Credit Where Credit is Due

The Credit Theory of Money as a Claim about Constitutive Social Construction

by

Jooseppi Juho Jukanpoika Räikkönen

Submitted to Central European University - Private University Philosophy Department

In partial fulfilment of the requirements for the degree of Master of Philosophy

Supervisor: Assistant Professor Asya Passinsky

Vienna, Austria 2023

Abstract

This thesis puts forward an interpretation of the "credit theory" of money as a theory of its "constitutive social construction". Credit theory often goes against a popular, though historically uncorroborated story of money's origins in barter, and claims that this false origin story is illustrative of a remarkable depoliticization of money's nature. Instead of being a simple commodity, the credit theorists say that money is a unit of account for debt and credit relations. The thesis offers a framework for understanding why claims about the "social construction" of even clearly social objects like money can be informative, and then goes onto use this insight to contrast two ways of understanding the social world: the game-theoretic and the Searlean. Finally, it is shown that the Searlean theory of social ontology is more suited to capturing the distinctive claims of the credit theory of money. This is because the credit theorists emphasise that money is, at base, an abstract agreement about how to track value embedded in debts and credits, not a commodity. Such an object could not arise from subjective preferences but requires the setting up of practices through acts of collective intentionality.

Acknowledgements and dedication

I would like to thank my friends Pavlo Kostin and Abulkhair Yerlan, who have been a constant source of both academic and personal support during thesis writing and my whole degree at CEU. As friends and colleagues, Abul and Pasha are ones the likes of which one can only dream of.

Further, I would like to extend my thanks to my supervisor Asya Passinsky. Asya, an expert in a field I was simply stumbling into, patiently listened to my uncollected ramblings, was supportive in the midst of three changes of topic, and continuously sent invaluable and endlessly helpful criticism on previous versions of this work.

Finally, I want to dedicate my thesis to the memory of David Graeber, who, though he passed away three years ago, continues to be a great inspiration; one whose lifework is a constant reminder that even rather theoretical investigations can be a venue for mapping out the infinite vistas of human possibility.

Contents

1. Money: Debt or Barter?
1.1. Money and the myth of barter1
1.2. Credit and commodity theories of money
1.3. So, it's a chicken or egg problem
2. The Money Debunking Project
2.1. Hacking on Social Construction10
2.2. The Debunking Project14
3. Social Ontology: Game theoretical or Searlean?
3.1. Game Theory and Coordination
3.2. Searle's Theory of Institutional Facts as a Framework for Credit Theory
4. Giving credit where credit is due
4.1. The fundamentals of credit theory from the history and sociology of debt and
money
4.2. Credit theory: Searlean or game-theoretic?
Conclusion
Bibliography

Credit Where Credit is Due: The Credit Theory of Money as a Claim about Constitutive Social Construction

1. Money: Debt or Barter?

This is a journey into money... Loads of money.

-Harry Enfield in the song "Loadsamoney"

1.1. Money and the myth of barter

Money represents contradictory strains in the social world. On one hand, money is a malleable institution, allowing for great degrees of planning, design, and alteration. On the other, money is tied to various logics of optimisation and quantisation and seems to be circumscribed by the hard limits of non-monetary economic value in inflationary and deflationary tendencies and political allegiance.

Money is also fundamentally social in character: it is dependent on our attitudes in a far more radical way, than say, the energy system we employ. While the energy system is causally dependent on our attitudes and our existence in the long run – we choose where we build extra capacity, whether we pursue fossil fuels or renewables etc. – its building blocks will not collapse with our belief and trust in them, unless this change in attitudes leads to causally efficacious inaction on our part. Opposed to this, money is suspended on a delicate web of belief and trust,

which, if it collapsed, could take down the whole monetary edifice with it. Without the state apparatus of the US and people's trust in it, a one-dollar note is simply a piece of paper, its value and validity have to be socially maintained.

But an intuitive thought might arise: doesn't this get the cart before the horse? Surely a modern currency functions because its management, amount, etc. *track* some features of prior value. The monetary authority of a state acts from an understanding of the real limits and functions of money, not the other way around? In fact, in the story economics textbooks tend to tell about money, a central authority or an agreed upon social convention of any kind are absent. In the classic statement, money emerged historically to ease transactions in an already existing, burdensome barter economy. The popular economics explainer website *Investopedia*, tells the following story:

"For example, a farmer may exchange a bushel of wheat for a pair of shoes from a shoemaker. However, these arrangements take time. If you exchange an axe as part of an agreement in which the other party is supposed to kill a woolly mammoth, you have to find someone who thinks the tool is a fair trade for having to face down the 12-foot tusks of a mammoth. If this doesn't work, you would have to alter the deal until someone agreed to the terms."

But eventually, from such simple, difficult trades

"A type of currency slowly developed over the centuries that involved easily traded items like animal skins, salt, and weapons." (*Investopedia - The History of Money;* accessed 4.5.2023)

Animal skins, salt, and weapons are valuable for us as such. Nobody needs to agree that they are money, they simply "slowly develop" to take up that position. What money is, at the end of the day, then comes down to what individuals want and desire in a given situation. Sure, money

does not exist without people being around. That much is obvious. But neither does it seem like anything like an antecedent social entity is *necessary* for understanding money: it simply smooths up what individuals already want. Simply put: money maps onto prior value and is modelled on the more basic case of barter exchange.

But many have pointed out that this origin story stands up to almost no historical scrutiny. Cambridge anthropologist Caroline Humphrey says that no "example of a barter economy, pure and simple, has ever been described, let alone the emergence from it of money; all available ethnography suggests that there never has been such a thing" (Humphrey 1985, 48). David Graeber, whose bestseller *Debt: The First 5000 Years* (2012) went a long way to bring a competing account of money to the popular imagination, went as far to argue that the barter story is a kind of legitimating myth for much of modernity:

"[The barter story] played a crucial role not only in the founding of the discipline of economics, but in the very idea that there was something called "the economy," which operated by its own rules, separate from moral or political life, that economists could take as their field of study. "The economy" is where we indulge our natural propensity to truck and barter. We are still trucking and bartering. We always will be. Money is simply the most efficient means." (Graeber 2012, 27–28)

Similarly, others have argued that the dominance of the barter story in economics originates in political interventions which explicitly attempted to limit the monetary breathing space of modern states (cf. Caffentzis 2021; Eich 2020). If disagreements about the nature of money have such broad-ranging implications, what is the disagreement about?

