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Article

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Reflections on the Ontology of Money

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Abstract: The suggestions outlined here include the following. Money is a bundle of institutionally sustained causal powers. Money is an institutional universal instantiated in generic currencies and particular money tokens. John Searle's account of institutional facts is not helpful for understanding the nature of money as an institution (while it may help to illuminate aspects of the nature of currencies and money particulars). The money universal is not a social convention in David Lewis's sense (while currencies and money particulars are characterized by high degrees of conventionality). The existence of the money universal is dependent on a larger institutional structure and cannot be understood in terms of collective belief or acceptance or agreement separately focusing on money. These claims have important implications for realism about money.

Keywords: money, currency, causal powers, institution, institutional fact, convention, realism, existence, social ontology, Searle

This paper has a long past. It is a moderate update and modification of earlier (2004 and 2009) versions that have not been published but are occasionally cited in the literature (e.g. Guala 2010, 2016). The 2009 version is archived for possible reference (as Mäki 2009, "Reflections on the ontology of money"). The original 2004 version was presented at the Vancouver workshop on the History and Philosophy of Money, 13–14 November 2004; at EIPE, Rotterdam, September 2005; at the ISNIE Conference in Barcelona, 22–24 September 2005. The 2009 version has been presented at TINT, Helsinki, June 2009; and at the workshop on the Ontology of Money in Groningen, November 2019. Thanks go to the audiences of these events and in particular to two anonymous reviewers for this journal, and to Amin Ebrahimi-Afrouzi, Cristian Frasser, Francesco Guala, Frank Hindriks, Pekka Mäkelä, Giorgios Papadopoulos, Margaret Schabas, and Petri Ylikoski for very useful written comments.

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1 Introduction

What is money? What does money consist of? Does money have an essence? What larger worldviews are revealed by different conceptions of money? How does money originate, and how does it persist? Is money an institution or a convention? What is the precise relationship between the material and the social in money? How do particular items of money relate to money as an institution? Why are certain things that are easily mistaken for money, not money? How does money exist? Is money real, and if so, in what sense? Does money exist just in virtue of people believing that it does, or is more involved? These are questions about the ontology of money.

Naturally, asking and answering these questions is a multi-disciplinary challenge. Contributions come, or should come, not just from economics, but from sociology and anthropology, history and archaeology, political science and psychology, and now also neuroscience. Such disciplines are built upon various ontological presuppositions, but their practitioners seldom make them explicit and systematically examine them (about economics, see Mäki 2001). In their accounts of money, however, economists have been forced to address ontological issues directly: money seems to be a sufficiently mysterious entity to trigger this mode of scrutiny. Yet systematic ontological forays into the deep secrets of money have not been encouraged by the disciplinary conventions of economics, and no unified consensus conceptions have emerged. The reflections to follow in the present essay seek to go further by inserting additional philosophical detail to the endeavour of disclosing money's secrets. These selective notes seek to provide some novel illumination on some of the questions above without, however, aspiring to offer anything close to a full systematic account of the ontology of money.

Another body of literature that has discussed money as a paradigmatic component of institutional reality is social ontology done by philosophers. The reflections of the present paper seek to contribute to this literature. By pointing out some gaps and shortcomings in the philosophers' discussion, I propose some directions in which social ontology should be further elaborated in its dealings with money. Given that money is part of institutional reality – and a very significant part for that matter – the observations to be made may also highlight some aspects in the ontology of the institutional world more generally (but such implications will not be pursued here).[1]

1 Unfortunately, philosophical social ontology has done too little to promote interactions and collaborations with substantive disciplines such as economics, sociology, anthropology, political science, psychology, and others. This also applies to the reverse relationship: these other disciplines have not properly set out to learn from philosophical social ontology. In an ideal world, there would be interactive mutual learning.

The claims and suggestions to be made and defended in this essay include the following. Money is a bundle of causal powers sustained by an institutional structure. Money is an institutional universal instantiated in specific currencies and particular money tokens. Taken separately, John Searle's (1995, 2005) account of institutional facts is not very helpful for understanding the nature of money as an institution (while it may help to illuminate some aspects of the nature of currencies and money particulars). The money universal is not a social convention in David Lewis's (1969) sense (while currencies and money particulars are indeed characterized by high degrees of conventionality). The existence of the money universal is dependent on a larger institutional structure and cannot be understood in terms of collective belief or acceptance or agreement separately focusing on money.

2 Money as a Bundle of Causal Properties

What is X? One way of making the question more specific is to ask, What is the identity or nature or essence of X? Indeed, in examining the nature of money, economists have been inclined to adopt unashamedly essentialist ways of talking: they take questions of this form to be legitimate questions about money. Expressions such as "essence", "identity", and "nature" are regularly used in accounts of money. Essentialism of this sort seems to be a rather widely shared philosophy in action of monetary theorists. It may be that it is in this part of economics that economists subscribe to an apparently essentialist outlook more explicitly than elsewhere.

In line with a long intellectual tradition, economists make claims about the essence of money by listing its "essential" or "intrinsic" properties. These properties are the essential "functions" of money. They include the functions of money as a medium of exchange, as a means of payment, as a store of value, and as a standard of value or unit of account. To this we may add a few more observations.

