economic and social elements, not what needs to be explained. However, the distinction between the natural and non-natural use of money is indefensible because money remains the same empirical being.

Furthermore, Aristotle's critique of the abusive employment of money in exchange may have unintentionally provided the foundations for the metaphysical status of money in economics, management, and interrelated research programs. Aristotle defined non-natural the use of money in exchange the conduct that occur when someone acts with the purpose of accumulating more monetary wealth in itself. Interests in loans (usury as understood at the time, or "the birth of money from money") and exploitative trading practices have special incidence in his definition of the non-natural use of money:

"There are two sorts of wealth-getting, as I have said; one is a part of household -management, the other is retail trade: the former necessary and honorable, while that which consists in exchange is justly censured; for it is unnatural, and a mode by which men gain from one another. The most hated sort, and with the greatest reason, is usury, which makes a gain out of money itself, and not from the natural object of it. For money was intended to be used in exchange, but not to increase at interest. And this term interest, which means the birth of money from money, is applied to the breeding of money because the offspring resembles the parent. Wherefore of an modes of getting wealth this is the most unnatural." Aristoteles (350 BC, Book 1, Part XI)

⁷¹ A further summary of Aristotle view on money can be found in Meikle (1994).

⁷² Aristotle (350 BC): "But is there any one thus intended by nature to be a slave, and for whom such a condition is expedient and right, or rather is not all slavery a violation of nature? There is no difficulty in answering this question, on grounds both of reason and of fact. For that some should rule, and others be ruled is a thing not only necessary, but expedient".

Although presenting a critique, Aristotle offered enemies of the conception of social responsibility towards others in the polis (community) a way to undermine non-monetary social relations. Enemies of social responsibility simply must prioritize monetary flows over other flows necessary for human survival and existence. They simply have to either focus on exchange (chresmatic) based on money and ignore all else, or use exchange (chresmatic) based on money to explain economic and societal production and the human relation with the biosphere. Accordingly, money could be turned into the constitutive being (ousia) of human organization, society, and the biosphere.

Writing in the nineteenth century, Sismondi understood the transformation being operated in economics (or political economy, as it was called at the time).⁷³ He travelled across Europe and directly testified to many factory workers' miserable livelihoods and how easily they could be replaced by machinery. Sismondi identified the term chrematistics ("*Chrématisitique*"⁷⁴) in Aristoteles to represent the non-natural use of money (for one's enrichment and self-fruition), hence, to represent an abandonment of the focus in human toil and existence. He understood that the focus on chrematistics advocated by several economists was a reorientation of political economy's focus from humankind to monetary wealth.

Sismondi warned that economics (political economy and interrelated disciplines) was being transformed into an "*occult science*" losing contact with facts for the purpose of better calculation of monetary wealth in chrematistic theories.⁷⁵ Yet, it is the metaphysical status of money, where money is treated as the constitutive being (ousia) of the flows necessary for human survival and existence, which enables the occult science and practices identified by both Sismondi and Aristotle.

As explained above, however, the deconstruction of the metaphysical status of money into an empirical status confirms the relevance of metaphysics. This is not the relativist deconstruction in which nothing can allegedly resist in the end. Relativism and antimetaphysics are self-defeating positions. Likewise, to remove the metaphysical status of money, one needs not to fall into pure idealism (mentalism) or nominalism denying the possibility and conditions of human knowledge over physicality (matter).

The current analysis does not exclude (or confirm) the possibility of the existence of ontological entities and categories. What it does is to remove the status of constitutive being (ousia) from of money. Rather than being the primary explanator of economic and societal production and human relation with the biosphere, monetary flows are what needs to be explained. Why do monetary flows flow and to where? Why do some people and groups hold privileged positions regarding the flows of money? These questions will only be properly addressed if money ceases to be the main explanator of human societies and our relationship with the biosphere.

⁷³ Sismondi (1819); Cardao-Pito (2021a, p. 264); Sowell (1972); Stewart (1984).

⁷⁴ Sismondi (1819, pp.8–9): "Aristote, dans le premier livre de son Traité de la République a consacré quatre ou cinq chapitres (VIII à XIII) à la science qui nous occupe; il Hedonist theory emerges lui donne même un nom plus propre à la désigner que celui que nous avons adopté: (Chrématisitique, gr χρεματιστικη), la Science des Richesses."

⁷⁵ Sismondi (1819); Cardao-Pito (2021a, p. 264); Sowell (1972); Stewart (1984).

The Metaphysical Status of Money in the University: a Brief Example of Possible Future Research Avenues

Future research may find it interesting to inquire about many organizational and non-organizational phenomena connected to the metaphysical status of money. For a brief example, we need to look not much further than the many contemporary universities where the generation of monetary flows seems to be gaining more importance than other contributions made by academics and other staff members.