1.2. Credit and commodity theories of money

Theories of money are usually split into two camps: the credit and the commodity theory. Though not all thinkers can be clearly characterised according to this dichotomy, it is applicable to most theories of money in a rather straightforward way. The controversy relates to whether money can be understood on analogy with the economic theory of market exchange. According to advocates of the commodity theory – though it might be a very special kind of commodity with functions peculiar to it, these being for it to be a *medium of exchange, a store of value, a unit of account, and a standard of deferred payment* – money is still a commodity, or a neutral "measure" of commodity exchange. Even if money is unique in having all these functions, its basic character is bound up in the laws of market exchange: it is subject to the laws of supply and demand, its value and availability is governed by them in the sense in which the value of all other traded goods are (Ingham 2013, 15–37).

Credit theorists oppose this account of money in two ways. 1) They claim that money is not a commodity, but at bottom an accounting method for debt and credit relations, and 2) to distinguish themselves from commodity theorists more strongly, that debt relations usually aren't *only* mathematically representable anticipations about supply, demand, and their general level, but examples of the kind of thick social structure which is the bread and butter of anthropological and sociological research.¹ For example, early forms of money were methods of accounting for damages done to individuals, and were really at base a legal, rather than an economic practice (see 4.1. below). These claims often bring with them a broader theory of

¹ Two things to note about the two features. 1) The claim that money is an accounting method for debt relations is a weaker claim than the one made by some credit theorists that *all debt is also money*. I do not go into this controversy, as we only need to talk about money: it is also in part a question of semantics where one lands down on this question. 2) Hence the credit theory often turns out to have very broad implications for the theory of the economy and its scientific modelling in general. Many of Keynes's considerations about the role of credit and the state in the maintenance of money lead him to fundamentally alter his theory of the formation of effective supply and demand in the economy, something which many of his mathematical interpreters struggle with to this day (cf. Mann 2017, chapter 13)

money, which many credit theorists say is fundamentally a "claim upon society" (Simmel 1978, 177). Therefore, money, through being debt, is a form of social power: by possessing it, one becomes a creditor to the social product.

The term "the credit theory of money" was introduced by A. M. Innes in two articles which appeared in 1911. Therein Innes defined the theory as follows:

"The Credit Theory is this: that a sale and purchase is the exchange of a commodity for credit. From this main theory springs the sub-theory that the value of credit or money does not depend on the value of any metal or metals, but on the right which the creditor acquires to "payment," that is to say, to satisfaction for the credit, and on the obligation of the debtor to "pay" his debt and conversely on the right of the debtor to release himself from his debt by the tender of an equivalent debt owed by the creditor, and the obligation of the creditor to accept this tender in satisfaction of his credit." (Innes 2004 [1911], 51-52)

Though not all the proponents of the credit theory of money are unanimous in their formulation of the doctrine, the basic fact agreed upon by them is this: money is fundamentally debt – or, if seen from the other side of the social relation, credit. Further, not all debt is money, but money is specifically a *unit of account* for general economic value through accounting for debt and credit relations, and a method for transporting and maintaining this value, primarily for the function of settling debts. These two functions are prior to the rest mentioned by commodity theorists. There are forms of money, say the credit theorists, which never function as a medium of exchange (Ingham 2013, 70; see also section 4.1. below). Hence, it cannot be essential to money that it is a commodity.

But the fundamental controversy must be whether claims about the credit theory can be rendered using models traditionally used to bring out features of commodity exchange. Credit theorists are quite adamant that their theories of money have broad implications for the social sciences, but these claims should be scrutinised thoroughly. While it seems clear that the traditional origin story brought out to support the commodity theory is fallacious, doesn't the question about the proper theory of the social relations in the background of monetary relations still come prior to any question about the history of money? Even if the historical origins of money contradict the story of the commodity theorists who claim money arose in barter, the most important feature of such theories cannot be their historical accuracy, but their logical content: is it *intelligible* that money *could* have emerged from mere barter exchange? Similarly, credit theorists will have to be able to say what makes money special in relation to commodity exchange as to stand as an independent analytical unit from it. This is a question about the orien.

1.3. So, it's a chicken or egg problem.

I suggest that we ought to investigate these debates as disagreements about the appropriate social ontology of money. The question will be whether some social forms are such, as to require a *distinctly* social ground. This question of ontological priority in investigating theories of money has been brought to the fore in the work of Geoffrey Ingham, who has suggested that studying money can bring into clear focus the differences in approach between the disciplines of economics and sociology (e.g. Ingham 2013, 1; 2020, 8). The fact that the historical evidence on barter economies is thin is one thing, but Ingham is committed to a stronger claim: "The very *idea* of money, which is to say, the abstract accounting for value, is *logically anterior and historically prior to market exchange.*" (Ingham 2013, 25, emphasis in original).

This is not only a question of logic, but of academic party politics, a question of a problem that "distinguishes economics from sociology" namely "Can an *inter*-subjective scale of value

(money of account) emerge from myriad subjective preferences?" (*ibid.*) Ingham's project in his book *The Nature of Money* is, he says, an attempt to recover a theory of money as a "socially (including politically) constructed promise" (Ingham 2013, 198). In contexts where Ingham refers to the fundamental feature of money as a promise and a "social institution", "socially produced", or a "social construction", he is also keen to refer to the work of John Searle in social ontology as an intellectual ally (e.g. Ingham 2013, 70–71, 74, 197). A term that frequently comes up in these instances is Searle's concept of an "institutional fact". Hence, the connection in which Ingham finds the work of social ontology important is to explicitly refute the theory of money present in neo-classical economics and the fallacious history of money as emerging from barter.

But the theories familiar from neo-classical economics have recently been suggested in social ontology, and their most famous proponent is Francesco Guala, who dedicates a chapter to money in his book *Understanding Institutions* (Guala 2016). Though Guala recognises the falsity of the economic origin story in barter, he claims that the tradition that produced it will be able to account even for the credit theory of money.² This is in direct contradiction with the position of Ingham, who believes that the credit theory and game theory -type approaches are fundamentally at odds with each other (Ingham 2013, 22–28). Guala, who claims that he is presenting the account of "social scientists" (by which he really seems to mean that of economists) on money, is directly opposed to this idea (Guala 2016, 33). In papers written with Frank Hindriks and his own work, Guala has further suggested that Searle's social ontology can be rendered coherent with the understanding of money in the social sciences, by which they mean the game theoretic account of equilibria as producing cooperative benefits (Guala 2016, 58–69; Hindriks and Guala 2021).

 $^{^{2}}$ Guala's term is "claim theory", though they are essentially used interchangeably. I will stick to the term "the credit theory".