First, these functions are identity-constituting properties in that they determine what it is to be money, thereby distinguishing money from other things such as consumer goods and physical objects. This list of properties makes money what it is: money. They constitute the real essence of money (this will be qualified in a moment).[2]

Second, natural necessity is involved here: money and its identity-constituting properties are related to one another by real-world necessity (necessity *de re*). Nothing can be money without having those properties, and nothing having those properties can fail to be money. This is natural necessity in the sense that is based

2 Note that I here suggest to locate the essence of money somewhat differently from the analysis of Menger's (1892) account of money offered in Mäki (1990). Yet the basic idea developed in the present paper was introduced in that earlier paper.

on the nature of things, in this case the nature of money. *De re* necessity is a modality that characterizes the relationship between essential properties and a natural kind that obtains by virtue of the structure of the world (not by virtue of how we decide to use words, which would give us *de dicto* necessity).[3]

Third, the list of properties is to be invoked in defining the concept of money. Any such definition of *the concept of money* is therefore also a definition of *money*. This means that such a definition is a real definition: a claim about the nature of the thing defined, not just about a concept used to talk about it. Considered as a definition of the concept of money, the list of properties determines its intension (or intensional meaning). The intension of the term 'money' in turn determines its extension (or extensional meaning), namely the class of objects to which the term 'money' correctly applies, that is the class of all items that are money, that have the identity-constituting properties of money. Note that the "definitions of money" that economists employ when distinguishing between what they denote as M1, M2, etc. are definitions of the extensions or extensional meanings of the term "money".

Fourth, economists and other social scientists hold rival views of the nature of money. They have different conceptions about which of money's functions are indeed the essential or intrinsic functions, and how the functions relate to one another, such as some of them being primary and others being derivative. This means economists entertain different real definitions of money. The exchange function is often thought to be the essential property of money, determining its identity. "The essential function, the performance of which enables us to identify money, is very simple: it is that of acting as a medium of exchange." (Newlyn 1962, 1) Others believe that it is the functions of money as a standard of value and as a means of payment that are "intrinsic" to it, while the capacity of money to serve as a store of value is "no distinguishing property of money as such" (Hicks 1989, 42). Of the two distinguishing functions of money (as standard of value and means of payment), these economists take the standard of value to be primary: it is presupposed by the function of money as a medium of payment (ibid., 43). Even though the reflections to follow in the sections below cite these functions as illustrations, no stance will be taken as to how exactly they are supposed to be related to one another.[4]

Fifth, I submit that what economists call the essential functions of money are its causal properties. As suggested earlier (in Mäki 1990), they are a special species

3 Note that if any given account of the origin of money (such as money being an outcome of an invisible-hand process, or of collective intentional action by a regulatory agency) is presented only as a possible scenario, then such an account does not qualify as a description of an essential property of money.

4 Most of the literature in social ontology dealing with money as part of institutional reality restricts its attention narrowly to the function of money as a means of exchange.

of causal properties: they are causal powers. Such causal powers or capacities are dispositional properties. It is a characteristic of dispositions that they need not manifest themselves in actual behaviour – just as the explosive power of a landmine does not have to manifest itself in an actual explosion, and the brittleness of a window does not have to manifest in that window actually breaking. Money is a collection of such causal powers, and they only manifest themselves when put to use by people.[5] Sometimes this ontic feature of money – as a collection of causal powers – shows explicitly in the phrases used by economists and others, such as, in connection to the exchange function, "the purchasing power of money", money as "generalized purchasing power", and money possessing "the property of being able to command goods".[6]

This idea of money's identity-constituting properties being causal powers invites expansion. We may distinguish between two sets of conditions of those powers: *conditions of existence* and *conditions of exercise*. To clarify the nature of these two conditions and their difference, it is useful to employ a richer typology (Harré and Madden 1975). First, when talking about the "intrinsic characteristics" of money we have already implied the distinction between *intrinsic* and *extrinsic* conditions of money. The intrinsic conditions consist of those properties that constitute the nature or real essence of a thing. The extrinsic conditions are those circumstances that may change without the identity of the thing changing. Second, there is a different distinction between *internal* and *external* conditions where "internal" and "external" refer to spatial attributes, to the "inside" and "outside" of the spatial envelope of a thing. That this is a distinction different from the first (that of intrinsic vs. extrinsic conditions) should be clear: intrinsic conditions do not have to be internal to a thing, nor do extrinsic conditions have to be external to it.[7] The third distinction is between *enabling* conditions and *stimulus* conditions.

5 One referee urges me to say more about whether these powers are to be ascribed to money or whether they rather are deontic powers of people in possession of money. This is a task for later work. What I say next in the text will be relevant for meeting the challenge.

6 In his recent writing, John Searle (2017) has adopted the idea of money being linked to powers. His formulations vacillate a little though. "Money consists entirely in power, specifically deontic power to buy, pay and close debts." (1463) On the other hand, he says collective practice assigns deontic powers to "individual agents" rather than money itself (1466). Yet another catch phrase would benefit from elaboration: "all money is a status function" (1460; italics original). All this will deserve close scrutiny, but my comments on Searle in this paper are focused mainly on his earlier ("pre-power") suggestions about money.