Many contemporary universities are moving from a view through which scholars are to be appreciated for their curiosity to advance our understanding of the world, upholding the quest for truth and the conditions for doing this, and their lectures to young students (the next generations). Plato and Aristotle, mentioned above (and we could look out for many other philosophers), were deeply concerned with their work, which still contributes to philosophical and scientific debates in our own time. Although this is impossible to confirm, their lectures in the academy (founded by Plato) and Lyceum (founded by Aristotle) must have been somewhat extraordinary.

Currently, many academics find themselves employed in universities that are managed as tertiary organizations primarily concerned with the monetary bottom-line.⁷⁶ Their academic is assessed through indicators connected to monetary metrics. For example, a) obtaining monetary grants elsewhere; b) working in schools that pay high salaries to the faculty; or c) publishing in journals with so-called high rankings (regardless of what has been published) that will allow their school to claim better status in school rankings and accreditation processes thereby attracting students who pay higher enrolment fees (hence better contributing to the monetary bottom-line).

For many academics nowadays, the monetary flows they help generate to their universities and/or themselves can be considered more relevant than the flows of ideas, discoveries and lectures they produce. This may have several consequences for the quality, integrity, dissemination, and direction of their work, as well as their biases, conflicts of interests and eventual emotional damage.⁷⁷ Furthermore, it may promote the tokenization of schools and journal rankings, and the development of a highly profitable industry in academic publishing.⁷⁸ There are powerful beneficiaries of this status quo, who will be against substantial change. Consequently, however, important lines of research and inquiry can be diverted, sabotaged, or abandoned.⁷⁹ The monetary status of money has profound implications for contemporary universities and their role in society. This is an example of a possible avenue for future research. Metaphysics impact contemporary universities and scholars.

Conclusion

Deconstruction of the metaphysical status of money into an empirical status is not an anti-metaphysical stance. In contrast, it results from a metaphysical analysis and demonstrates the relevance of metaphysics in the social sciences. As shown above, eliminating the metaphysical status of money contributes to eliminating the mainstream concept of externality.

⁷⁶ Buchbinder (1993); Cuban (2007); Starkey and Tiratsoo (2007);

⁷⁷ Adapted from Aguinis et al. (2020); Gruber (2014); Moosa (2024), Cox et al. (2023)

⁷⁸ Idem.

⁷⁹ Idem.

When money ceases to be treated as the constitutive being (ousia) of economic and societal activity, what occurs or exists with no direct reflection on monetary flows can no longer be automatically externalized in relation to economic and societal activity.

Therefore, the elimination of the metaphysical status of money contributes to the integration of organizations in the biosphere, organizational ecosystems, and with human beings to whom products are delivered. In the empirical status of money, monetary flows are just one type of flow among the many necessary for human survival and existence. Economic and societal production cannot be defined merely through monetary metrics such as GDPs, profits, dividends, rents, interests, and so forth.

This explanation adds to our understanding of how monetary flows, and hence, profits, are generated. It is not difficult to find specific examples of organizations with high levels of monetary flow generation, which are perhaps organizations whose product flows cause the greatest harm to our home planet. This harm persists even after considering commendable circular economy and corporate social responsibility initiatives, or the adoption of innovative technology that these firms engage in.

However, these firms' financial results (or profits) alone would deem them very successful corporations. The empirical status of money demonstrates that the harm that firms cause to the planet is an integral part of how their monetary flows, and thus, their profits, are generated. This harm is an integral part of a business model. We propose that future research consider our proposal to make redundant the distinction between circular and linear economies, which can be invoked to excuse some serious polluters.

Business model frameworks must not consider the monetary flow as the definitive flow of economic and societal production. Rather, monetary flows are empirical flows among the many flows currently necessary to deliver flows of products to the members of society. Alternative forms of organizing for sustainable human societies must address the reality of the flow of products delivered to members of society, which is vital for our preservation and being. We suggest a new approach for business models in the context of our immersion in the biosphere, where every organization is an ecological entity because it participates in the manners through which humans integrate into their surrounding environment and relate to other living beings. Organizations are ecological entities whether they explicitly engage in environmentally friendly activities or not.

In the future, researchers, students, and other people interested in organizing may confirm the research potential of attributing an empirical status to monetary flows in the context of the biosphere. Following these proposals, future research may find it fruitful to further inquire about the productive flows organized by firms (corporations), other organizational forms, and their organizational ecosystems. Given the damages caused by a rapacious hankering for monetary profits in the context of major societal and environmental challenges we human beings currently face, feasible alternatives are urgently needed.

As explained above, some important questions need to be addressed in future research. We have introduced two of these: [a] When did the treatment of money as the constitutive being (ousia) of economic and societal activity originate? [b] Why did the treatment of money as constitutive being of economic and societal activity remain under notice and understudied in various disciplines? We have also exemplified a brief example of possible future research regarding an organization that may be highly impacted by the metaphysical status of money: The contemporary university.

Acknowledgements Cristina Neesham (the editor), two anonymous referees and (the late) João da Silva Ferreira.

Funding Open access funding provided by FCTIFCCN (b-on).

Declarations

Competing Interests The authors declare that they have no competing interests.

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