My aim in this thesis is to bring out of the fundamental features of credit theory in terms of two competing accounts of social ontology. I claim that under a plausible interpretation of the concept of "social construction" I claim that credit theorists are committed to a distinct form of social construction claim about money, and that their theory of money requires a social ontology that captures such claims. Guala's attempt to describe credit theorists about the social grounds of money. Credit theorists understand money's nature as a unit of account for debt relations as 'political' or 'social' and oppose it to mere individualistic calculation, while Guala's theory is committed to an essentially non-social *ground* of sociality in game-theoretically understood conventionality.

Though this claim might sound puzzling at first, one only need think about what kinds of basic claims the two theories invoke about money to clarify it. The name of the *credit* theory is evocative, the word "credit" being a cognate of the Latin word "*credere*", meaning "to trust". To credit theorists, money requires a prior set of ideas like *owing* something to someone and *trusting* some institution or set of people. To them, social life has deep cognitive analogies with ethical life at its most basic level. The further claim then must be, though credit theorists have failed to supply a full account of how this is, that these features of the theory do not merely reduce to something like economic calculation. Economic calculation is all the commodity theorists need; namely, claims of the following form: I want an apple, this guy wants a spear; I have a spear and this guy has an apple: let's trade! ... repeat.

The claim I wish to begin with is the credit theorists' claim that money is a "social construction". The first impulse upon hearing this is to say: "*Of course* it is! what else would it be? Money isn't a *natural* thing." Against this reaction, I wish to show that there are often two kinds of claims at stake when people talk about social construction, and that one of them is informative and novel when applied to even obviously social objects like money. Following Sally

Haslanger, I will distinguish from each other claims about "causal social construction" and "constitutive social construction". Constitutive construction claims about object X are claims that objects of type X are fundamentally grounded in social kinds. Hence, here the claim is that credit theorists of money are committed to money being grounded in distinctly social phenomena, like social relations, or practices and systems of meaning, while commodity theorists claim that social phenomena are merely grounded in the calculative desire structure of the individual. Chapter 3 goes on to present two views in social ontology to interpret these claims, and in chapter 4 the framework developed in chapters 2 and 3 are applied to the claims of credit theory.

2. The Money Debunking Project

Is it not quixotic to say, as Ingham does, that money is a social construction? Everyone knows money is social, why not reserve 'social construction' for controversial cases like gender or race? A veritable explosion in accusations of social construction, Ian Hacking famously claimed, has led the term, which once had "excellent shock value", to "become tired" (Hacking 1999, 35). Hacking, therefore, opposed throwing around social construction claims too liberally, especially when it came to uncontroversial cases of social objects (again, why state the obvious!). Hacking even claims that the paradigmatic anglophone work of social ontology, John Searle's The Construction of Social Reality (1996), is "not a social construction book at all" (Hacking 1999, 12, emphasis retained; see also 1997, 83-85). In this chapter I argue that Hacking is wrong in this statement, and that, in fact, there is a distinct model of social constructivism about the social world, as presented by Sally Haslanger which Searle's theory will be shown to fit (2012, 113-38). I argue that there is a reasonable sense in which a merely strongly socially "mediated" practice can be socially "constructed" by being "constitutively" social in Haslanger's sense. Hence, barter exchange is not constitutively socially constructed, but merely causally so, while institutionalised relations of credit and debt are constitutively socially constructed. So while it is clear that "social construction" talk does not always manage a level of coherency required of a fully philosophical concept, there are helpful ways of clarifying certain aims of such talk.

2.1. Hacking on Social Construction

Why does social construction discourse emerge and where did its original shock value come from? Social construction claims are centrally claims about contingency: they oppose the inevitability of a given state of affairs. Hacking presents us the following schema for spotting a "social constructionist". According to Hacking, social constructionists typically endorse:

 "X Need not have existed, or need not be at all as it is. X, or X as it is at present, is not determined by the nature of things; it is not inevitable." (Hacking 1999, 6)

And, Hacking adds, sometimes advocates also go further and claim:

- (2) "X is quite bad as it is."
- (3) "We would be much better off if *X* were done away with, or at least radically transformed." (*ibid*.)

The reason Hacking believes social construction claims about social objects are not interesting is that (1) clearly brings with it a kind of relevance criterion which says that:

(0) "In the present state of affairs, *X*, is taken for granted; *X* appears to be inevitable." (Hacking 1999, 12)

Without (0), there is no temptation to talk about the social construction of *X*. Why would we need to point out the contingency of something if we already know it to be so? Therefore, it is no surprise, says Hacking, that one finds no books on the social construction of "banks, the fiscal system, cheques, *money*, dollar bills, bills of lading [etc.] ..." (*ibid.*, emphasis added) as this would merely threaten triviality. But, as we saw in the introduction, while there might not be that many *books* on the "social construction of money" in the title, many theorists of money *do* feel the need to emphasise that it is a social construction. Are we simply overcrowding the bandwagon, or is Hacking mistaken?

It is important to note that one might find no such books because the distinctions between strongly constructionist positions about social objects and less constructionist ones are simply more fine-grained. Social systems are thoroughly coupled with natural ones, and it could be that one simply has to ask more specific questions about money; about which of its features are social, and which "natural" (or a similar "non-social" category). So, while it might be trivial to say, for example, that energy markets are socially constructed, it is not trivial to say that "the price of energy is a social construction". Many believe the price of energy to merely be a function of the relative scarcity of energy, or even that energy is somehow equivalent with economic value (cf. Hall and Klitgaard 2018). Social constructionist claims about the price of energy will then point out to a broader constitutive set of specifically *social* grounds which determine the price level for energy. The challenge will be to point out where exactly the non-triviality would lie, and it is possible that Hacking's theory could allow for cases like the above.

So, one must get into the specifics of Hacking's theory. Hacking's splits social construction into two parts: the construction of *ideas* and the construction of *objects* (Hacking 1999, 21–24) (I call these "idea-construction" and "object-construction" respectively following (Haslanger 2012 113-138)). Idea-constructionists hold that at least a part of a given concept, idea, theory, or conceptual scheme, belief, attitude, etc. (Hacking 1999, 22), is *caused* by social factors, *and other possible concepts, ideas etc. would be possible (ibid.* 84–92).³ The second point is important because without it, this position would also threaten triviality: it is obvious that the process by which we come to possess our given conceptual schemes and understandings of the world is a social process. The question is whether this is detrimental to the *accuracy* of our cognitive positions; in the case of natural sciences, whether the explanation of the stability of scientific practice comes from at least in part from "elements that are external to the professed content of the science" (*ibid.*, 92).