7 Cristian Frasser and Gabriel Guzmán (2020) argue that what they call "traditional essentialism" holds that intrinsic identity-constituting conditions must also be internal conditions. Regardless of who has held or is holding such a view, I do not think major theorists of the nature of money have held it. It is another story if folk conceptions of money were to be inclined towards such "internalist" positions.

The satisfaction of enabling conditions ensures that the thing is in the state of readiness to act so as to manifest the power. Fulfilling the stimulus conditions amounts to triggering the power so as to bring about the relevant action of the thing as a response.

Employing these concepts, we can now introduce and elaborate on the idea that the causal powers of money have conditions of existence and conditions of exercise. It is evident that the *conditions of existence* are for the most part external rather than internal. While external, they are money's intrinsic enabling conditions. These conditions have the character of an institutional structure, itself containing numerous other causal powers. It includes various regular and rule-governed patterns of social interaction such as market exchange, contractual arrangements, debt and credit, tax payments, etc; regulatory institutions with powers and activities such as the state and the banking system with various rules and regulations and agreements; systems of property rights; systems of trust, authority, and collective acceptance. It is in virtue of this institutional structure that money exists as a collection of causal powers.[8] As I put it, *money is an institutionally sustained bundle of causal powers*. This idea combines the functions of money with the institutional structures required for those powers to be there and to be ready for being exercised.

For money's causal powers to be exercised, money must be used. This is a matter of meeting their *conditions of exercise*. Again, they are mostly external conditions. Consider money's power as a means of payment. Among the enabling exercise conditions are that money is in someone's possession, that it is of a sufficiently liquid kind, and that it belongs to a currency that is acknowledged as valid means of payment in the location of its use. Among the stimulus conditions that need to be satisfied for money's payment powers to be triggered, the actor in possession of money must have a desire to buy or to keep a promise, must have the power to implement this desire, and this latter power must be triggered.

3 From Physics to Society, from a Particular Euro Coin in my Pocket to Moneyhood: Institutionality and Conventionality of Money

Money manifests itself in physical forms such as particular pieces of paper and metal. How does the institution of money arise from, and relate to, such physical

8 For a brief account of the variety and evolution of the regulatory institutions that sustain money, see Aglietta 2002; for the roles of trust and authority, see Frankel 1977.

objects? How does money as a social universal relate to particular items such as this euro coin in my pocket now? How exactly to think of institutionality and conventionality in relation to money?

3.1 Does Constitutive Rule Reveal the Constitution of Money?

An account of money should tell us what money is, *what constitutes* money. One might therefore expect that John Searle's idea of *constitutive rule* would be helpful here, especially given that he suggests that such rules play a central role in understanding institutions, and that he himself uses money as a paradigm example when discussing constitutive rules (Searle 1969, 1995). Constitutive rules have this form:

– [CR] X counts as Y in C.

Searle's favourite example is this: a piece of paper counts as a dollar bill (or, more generally, money) in the United States.[9] The question is whether this formula is helpful as an account of the nature of money. I argue it is not. It does not tell us what money is, namely a set of causal powers sustained by systems of certain kinds of practices and institutions. To see the limited services provided by the formula, we need to consider the relationship between institutional reality and non-institutional (or pre-institutional) reality, and the distinction between money as a general type and particular items of money.

Money is often taken to be an institution, but it is seldom made clear what precisely is intended. What does it mean to say that money is an institution? On Searle's account, applications of constitutive rules of the form [CR] create what he calls *institutional facts*. It is an institutional fact that a particular piece of paper counts as a dollar bill. Likewise, that a piece of metal counts as a euro coin is an institutional fact. We may say that the rule points out a certain property, or bundle or properties, of the piece of metal: they are social properties that do not reduce to the physical or chemical properties of that piece of metal. But the fact that a particular piece of metal has these properties is not an institution: it is an

9 Searle introduces the notion of constitutive rule in terms of a contrast. Regulative rules govern antecedently and rule-independently existing activities, often as imperatives. Their form is, "Do X" and "If Y, do X". By contrast, constitutive rules ("X counts as Y in context C") create or define new forms of behaviour or create the possibility of their existence. For critical examinations of the notion of constitutive rule and the notion of status rules as complements of constitutive rules, see Hindriks (2003, 2009).

institutional fact about that piece of metal. Institutional facts presuppose institutions but are not institutions themselves. This leaves it open what institutions are and what it is for money to be an institution. Searle says *institutions* are "systems of constitutive rules" and that this applies to money, too: "… institutions like money, property, syntax, and speech acts are systems of constitutive rules …" (Searle 1995, 140; see also 2010, 10). But that's about it, no further elaborations are provided. Searle has a lot to say about institutional facts, but very little about institutions.[10]

Let us see what we can make of this. A closer look will reveal that Searle's idea – that institutions are systems of constitutive rules – cannot be quite right. Employing ideas suggested in the previous section, we can say that Y is a bundle of causal properties: these are causal powers of money that economists call its "functions" and regard as its "intrinsic characteristics". Shouldn't we say it is this *bundle of causal properties sustained by a structure of other institutions* that constitutes the institution of money? Whatever else is required for this institution to emerge and persist does not define the institution itself. In particular, rules that govern the way in which the institution is instantiated in particular pieces of physical matter do not define the institution of money. Therefore, *we should not say, as Searle does, that the institution of money is a system of such rules*.