Most cases of the "social construction" of distinctly social objects Hacking would place under the heading of idea-construction, so as not to threaten triviality against (0). So while the claim

³ Though this is clearly a part of Hacking's claim, the full extent of his position remains relatively unclear as Haslanger also points out. (Haslanger 2012, 116–18)

that the "economy" as an object is socially constructed is painfully obvious in Hacking's books, the claim that the *idea* of the economy is socially constructed is more controversial (Hacking 1999, 13–14), hence an interesting social construction claim. Our talk of "the economy" as a given concept and a cogent category presents the concept as something inevitable, but the ideasconstructionist about the economy would claim that this represents only one way we could carve the world up: we could understand societies (though even that term is controversial) without distinguishing strongly between 'the economy', 'nature' and 'politics' etc.

But paradigm cases of object-construction are also social kinds. Here Hacking uses a very broad sense of "object", which can at least mean things like behaviour, people, states, conditions, practices, particles and relations... etc. (Hacking 1999, 22). In this connection, an important distinction is the one between *interactive* and *indifferent* kinds. When an object is "constructed" in a social process, the classification of the object will have an influence on its nature. Interactive kinds, for example women and mentally ill people, are *responsive* to the things they are classified as: women respond to being described as "women" by assuming certain gender-coded social habits, while mentally ill people (at least according to some), through institutional conditioning or from assuming traits from classifications. *Summa summarum*, members of interactive kinds act "under descriptions" which are formed – to a sufficiently strong extent to factor in the explanation of their action – by social forces (Hacking 1999, 103–4).⁴

⁴ Hacking claims he does not "offer a definition" of interactive kinds (Hacking 1999, 104). Nonetheless for our purposes the only important thing is that there is, if not a causal, a contrafactual dependency on classification practices and the nature of the member of an interactive kind – this does not require that Hacking have a fine-grained definition of the term.

2.2. The Debunking Project

Sally Haslanger has pointed out that Hacking primarily thinks about social construction through causality: whether an idea or object is socially constructed will hinge on whether its nature is significantly causally determined by social factors (Haslanger 2012, 113–38). While this might be a plausible interpretation of many social construction claims, Haslanger points out, through the examples of race and gender, that it is only one among many – and one badly suited for the race and gender cases at that. To show this, Haslanger contrasts the causal conception which says:

"X is socially constructed causally as an F iff social factors (i.e. X's participation in a social matrix) play a significant role in causing X to have those features by virtue of which it counts as an F." (Haslanger 2012, 131)

with the idea of "constitutive social construction", which says:

"X is socially constructed constitutively as an F iff X is of a kind or sort F such that in defining what it is to be F, we must make reference to social factors (or: such that in order for X to be F, X must exist within a social matrix that constitutes F's)." (*ibid*.)

What is the significance of this claim? It is worth quoting Haslanger at length here:

"I am a White woman What does this mean? What makes this claim apt? Suppose we pose these questions to someone who is not a philosopher, someone not familiar with the academic social constructionist literature. A likely response will involve mention of my physical features: reproductive organs, skin color, and so on. The gender and race constructionists will reject this response and will argue that what makes the claim apt concerns the social relations in which I stand. In effect, the constructionist proposes a different and (at least in some contexts) surprising set of truth conditions for the claim, truth conditions that crucially involve social factors." (Haslanger 2012, 132)

This Haslanger calls the "debunking project", as it offers to "debunk" a naturalised, non-social account of a kind which turns out to be social. Instead of having natural properties factor in the truth evaluation of a proposition attributing gender or race characteristics to an individual, the debunker will offer a set of statements about their position relative to others in a social hierarchy, in which specific features are attributed to them.⁵

Following Haslanger's account of distinguishing constitutive and causal construction we may specify the position further. Jonathan Schaffer has, I believe correctly, identified the minimal conditions to which social construction claims must amount to in his definition of social construction:

"Socially constructed: To be socially constructed is to be grounded in distinctive social patterns." (Schaffer 2017, 2454)

I believe this tracks the heart of Haslanger's claim in an important way. Grounding is usually distinguished from both causal and probabilistic determination of phenomena and thought to be a "constitutive" form of dependency (Bliss and Trogdon 2021). Grounding claims answer questions about the ordering of reality according to fundamentality, and what kinds of objects *constitutively* depend on prior ones, like the arrangement of particles into macrophysical objects on the microphysical particles themselves (Schaffer 2009). Hence, claims of constitutively depend on social entities or phenomena for their existence and character.

⁵ Ásta has proposed analysing the debunking project through her "conferralist" framework of human kinds. Here the social property is bound first and foremost to an epistemic kind: individuals with authoritative positions for conferral perceive a given thing as having a property (e.g. a baseball umpire as a pitch being a strike), and then "confer" the property of being a strike on the physical event of the pitch (Sveinsdóttir (Ásta) 2013, 720).

Schaffer's definition of social construction is also abstract enough that it allows for much leeway in its interpretation, and the controversy related to whether a given type of thing is socially constructed can also be a disagreement about how to interpret the words "distinctive", "social", and "pattern" in his definition. Schaffer's position specifies Haslanger's claims and remains quite deflationary because it only claims that there has to be something *distinctively social* about the patterns to which a given *X* is grounded if *X* is socially constructed, while staying ambivalent on the specific practices and whether this is a case of "projection" etc. (Schaffer 2017, 2455).

Here, the term "pattern" is slightly burdened in my opinion, as a feature of social practices some find crucial is that they do not represent a "pattern" of action, but activity governed by *norms*. Norm governed action can or cannot exhibit a "pattern", because it is possible that we still act from an understanding of, or governed by, a norm, while failing to exhibit a token of the type of pattern which would define our pattern of action as this or that *kind* of action. But, this is not really a problem as Schaffer is clear to emphasise that he is neutral on whether these patterns are to be "understood purely in terms of displayed behaviours or must be understood in terms of intentions." (*ibid.*). Hence, the details will have to be filled in by the specific position on what sociality amounts to, the grounding relation being a neutral ontological describer of the necessary pre-conditions of any account.

The word "distinctively" in Schaffer's definition is also important. To see why, consider the following two examples:

 John and Sally are on an island. Every day John places a coconut at the centre of the Island and Sally places an orange. Both take turns getting the fruit placed at the middle of the island by the other at the end of the day. The two sometimes see each other but have never had a conversation or agreement about the practice. John and Sally agree that every morning they will trade fruits at the middle of the island. They change their gifts according to what they agree on the previous day and anticipate the other person's wishes through conversation and planning.

Is 1) a case of social construction? Arguably it constitutes a practice which fundamentally depends on the individuals coming together in the correct ways and it has the fundamental features of a conventional arrangement. Nonetheless, it does not seem to be a case of *constitutive* social construction. In 1) the primary features are simply grounded in the anticipations of John and Sally about where the fruits will be and the two are ambivalent as to whether the fruits are placed there by a machine or a person. In 2) on the other hand, the fundamental structure of the practice is governed in the mutual recognition of the participants and a continuous social process regulating their behaviour.

What I wish to showcase with this that it is not trivial to say that "money is socially constructed." Theories of money might end up placing emphasis on different points of the process of sociality in constructing money. As we saw in introduction, the history set up to support the commodity theory which sees money arise from barter seems to implicate less weighty social concepts than commodity theory, which requires relations of debt between individuals, often mediated by social institutions. The interpretation of constitutive social construction employed for the rest of the thesis will be a strong one. Even if an activity is fundamentally "social" in the sense that it necessarily involves some level of individuals anticipating each other's behaviour and responses, if these anticipations aren't fundamentally social, I will not say that the practice is "constitutively socially constructed."

To sum up. Examples of social construction are usually race and gender: categories which are not as clearly *as social* as money is. Hence in the race and gender cases, at first glance at least, "debunking" claims have much more force. Nonetheless, the distinction between constitutive and causal social construction claims allows us to point to salient features in the debate about money. What I claim it specifically allows us to do that the sense in which social aspects function in the *explanation* of the position of money in a social arrangement is important. In the simple causal case, the context in which individuals come to form monetary practices for solving coordination problems, the social matrix simply plays a causal role. Naturally, money does not arise without some level of cooperation: we know this much. But the position which sociality plays in the purely game theoretical explanations of the emergence of money is purely causal, and in fact, the primary role constitutive of money is still played by the marginalist utility functions of individual cooperators. The next chapter begins with an elaboration of the game theoretical theory of conventions and sociality, after which I go on to contrast it with John Searle's theory in social ontology. We will see that the central controversies between the two theories relate to the position of motivating reasons and methodological individualism in explaining social structures. Through these disagreements, Searle's approach will allow us to cash out claims about "constitutive social construction" where game theoretical approaches do not.

3. Social Ontology: Game theoretical or Searlean?

This chapter begins with an elaboration of game theoretical analyses of social conventions and institutions. It is shown that they are committed to two claims about sociality which makes their convention of the social world modelled on individualism and fundamentally non-social phenomena: there is nothing fundamentally distinctive about social objects, as compared to patterns of actions formed by individuals. This is because game theory is committed to a Humean theory of motivation and methodological individualism. In the second section, game theoretical approaches are contrasted with John Searle's theory of institutional facts. The aim is to show what conditions a theory of money would have to fulfil in order to land fully on the side of "constitutive social constructivism", as laid out in the previous section. Two features are suggested, 1) that credit theory would have to exploit Searle's concept of collective intentionality, or 2) it would have to evoke what Searle calls "deontic powers" in a fundamental way. In the final chapter I suggest that credit theorists tend to be committed to both, but that sometimes their position on deontic powers is slightly unclear.

3.1. Game Theory and Coordination

Some, if not all, social arrangements are conventions: they are non-unique solutions to problems of how to coordinate action among groups of individuals. One way to understand such coordination endeavours is to model them on the instrumental rationality of the individuals participating in the scheme, a feat usually achieved using game theory. Games are ways of aggregating the already-existing desires of the players. These are modelled by decision theory, which calls them "preferences". These are in turn ranked for each individual player by a utility function, which maps then in order of strength of preference. The higher the desire in the preference ordering the riskier bets the individual will be ready to undertake to achieve it. These preferences are represented by numerical values in order to rank them, but these are essentially meaningless outside of the individual's utility function and only work as a stand-in to mark the place of a given desire in the preference ordering (Hargreaves-Heap and Varoufakis 2004, 5–12).

Game theory integrates the individual preference functions and makes the "pay-outs" for action dependent on the moves of other players. Say you and I both have the option of either going for a run or going fishing. But our local fish population is savvy, and two people on the peer would make too much noise and drive all the observant fish away. Hence, it is in neither's interest that two of us go fishing. Here, the fulfilment of our preferences is conditional on the actions of the other player. Here we might come up with a way – through communication or mere force of habit – to coordinate the activity, like that you fish on Thursdays and I fish on Fridays, i.e. set up a convention.

David Lewis pioneered such accounts of conventions in his 1969 study, primarily with a view to understanding what we mean by the "conventionality" of language (Lewis 2008 [1969]). To Lewis, conventions are solutions to "coordination problems" i.e., situations in which many equilibria solutions are possible to agents. To understand this account, consider the following example: John and Oskar drive down a street every day, they know they'll come across each other when going to work and when coming from work. The street has two sides, and each has the following choice set: {Left, Right}. Assume, further, that both are ultimately neutral on which side of the road is better. The table for the game is as follows:

	Oskar: Right	Oskar: Left
John: Right	1, 1	0,0
John: Left	0,0	1, 1

Simple coordination game with two Nash-equilibria

In cases where both players are sticking to the same side of the road, e.g. the right, neither will have an interest to change their side of the road unless the other also does this. In such a situation we say a game has reached a "Nash equilibrium", i.e. when no player has an interest to diverge from their chosen strategy unless others also do so. And as players stick to their chosen strategy and the game goes into equilibrium, the practice "driving on the left side of the road" has been instituted in the social group as a solution to the coordination problem of driving on the road: if it gets standardised to a high degree and everyone expects others in the social group to conform to it, it has become a "convention" in Lewis's sense (Lewis 2008 [1969], 42, 78).⁶

The work of Brian Skyrms offers a kind of paradigm of where Lewisian positions might be taken at their most extreme. Skyrms's work is characterised by a forcible application of the game-theoretic modelling of evolution to bring to view the continua, rather than discontinua, between the human and animal worlds (Skyrms 2010; 2004). Consider a situation where two people are hunting. They don't know of each other's activities, and they must feed themselves. Neither of them can catch a stag alone, but were they to hunt it together, they could fell it. For both, hunting hare will feed them, but a stag would grant them far superior sustenance. The game will look something like this:

⁶ Nash equilibrium is a specific solution problem in game theory, and many game theoretic accounts of sociality will use a more general solution concept and Guala and Hindriks argue that Lewis's conventions *cannot* be Nash-equilibria (Aumann 1987; Hindriks and Guala 2015, 182–84). Some even opt for non-equilibrium concepts of practices, institutions and conventions, like a specific set of strategies. The important aspects of game-theory for our purposes, methodological individualism and the Humean theory of motivation, are independent of this controversy, which relates to methodological questions about the nature of the *beliefs* involved in the decision models on a general level, and on the question of which concept of structure to use in game-theoretic modelling, though these still reduce down to the individuals as preference satisfiers: this idea is not challenged by the interlocutors at any point.