Consider again Searle's paradigm example: this piece of paper counts as a dollar bill. Obviously, the particular piece of paper has to have a number of properties in order to qualify: it must be of a certain size and shape and colour and chemical composition, with definite figures printed on it by authorised agencies, and so on. Importantly, none of these properties is essential for the piece of paper to count as *money*. Rather, they are contingent features of a particular *currency* such as euro, yen and krona. They are contingent features since they could as well be otherwise, as witnessed by the endless variety of bank notes that there have been across time and place in the history of humankind. By contrast, the causal properties that constitute money are non-contingent, they are necessarily possessed by anything that is money.

Let me propose somewhat more abstract terminology that may help to see the point more clearly. We can say that money is a *social universal*, while currencies are its *generic instantiations*, and that certain *particular items* of matter are instantiations of currencies and money. In philosophers' jargon, we could put this in

10 Notably, one of Searle's many articles that summarize his overall account is entitled, "What is an institution?" but this article only deals with the creation of "institutional facts". He acknowledges this himself: "… the question which forms the title of this paper: 'What is an institution?' We have substituted for that question, the question: 'What is an institutional fact?'" (Searle 2005, 9).

terms of the distinction between (general) types and (particular) tokens, but given that 'token' is in use with other connotations in various accounts of money, I'll refrain from using it here. Using the language of universals and particulars, we may now characterize their relationships by saying that the money universal – moneyhood or moneyness – manifests itself in particular items of money and in generic currencies. We may also say that these relationships are characterized by *multiple realizability*: money has multiple realizations in specific currencies and particular items of money. The money universal is one, its realizations are many. The modal status of these relationships of manifestation and realization is obvious: they are contingent rather than necessary relations.[11]

It is now easier to see the limited services that Searle's [CR] might provide. It describes an aspect of the bridge between physical matter and social reality: particular items of matter count as money, that is, have institutionally recognized powers. At most, [CR] tells us *what is money*, but it does not tell us *what money is*: it says that certain items of matter are (particular instances of) money, but not what the identity or nature of money is. In even more revealing words, the *constitutive* rule [CR] does not inform us about the *constitution* of money. [CR] appears to suggest that certain particular items of matter constitute money, but this would be misleading. At most we might say that the complete set of such items constitutes *the extension of a currency*, but this is an entirely different thing to say. I have suggested that money – moneyhood – is constituted by a set of institutionally and practically sustained causal powers. [CR] does not help to express this idea, thus in this context should perhaps not be called a "constitutive rule" at all. Calling it the "counts as" rule would be all right.

3.2 Is Money a Convention?

I have proposed distinguishing between levels of abstractness or generality – money as a social universal, generic currencies, and particular instantiations. This will help to clarify a few other issues as well. It is sometimes suggested that money is a social convention. This can now be questioned. Conventionality generally understood combines the properties of being customary and being arbitrary. The

11 Frasser and Guzmán (2020) argue that money has no sharp boundaries – that what is and is not money is a matter of degree rather than kind. We can now see the limitations of this idea. First, their argument focuses merely on liquidity or the acceptability of a means of payment as the relevant dimension, in exclusion of the other functions of money. Second, it is notable that even though money particulars and generic currencies may come in degrees for their liquidity, this does not yet imply that the money universal has such a feature. The properties of the overall extension of money's manifestations do not directly derive from those of the nature of money.

concept of convention I have in mind focuses on the arbitrariness or contingency of a rule or practice or fact: things could as well be otherwise (but naturally being contingent and having a customary status may be conjoined). Let us then introduce the idea of *degree of conventionality*. The important observation to make is that currencies are characterized by a high degree of conventionality, while the money universal is not. The properties of the dollar bill are conventional, while the causal properties of money as a social universal are not. Any given currency is dependent on various local-natural and local-cultural conventions and constraints. This applies to the material aspects of money particulars, and the symbolism and numerics used. The Netherlands nowadays uses coins and bank notes for 1, 5, 10, 20, 50 euros, whereas a couple of decades ago it used to have them for 1, 2.5, 10, 25 guilders, with different symbolism and colours.

These are *recognitional properties*, that is, properties in terms of which we recognise tokens of a currency as instances of money. Using the terminology of essence, those recognitional properties belong to the nominal essence of money, but they do not constitute money's real essence (while they may be taken to constitute the real essence of a currency – supposing one wishes to entertain such an idea). The nominal essence of money is more conventional than its real essence: it may vary from country to country, from historical period to another, and this variation is dependent on local contingencies that do not contribute to the essence of moneyhood, the money universal. In contrast to many other cases – such as the metal gold – the relationship between the real essence and the nominal essence in the case of money is relatively less stable across time and place. The connection between the atomic constitution of gold (presumably being its real essence) and its colour, malleability and other observable features (its nominal essence) is more stable than, say, the connection between money and gold.

The degree of conventionality is relational. In relation to the money universal, currencies are highly conventional as just noted: it is up to a set of conventions what counts as a currency relative to money. Likewise, in relation to a given currency, any particular items of money are conventional. Like a currency, a particular item of money is highly conventional in relation to money.

We may conclude that money as a social universal is not a social convention. We may grant that certain traffic rules are contingent conventions in that they could as well be otherwise. Driving on the right hand side of the road is such a rule, and there is nothing necessary about it, at least not in the same sense as it is necessary for money to serve as a unit of account and as a means of payment. The traffic rule has been shaped by historical contingencies just as currencies and money particulars. They are rightly characterized as conventions. This means, among other things, that

David Lewis's account of convention does not apply to money, while it has a better chance with respect to currency (see Lewis 1969, 48–49).

4 Does Money Exist? How Does Money Exist?

Answering the question, *What is X*? Does not yet settle the questions of *whether X exists* nor of *how X exists*. Issues of existence are among the core issues of realism about money (while saying that money is a bundle of institutionally sustained causal powers does not yet imply realism about money). There are several perspectives from which questions of existence can be raised, and there are several possible answers to these questions. I begin with two brief suggestions and then move on to discussing major contemporary issues in social ontology.

4.1 Exercise and Immanence

We may employ the universal/generic/particular division suggested above to make a couple of further observations. The first is about how the existence and exercise of money's causal powers are related. My suggestion is that in this respect the money universal is different from its instantiations. In the case of the money universal, existence and exercise are linked in that *existence requires exercise*: money's powers need to be exercised in order for them to exist. In this respect money's powers are similar to many human powers, such as physical strength and various cognitive skills at given levels: without exercise, they tend to deteriorate. They are dissimilar to the (active) power of landmines to explode and the (passive) power of glass windows to break. These latter powers may exist even if never exercised: even though no landmine ever explodes and no window ever breaks. The same applies to particular items of money: a particular item may never be used for any purpose, thus its powers remain unexercised without being deteriorated. But the money universal is different: if the powers constituting it are never exercised, they cannot possibly exist. In this sense the existence of money's powers are dependent on their exercise.

The second and related observation has to do with rival accounts of universals. Transcendental (Platonic) accounts claim that universals reside in a separate realm independent of their instantiations in particular things, while immanent (Aristotelean) accounts claim that universals only exist as instantiated in particular things (see Armstrong 1978; Mäki 1990, 1997). What I have suggested above implies an immanent view about the money universal: moneyhood only exists as instantiated in particular currencies and money items rather than independently of them. Viewing this thought from the point of view of philosophy's own debates, here we have an argument for a "naturalized" position in the theory of universals: the dispute between the transcendental and immanent views about the money universal is being resolved by relying on specific factual information about money as part of social reality. This is much in line with how I see the role of factual (preferably scientifically acquired) information in relation to many philosophical issues.

4.2 In Virtue of Collective Acceptance

In their accounts of social ontology, philosophers often use the case of money to illustrate some general ideas about institutional reality. One such general idea is that social facts exist in virtue of being generally believed to exist. A somewhat weaker formulation is to say social facts exist in virtue of collective acceptance. This gives us an answer to the question, *How does money exist?* The answer is: in virtue of general acceptance or belief. This gives us the rudiments of "idealist" accounts of social reality. Note that this view does not go quite as far as the extreme individualist version put forth by one social thinker: "Money is money, a word is a word, a cosmetic is a cosmetic, if and because somebody thinks they are." (Hayek 1948, 60)[12]

There are many things that should be said about this view, but I will only take up two issues, one briefly, the second more extensively. First, to say that money exists just in virtue of collective acceptance is to suggest that money is highly conventional. It is conventional in the sense of being arbitrary or contingent. It is contingent upon such collective belief or agreement or acceptance: the relevant population of people could as well have agreed otherwise, had they had different perceptions and convictions; and whenever they were to change their minds, money would cease to exist. From the point of view of the ontology of existence, there would be no major difference between money, currency, and particular instantiations thereof.

The second issue has to do with existence of money more directly. *Does money exist?* Does it exist in any sense that would satisfy the realist? To address this

12 Hayek is considered a member in the Austrian lineage in the history of economics, launched by Carl Menger in the late 19th century. It is notable that Menger's famous account of money as an unintended consequence of individuals' actions is not ultra-subjectivist and ultra-individualist in the way that Hayek's phrasing seems to imply. Menger's account also conflicts with that of Searle who makes money dependent on the assignment of status functions by collective intentionality (on this conflict, see Tieffenbach 2010).

question, I will next discuss David-Hillel Ruben's argument about realism and money (Ruben 1989).[13] The key question in the argument is whether we can be collectively mistaken about money. One important implication of *realism* is that even our most perfect theories and beliefs may be in error about reality since reality exists independently of them, whereas the relevant version of antirealism implies that beliefs or theories meeting our most stringent methodological standards cannot be in error – such beliefs are true of some facts simply because they somehow create those facts (see Mäki 2002). If there is no possibility of being in error in the case of money, then money does not exist independently of beliefs about it, and we are advised to take an antirealist stance about it.