	P2: Hunt hare	P2: Hunt stag
P1: Hunt hare	1, 1	1,0
P1: Hunt stag	0,1	4,4

The Stag-Hunt

The top left, and the bottom right corners of the game are Nash-equilibria, while the top right and bottom left are strictly sub-optimal for one of the players, who has an incentive to change their strategy. Hare hunting is a strategy for risk-averse players, *and* for ones who simply don't know what the other player is up to with any confidence. The payoff from hare is secure, while hunting stag alone dooms one to failure. The game-theorists therefore understand cooperation primarily through individual pay-off and expectation.

Hindriks and Guala have recently advocated a theory of institutions based on game theoretical equilibria (2021). According to them, both the primary function, *and* the explanation of the success of institutions is that they solve collective action problems by introducing equilibrium strategies (*ibid* 2030-231). This is the "etiological" function of institutions, and Hindriks and Guala even speculate that cooperative benefits might play a crucial role "in the selection process that only some institutions survive" (*ibid*. 2033). The fundamental takeaway from this is that equilibria are stable because they produce benefits for participants. The two cite money as an example of their framework for institutions. They recite the barter story we saw in chapter 1. from Menger, the coordination problem to be solved being the double coincidence of wants (*ibid*. 2034): how can I trade a good I want for a good the other person does not? An important feature of this theory is that no one would ever *need* to agree to introduce money – practices which employ it would simply, on the whole, be far more successful. Guala has further claimed

that the credit theory can be modelled for on this basis (cf. Guala 2016, chapter 3 for his account of money). But as we will see in the next chapter, this is a mistake.

These game theoretical theories of sociality are directly related to the Humean theory of motivation in the philosophy of action. As stated by Michael Smith, the theory says that:

"R at t constitutes a motivating reason for agent A to Φ iff there is some Ψ such that R at t consists of a desire of A to Ψ and a belief that were he to Φ he would Ψ ." (M. Smith 1987, 36)

So say A wants to have a large meal and that he believes hunting hare will grant him that meal. The following schema appears:

A desires a big meal, and A believes that B will hunt stag and that hunting stag will bring him a big meal.

The ranking of the *strength* of the motivating reason, which will be modelled on the beliefs and the strength of the preferences of individuals will tell what they choose. In the case of having little confidence that B will pursue stag, A will opt for hare because the motivating reason for doing so is stronger: i.e. the Humean theory will map decision theory strongly. Skyrms notes as much, even lifting many of his examples from the work of Hobbes and Hume (Skyrms 2004, 4-13, XI).⁷

One "critical guide" to game theory says the field of inquiry is "avowedly Humean in orientation" (Hargreaves-Heap and Varoufakis 2004, 28). A further consequence of this, they claim, is that game theory is a paradigmatically *individualist* way of understanding the social

⁷ Cudd (1993) presents a more detailed history of the evolution of game theoretical reasoning in the social sciences and philosophy. It is important to note here that the discord between philosophy and social sciences presented in later sections is by no means acknowledged by all. In fact, it seems plenty of social scientists and historians of social science are keenly aware of the continuous interplay and deep entanglement of philosophy and the social sciences.

world. Structures, in the game-theoretical account, are merely "deposits of previous interactions" (Hargreaves-Heap and Varoufakis 2004, 32), which are understood as games. And games, as we recall, are simply ways to aggregate the pre-existing individual preferences of participants.

Skyrms even suggests that the game-theoretical approach applied to signalling games will allow us to bridge traditionally held gaps between human and animal communicators. His whole book on the theory of communication as a set of signalling games is framed as an assault on Paul Grice's distinction between "natural and non-natural meaning" (Skyrms 2010, 1; for distinction see Grice 1957), and the book aims eventually to also eliminate thick anthropocentric concepts like intentionality through analysing them down to signalling games (*ibid.* 42-44). This needn't mean that all those committed to following game theoretical approaches should resort to a biological reductionism, but it *does* mean that there is no *in principle* distinction between natural and non-natural meaning. This is an important historical, and methodological note: the game-theoretic conception of communication as signalling games challenges the tradition from which Searlean social ontology originates, ordinary language philosophy, already on the level of their concepts of adequate accounts of communication, trying to explain away norms as forms of instrumental rationality.

This allows us to summarise the two key lessons to draw from the game-theoretic understanding of sociality. Game theory, we have seen, is committed to two claims about the nature of social action:

 Instrumental rationality/the Humean theory of motivation: Motivating reasons are understood as originating in a prior psychological desire, whose fulfilment is predicted by the beliefs of the agent. Each agent acts on this understanding. The content of the beliefs can be altruistic, but the motivation which acts in an explanatory role is a psychological *desire* to help others.

2) Methodological individualism about structures: Conventions and social practices return to the subjective attitudes of individual participants in the sense that these attitudes are merely individual psychological states. Structures merely constitute patterns for the aggregation of individual attitudes, and the only causal influence will be on the expectations of patterns of cooperation: something which takes place in the minds of the individual participants.

Under the account presented in §1, this would only allow for a convention to be socially constructed only in the sense that it is causally constructed. Though this is important, as there is a sense in which pointing out the conventionality of a social arrangement also points out its contingency. But in the game-theoretical accounts the base-facts to which higher facts about structures are grounded are only about the preferences of individuals and their anticipations about the courses of actions of others. Hence, the game-theoretical account does not offer an account of *constitutive* social construction, which I suggested requires that the object that is constructed is *grounded* in a distinctly social pattern following Schaffer (Schaffer 2017).

In the next section I will show that neither of these positions is shared by the social ontology of John Searle, which presents, first, a model of interpersonal cooperation bound up intimately with his concept of collective intentionality, and second, a theory where motivating reasons can, and in fact, *must* be non-Humean at times.

3.2. Searle's Theory of Institutional Facts as a Framework for Credit Theory

In this section I will introduce John Searle's account of the creation of institutional facts. The aim is to show that it offers two conditions the credit theory could fulfil and fall on the side of

constitutive social constructionist claims as laid out in chapter 2. As we saw in the introduction, Geoffrey Ingham, a notable supporter of credit theories, is keen to refer to Searle's concept of an institutional fact as a model for how to understand the distinctive claims about money's being a social construction. Nonetheless, Ingham is unclear on how exactly this would work. Hence the work of reconstructing the position will be taken up in this section and the next chapter.

I claim that Searle's theory of institutional facts has four central parts: 1) a specific concept of observer-dependency, which characterises social objects in particular, 2) the concept of "collective intentionality" in which we-mode intentionality is not reducible to aggregations of individual intentions or mere expectations about the actions of others, 3) the imposition of observer-dependent status functions on physical objects through acts of collective intentionality,⁸ 4) the "glue" holding the above together being systems of "deontic powers", which require that normative reasons may also function as motivating reasons for action.

Here I go against two claims about Searle's theory. 1) Hacking's claim, mentioned in §1, that Searle's theory is not a theory of social construction. I argue that there is a non-gerrymandered sense in which it is. I wish to illustrate the importance of this point in more detail when we get to applying Searle's theory to theories of money. 2) I also go against the claim that Searle's position is coherent with methodological individualism. Searle's own examples of the controversy relate to the structure of mental content, an issue I consider orthogonal to the question of *methodological* individualism: Searle treats this together with the question of ontological individualism (e.g. Searle 2005, 21). The fundamental question should be is there a non-reducible sense in which sociality itself has to function in the explanation of social statuses.

⁸ While intending to do something is a form of what philosophers call "Intentionality" as introduced by Franz Brentano (Brentano 1925, his term is "*intentionale Inexistenz*"), in the sense that the intention has an intentional object (what one is intending to do), but collective intentionality is *not* "Intentionality" in the sense Brentano meant it, but a subclass of intentional phenomena. We "intend" to do something together: the individual cognitive Intentional states are still in the minds of the individuals.

While Searle is clear that there is no extra-mental "collective intention" floating in the air, he *is* still committed to the distinction in kind between social statuses imposed on objects and allowing for the exercise of deontic powers and acting merely under force of habit or something of the sort or accidentally coordinated action. Collective intentionality, as we will see later, is different in *kind* to accidentally coordinated action.

Searle describes his project in *The Construction of Social Reality* as the problem of situating the world of social objects and practices in the broader framework of philosophical naturalism. In the introduction to the book he asks how "can there be an objective world of money, property, marriage, governments, elections, football games, cocktail parties and law courts in a world that consists entirely of physical particles in fields of force, and in which some of these particles into systems that are conscious biological beasts, such as ourselves?" (Searle 1996 xii). Hence, while Searle is interested in drawing out the specificities of the social world in terms of its fundamental ontology, he is still in the camp of philosophical naturalism.

To start off, Searle introduces a distinction between "institutional facts" and "brute facts". The former are dependent on their existence for human agreement, while the latter are not (Searle 1996, 1–3). This, in turn, is called observer dependence by Searle. To him, the fact that "x is F" is observer dependent if the recognition of x as an F is prior to x's being F, or, more strictly, if x's recognition as F is a necessary condition for it being an F (*ibid.* 13).

Why is the idea of observer-dependence so important for Searle? The first reason is trivial: no observers, no social objects; no people, no things people do together. But Searle's claim is stronger. Social objects are frequently defined through their associated functions in social science. Anthony Giddens has noted that the "origins of fieldwork in anthropology are more or less coterminous with the impact of functionalism", and in sociology functionalism has produced "a significant body of research work" (Giddens 1986, xxxi). Such is the case also in

economics, where it is not uncommon at all to define its objects of study through functions, money perhaps being the most important example, the functions of which are: being a *medium of exchange, a store of value, a unit of account, and a standard of deferred payment*. A functionalist answer to whether a certain thing is money asks how well it fulfils these functions.

The primary observation that leads Searle to think that social objects are constitutively observer dependent is that statements about function-fulfilments take the form of value judgements. If my friend asks me "is that a good pen", I will answer by evaluating how well the pen fulfils the functions associated with being a pen: the ink dries quickly, you don't need to press the pen hard on the page to extract ink, etc... In brief, attributing a function to a thing makes it an apt target for evaluative vocabularies. There is a *fact* about whether the pen fulfils these functions. But, Searle says, such evaluations are only possible through "a set of prior *assignments* of value (including purposes, teleology and other functions)." (Searle 1996, 15, emphasis retained). The "content" of the function is merely a set of non-functive physical facts about the pen, while what allows us to say that the pen is a "good pen" etc., is the set of values that *we hold*, and then evaluate the pen *through*. ⁹

Here Searle distinguishes between agentive and non-agentive functions. The former connect directly to our practical aims, while the latter are not (Searle 1996, 20–21). The function of an individual flight feather in the wing of a goose to stabilise the flight of the bird is a non-agentive

⁹ A question which arises in this context, but cannot be tackled in the present inquiry, is what the import of subjectivism about functions is for the rest of social ontology. Searle ends up making counter-intuitive claims about social kinds. For example, a war "is a war only if people think it is a war." (Searle 1996, 89). Searle's example is Vietnam, which he believes only became a war when the US public became more cognisant of the situation (*ibid.*) a claim whose full import is quite difficult to even understand. Even prominent critics of Searle who tout their realist credentials still only retain space for the functions of institutions being *etiological*: i.e. a mechanically conceived selfmaintenance benefit, and limit teleology to the retrospectively evaluative realm (Hindriks and Guala 2021). If one were to pursue the lines in the philosophy of biology which has recently argued that there are objective function assignments and that biological vocabulary is irreducibly evaluative yet also descriptive (e.g. Short 2007 chapters 4 & 5; Christensen 2012), much of the controversies around Searlean ontology would have to be fundamentally reframed.

function, while my decision to use the feather as a quill is an agentive function: the feather is a quill only as long as I am there to use it as such and impose this status on it, while the feather stabilises the bird's flight even if no one observes it doing this. Using the feather as a quill defines the function through *use*, while the function of the feather to keep the bird afloat is not dependent on anything I do. Finally, Searle thinks that a subclass of agentive functions relates to their role as symbols, some signs "standing in" for something else: the function of me crossing my fingers intensely is to wish you good luck on your upcoming performance (Searle 1996, 21).

But how do we get from crossing fingers to social objects like banks or policemen? Here Searle introduces his concept of collective intentionality. Collective intentionality is key to explaining institutional facts, as according to Searle, these are created through "the *collective assignment* of a status function" (Searle 2005, 22, emphasis added). Collective intentionality is intending to act as a "we". Searle's own examples include games of sport and orchestras joining together to play a piece. In a game of sport, an individual player will act their part in executing a play, but only in a joint understanding that they are doing so as a united "team" to execute a strategy (Searle 1996, 23–25). The individual player is not intending to "execute a pass play", but the "we" of the team is. The individual player is intending to do something like pass the ball as a *part* of the play *by the team*.

The fundamental difference at which Searle is grasping with the concept of collective intentionality, relates to one which is recognised in the semantics of ordinary languages: there is a difference between speaking of "us doing something" and us doing something together by accident. Here Searle need not be committed to the idea that I-intentions are not involved at all, merely to the weaker claim that the content of the first-person intentions of the individuals

joining together in collective action is in some sense *derivative* on the collective intentionality.¹⁰ Fundamentally, Searle's claim is not metaphysical here. Merely one about the irreducibility of the semantics of the vocabularies *describing* the mental states of the individuals. He is not necessarily committed to a claim about something like an interpersonal metaphysical mental state or anything of the sort (Searle 1996, 25–26; 2005, 21), though something has to distinguish collective intentions from individual ones fundamentally.