Optimism about realism about money can be fostered by considering situations like this: A person passes over a physical item, believing it to be a valid bank note, with an intention to purchase a piece of cheese, but fails to achieve her goal since the note is found to be counterfeit by the cashier. The person turned out to be in error concerning the causal powers of the item. Such physical items really do or do not have such institutionally supported powers regardless of whether an individual believes so. The general epistemological observation is this: "Even if we cannot be wrong about what function something was supposed to have, we can certainly be wrong about what function something actually can have." (Ruben 1989, 71) This could be taken to suggest the ontological claim that we are entitled to be realists about money as real because of the possibility of error: "the social sciences rely on a system of classification which is open for correction" – thus fallible (ibid.).

But things are not quite as simple as this. Two distinctions are required:

[A] Classificatory beliefs on the part of *one person or a few persons* **versus** Classificatory beliefs on the part of *everyone in a society*

[B] *Singular* classificatory belief ["Some specific item *i* is of social kind *s*"] **versus** *General* classificatory belief ["There are things of social kind *s*"]

Singular classificatory beliefs – for example beliefs about particular money tokens – pose no threat to realism: those tokens exist since we may be in error about them. Indeed, everybody might be wrong about them. If one person can be mistaken in believing that a given item is a valid bank note, then everybody in the society can have that false belief. "Whether or not something is a dollar bill depends on its not

13 I am tempted to make an autobiographical note here. When working on the original 2004 version of the present paper, I was familiar with Ruben's previous excellent contributions to social ontology, but it was unlikely that I would discover his essay on realism and money in an edited volume on postmodernism and truth. I had been sufficiently intrigued by the latter theme to have purchased the book and so was able to make the discovery as a lucky side effect.

being counterfeit, on where it was made and under what circumstances, and this is something that we may all get wrong. The dollar bill can be counterfeit, even though forever undetected as such." (Ibid., 72)

General classificatory beliefs are more problematic. Ruben argues that if a general classificatory belief is held by one person or a few persons, it can indeed be wrong. But *if a general classificatory belief is held by everyone in a society, it cannot be wrong*. The generally held general belief cannot be mistaken since that belief creates the fact it is about, rather than being about any independent fact. "Here the intuition is that we reach a point at which generalized thinking really does make things so, that there is no distinction at this point to be drawn between a general illusion about the social world and the reality of such a world." (Ibid.) This feature of general classificatory beliefs held by everyone in society implies anti-realism about the things those beliefs are about: such things don't exist independently of beliefs about them but rather result from such beliefs.

Here is the example of money: "Suppose, in society *s*, everyone believes that there is money, some medium of exchange. What might these people be wrong about? They can be wrong concerning some particular item that it is a *bona fide* example of money. But what would it be like for them all to entertain a false general belief that there is money? They act just as if there is. They transfer title by handing over physical tokens of some sort. They regard those tokens in this way, just as if they were money. What more would have to be the case for there to be money? The plausible answer is: nothing more." (Ibid., 72–73) Thus, generally held belief in the money universal ensures that money exists: it brings money into existence.

I am somewhat puzzled by the phrasing of this argument. It seems that the argument is not merely about general beliefs but also and importantly about singular beliefs. It talks about people "handing over physical tokens of some sort" and it says that people "regard those tokens in this way, just as if they were money". Maybe the idea is that holding such singular beliefs amounts to holding the general belief that there is money? But this is not clear at all. What is the difference between everybody being "wrong concerning some particular item that it is a *bona fide* example of money" (supposed to be possible) and everybody being wrong in regarding "those tokens in this way, just as if they were money" (supposed to be impossible)? Ruben starts talking about people acting "just as if there is money" in general, but then he goes on talking about people using certain "physical tokens" "just as if they were money", that is, as if they were instantiations of money. I have a difficulty seeing clearly what exactly the general classificatory belief here is. Of importance has to be a distinction between something like "this particular token" and "just any token": the latter would somehow constitute general beliefs.

Be as it may, Ruben's claim is that if everybody believes there is money, then there is money: it is not possible for everybody to be mistaken at the same time, thus money exists just if everyone believes so. But this means money is very straightforwardly dependent on human belief for its existence, indeed to the extent of removing the possibility of error, and this serves as an invitation to antirealism. I have two arguments that speak against, or at least aspire to qualify, such an account of social reality.

4.3 Beliefs of Social Actors and of Social Scientists

Even if money were completely dependent on people's beliefs for its existence, there is a way in which it could exist objectively. This is a sense of existence that is relevant to *scientific realism* about economics and other social sciences. Scientific realism is usually defined in terms of something existing mind-independently, but this is not a very good idea when considering realism about the social sciences: social objects don't so exist. Social objects are mind-dependent, thus a realism capable of accommodating the social sciences must take this into account. The solution is simple: the social world is dependent on the minds and beliefs of social actors, but it may be independent of the social sciences, including their theories and inquiries. Indeed, this suggestion can be made more strongly: the relevant notion of existence for *scientific* realism is not mind-independent existence, but *science-independent existence* (Mäki 2005). This creates room for scientific realism about money. This suggestion contrasts with Ruben's argument that fails to make a distinction between beliefs and theories held by social agents on the one hand and those held by social scientists on the other. His argument is mainly in terms of the former, even though the title of his essay ("Realism in the social sciences") refers to the social sciences.

An obvious objection to this solution would refer to the various ways in which the social sciences may contribute to the shaping of social reality – such as by way of policy advice, institutional design, and the so-called self-fulfilling and self-destructive prophecies.[14] Indeed, we may grant that some currencies (such as the euro) might not be science-independent since economists have contributed to their design. However, admitting this does not imply that money as a social universal is

14 It has become fashionable to refer to these connections by the term 'performativity' but this is an unfortunate misunderstanding. This practice conflates causal and constitutive connections, and by broadening the extension of 'performativity' far beyond its Austinian connotations, it wastes a fairly well understood concept, replacing it with an obscure one. For detailed arguments, see Mäki 2013.

not science-independent, thus scientific realism about money is not thereby threatened.

To fortify the case, we can make a further distinction between causal dependence and constitutive dependence. We may grant an extent of causal dependence between the social sciences and social reality: the contents of social scientific theories may shape the beliefs of social actors prompting them to take action that has consequences for social reality. At the same time, we may deny constitutive dependence: the theories and beliefs held by the social scientists do not constitute, create or give rise to the social world just by being held or uttered. Little more is required by a scientific realism about economics and other social sciences. (For more detailed discussions of these concepts and arguments, see Mäki 2002, 2005, 2008, 2012, 2013)

The argument can be formulated as the claim that even if the money universal were fully dependent on the collective beliefs by social agents, this would not imply a denial of scientific realism: money is not constitutively dependent on economic and other social scientific theories and inquiries. In short, regardless of whether or not some generic notion of realism applies to money, *scientific* realism has no trouble with it: money is in an appropriate sense science-independent.

4.4 In Virtue of the Pressures of a Complex Evolving System of Economic Institutions

Purely idealist accounts of social reality make that reality entirely dependent on people's attitudes and acceptances. An institution or institutional fact exists just if people believe or collectively agree that it does. This means that if the relevant population of individuals were to stop believing that an institution exists, in consequence the institution would cease to exist. Thus, on the idealist conception, money exists because people believe or collectively agree that it does, and it would cease to exist if people were to stop believing that it does.

My second argument against purely idealist accounts remains at the level of collective belief amongst social actors, thus does not make appeal to the second-order beliefs of social scientists. My argument is based on a *systemic* perspective, while the purely idealist account tends to be separatist and to downplay the systemic character of social reality. The separatist account suggests a counterfactual speculation: if people were to lose their faith in money, money would cease to exist. But it is easy to see that this counterfactual speculation is indeed just that: mere imaginary speculation of a strongly counter-to-the-facts sort. It is conceivable that a *currency* would cease to exist in case people no more believed in its powers, in consequence of a collapse of an economy or its monetary system for example; or in consequence of an administered transformation such as from guilder to euro in The Netherlands. It is not similarly conceivable that there would be a separate loss of collective belief (or any other volitional attitude) in *money*, and that due to this loss of belief, money would cease to exist. This is because money is a deeply rooted essential component in a larger complex system of institutional and organizational structures and practices. There is no way money can be made to vanish separately just by way of collectively agreeing so: it is that larger complex system that would have to disappear in order for money to disappear. Money as a social universal is far more robust than currencies and specific monetary institutions.[15,16]

A qualification is needed. Any talk about collective belief must not exaggerate the cognitive powers of the collective and its members, and must have the targets of those beliefs right. Money is a case in point. As the old wisdom has it, people are typically able to use money without understanding what money is – without having the correct concept of it. The mystery of money is a tough enough challenge to theoretical social scientists (and to philosophers doing social ontology), and surely ordinary money users are in no better position on this matter. Therefore, I don't want the above argument to be dependent on collective belief in money having to be *based on having the correct concept of money*. This would be too strong a requirement. Some weaker idea of collective acceptance is needed to meet this demand. But there is a limit beyond which the weakening of the notion of acceptance should not go. Suppose we take 'acceptance of X' to mean *going along with X in one's practices* – rather than violating the practical requirements of the institution. Given this meaning of collective acceptance, it would become trivially true that were collective acceptance of money to be removed, money would cease to exist. So this notion would be too weak. The appropriate idea of collective belief or acceptance for our purposes must lie somewhere in between the above two extremes.

It may therefore be undeniable that money exists in virtue of people collectively believing in it (without necessarily having the right concept of it) or collectively accepting it (involving more than just blindly following the relevant practices).

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15 The claim about the robustness of the money universal should not be taken too far: it should be made compatible with the ideas suggested earlier that the money universal can only exist in its instantiations and that its existence requires exercise.

16 Another issue is whether money is just more robust than currencies, or whether it is perfectly robust, persisting no matter what. My tentative response at this point is that it is both ways, or somewhere in between. Money is perfectly robust to alterations in collective belief or agreement, but this is so only relative to the larger social system (or rather a wide family of such systems) that itself would not be possible without money. Thanks to Amin Ebrahimi-Afrouzi for pushing me on this matter. Naturally much more elaboration will be needed to understand the way in which money is and is not dependent on collective agreement.

But it is equally obvious that money exists in virtue of the pressures of a complex and comprehensive system of monetary and other social institutions. Rather than thinking of voluntary collective belief somehow hanging in the air and serving as an autonomous source of institutional existence, it makes more sense to regard it as itself dependent on the system of institutional interconnections. Indeed, I suggest we consider the situation as *a triple whose components are mutually dependent on one another*. On this view, money, collective belief or acceptance, and the larger system of institutional dependencies mutually shape and condition one another. Within this triple, we find another manifestation of *de re* necessity in contemporary social reality: the three components mutually necessitate one another in that it is not possible to do without any one of them.

This shows how the case of money can be used to make a more general argument in social ontology. What I have emphasized is *the systemicity of social reality*, the synchronic and diachronic interlocking of institutions. This has deep implications regarding the way in which institutional reality exists. It is surely misleading to say it exists independently of people's beliefs about it: it would not exist if people did not have beliefs about (at least parts of) it. It is equally misleading to say it exists just in virtue of people believing it does: it is too large, complex, non-transparent, inherently interdependent, and historically staggered to be reducible to collective belief. Institutional reality, money as a social universal included, is both dependent on and independent of any conceivable collective belief at any given time and space.

References

Aglietta, M. 2002. "Whence and Whither Money?" In *The Future of Money*, 31–72. Paris: OECD Publications.

Armstrong, D. M. 1978. *Universals and Scientific Realism*, Vol. I. *Nominalism and Realism*. Cambridge: Cambridge University Press.

Frankel, S. H. 1977. *Two Philosophies of Money. The Conflict of Trust and Authority*. Oxford: Basll Blackwell.

Frasser, C. and G. Guzmán. 2020. "What Do We Call Money? an Appraisal of the Money or Non-money View." *Journal of Institutional Economics* 16: 25–40.

Guala, F. 2010. "Infallibilism and Human Kinds." *Philosophy of the Social Sciences* 40 (2): 244–64.

Guala, F. 2016. *Understanding Institutions. The Science and Philosophy of Living Together*. Princeton: Princeton University Press.

Harré, R. and E. H. Madden. 1975. *Causal Powers*. Oxford: Basll Blackwell.

Hayek, F. A. 1948. *Individualism and Economic Order*. Chicago: University of Chicago Press.

Hicks, J. 1989. *A Market Theory of Money*. Oxford: Clarendon Press.

Hindriks, F. 2003. "The New Role of the Constitutive Rule." *The American Journal of Economics and Sociology* 62: 185–208.

Hindriks, F. 2009. “Constitutive Rules, Language, and Ontology.” *Erkenntnis* 71 (2): 253–75.
Lewis, D. 1969. *Convention*. Oxford: Blackwell.
Mäki, U. 1990. “Mengerian Economics in Realist Perspective.” *History of Political Economy* 22: 289–310.
Mäki, U. 1997. “Universals and the *Methodenstreit*: A Reexamination of Carl Menger’s Conception of Economics as an Exact Science.” *Studies in History and Philosophy of Science* 28: 475–95.
Mäki, U., eds. 2001. *The Economic World View. Studies in the Ontology of Economics*. Cambridge: Cambridge University Press.
Mäki, U. 2002. “Some Non-reasons for Non-realism about Economics.” In *Fact and Fiction in Economics. Realism, Models, and Social Construction*, edited by U. Mäki, 90–104. Cambridge: Cambridge University Press.
Mäki, U. 2005. “Reglobalising Realism by Going Local, or (How) Should Our Formulations of Scientific Realism be Informed about the Sciences?” *Erkenntnis* 63: 231–51.
Mäki, U. 2008. “Scientific Realism and Ontology.” In *The New Palgrave Dictionary of Economics*. 2nd ed. London: Palgrave Macmillan.
Mäki, U. 2009. *Reflections on the Ontology of Money*. unpublished paper, archived at http://www.helsinki.fi/tint/maki.
Mäki, U. 2012. “Realism and Antirealism about Economics.” In *Handbook of the Philosophy of Economics*, edited by U. Mäki, 3–24. Elsevier.
Mäki, U. 2013. “Performativity: Saving Austin from Mackenzie.” In *Recent Progress in Philosophy of Science: Perspectives and Foundational Problems*, edited by K. Vassilios, and D. Dennis, 443–53. Dordrecht: Springer.
Menger, C. 1892. “On the Origin of Money.” *Economic Journal* 2: 239–55.
Newlyn, W. T. 1962. *Theory of Money*. Oxford: Clarendon Press.
Ruben, D.-H. 1989. “Realism and the Social Sciences.” In *Dismantling Truth. Reality in the Post-Modern World*, edited by H. Lawson and L. Appignanesi, 58–75. London: Weidenfield and Nicolson.
Searle, J. 1969. *Speech Acts. An Essay in the Philosophy of Language*. Cambridge: Cambridge University Press.
Searle, J. 1995. *The Construction of Social Reality*. New York: Free Press.
Searle, J. 2005. “What Is an Institution?” *Journal of Institutional Economics* 1: 1–22.
Searle, J. R. 2010. *Making the Social World*. Oxford: Oxford University Press.
Searle, J. R. 2017. “Money: Ontology and Deception.” *Cambridge Journal of Economics* 41: 1453–70.
Tieffenbach, E. 2010. “Searle and Menger on Money.” *Philosophy of the Social Sciences* 40 (2): 191–212.