Finally, Searle believes that this allows us to create institutional facts. Mere collective intentionality is not sufficient to create an institutional fact. Animals exhibit collective intentionality in cases like a pack of wolf hunting prey. "A wolf pack hunting down an elk" is not an institution though, even if it does form a group agent. Institutional facts are created by collectively imposing a specific kind of symbolic status function on an object. These facts take the form:

X counts as a Y in context C (Searle 1996, 28; 2005, 5–10)

Searle calls these "constitutive rules" a term taken from his theory of speech acts. Constitutive rules define the conditions under which a certain thing comes to count as another in a context and are therefore opposed to regulative rules, which take the form "do X", or with sufficient conditionalization added, "if X do Y": if you see a red light, stop; if you see a green light, drive.

Note that the game-theoretical accounts of sociality we saw before account for even collective action through regulative rules. Agents respond to signals from their environment, which they filter though the mangle of their subjective preference function and act. If the correct signal comes up, if the correct belief is fulfilled, they perform the action anticipated by their utility function. The difficult part for Searle is to explain how the status function is imposed if not by

¹⁰ Margaret Gilbert shares this interpretation when she states that: "Searle would, I believe, say that Iintentions are involved (perhaps he would say that they have to be involved if a human being is to do something) but that, importantly, they are in some sense *derivative* in this case." (Gilbert 2007, 32fn)

agentive activity which creates deontic rules: "this light counts at this context as a traffic light" is needed before the game-theoretical theorist explains *why* people respond to the traffic light in the correct way.

Searle thinks that such rules aren't enough to understand sociality. Constitutive rules fundamentally enable action through granting individuals "deontic powers". Status-impositions come with associated deontic powers: referees have the power to declare a foul, money has the power to purchase goods in exchange. In fact, this is the very fundamental point. Institutional structures are so important for society, because they create new power relationships and enable people's cooperation by helping create "desire-independent reasons for action" (Searle 2005, 11). This is to say that the fundamental social variety of motivation is a *normative* one, doing something because one *ought* to do it, not because one is inclined to. Note, though, that the sense of normativity at play is not a *moral* one. It relates to the actions being governed by an understanding of the *correctness* of the actions involved, not mere force of habit or desire. Plausibly, moral practices are a *subclass* of normative ones, but the two should not be conflated.

This allows us to sum up the points at which Searle's theory of social ontology disagrees with the game-theoretic account of sociality:

- Constitutive rules functioning through deontic power: Societal arrangements described by institutional facts fundamentally include a non-desire-based form of motivation: this is Searle's "deontic power": Constitutive rules, of the form "X counts as Y in C", cannot be understood without it. This is in contradistinction to the gametheoretic count, which understood motivation along the lines of the "Humean theory" as we saw in 2.1.
- 2) **Collective intentionality:** Sociality includes a fundamentally non-individualistic attitude. This is collective intentionality, which does not reduce down to expectations

individuals have about the actions of others, but in the intention of the group to act as a group.

The most important feature of Searle's theory for our purposes is that constitutive rules have to be imposed collectively, and that what is distinctive about them is that they *allow* for a new set of practices. Money is plausible a kind of meta-practice of societal bookkeeping, as we will see. I also point out in the next section that while credit theorists emphasise multiple ways in which the social practices surrounding money have to be different from commodity exchange, only their claim about the distinctive nature of money as a unit of account stands up to scrutiny. This claim is not captured by game theorists but is by the Searlean social ontology.

4. Credit where credit is due

I begin this chapter by laying out the fundamental claims of the credit theory through examples lifted from the history and sociology of money. I then go onto see if these claims can be captured by game theorists. I claim that while game theorists have plausible, and perhaps more ontologically deflationary, accounts of how two of the features of money work, their approach is still antithetical to money's ontology as a unit of account as laid out in credit theory. This feature, I argue, is better captured by Searle's social ontology.

4.1. The fundamentals of credit theory from the history and sociology of debt and money

In this section I briefly introduce some of the salient features of various historic forms of money credit theorists like to emphasise. These are 1) that money's history as a unit of account or abstract measure of value is found in the practice of *Wergeld*, the compensation of injuries, whose character was irreducibly connected to moral forms of motivations, 2) money's nature as a unit of account is based in that it represents an abstract value *between* goods, and this value is only possible through acts of collective intentionality 3) that money fundamentally involves a form of trust which is not reducible to the knowledge or probabilistic expectations of its users. In the next section I will point out that 1 and 3 are plausibly vulnerable to objections from the game theorists, especially in the case of modern money, but that 2) is almost impossible to understand without Searle's concept of collective intentionality, and that with it, some features of deontic power would probably also have to follow.

Though historical examples should not be directly read as contributing to this or that ontological claim, they can still help us understand the ontology of current social forms. They can do so

especially well by pointing out how we might be mistaken about the nature of social objects. Say we discover a past form of what we call "money", but this social form has a radically different function to the ones we identify for current things called "money", and its history indicates that it is inconsistent with our views about how money *should* emerge because of its nature. This would at least indicate that we should do more work to account for the historical form, or prefer a theory which could capture both the present and historical case.

This is what sociological and anthropological critiques of the truck and barter origin story try to achieve. One of their primary goals is to show that money's historical origins lie in social configurations, whose possibility hinges on their participants having distinctly non-economic motivations for their actions. One classic case study is found in the theories of *Wergeld*. *Wergeld* was a legal practice of compensation in premodern societies, especially witnessed (as the name suggests) in the Indo-European context. The laws had extremely specific guidelines about how given injuries from damages to the skull to lost limbs were to be renumerated to the victim. The laws would detail a list of injuries and pair them together with the goods which were to be given as compensation, these usually being things like, cattle, metals, or agricultural products.

In a study titled "*The Origins of Money*" Philip Grierson suggests that the conditions under which *Wergeld* laws were put together can "satisfy, much better than any market mechanism, the prerequisites for the origins of the monetary system" (Grierson 1977, 13). The standards for compensation tended to differ based on the social status of the harmed individual; kings requiring greater recompense than a member of the clergy or nobility, whose injuries, in turn, were valued higher than those of a commoner. The level of the tariffs for damages were established in public assemblies, and the common level denominated in goods that a commoner could be expected to have at their disposal at any given time (*ibid*.). The important aspect of *Wergeld* bookkeeping according to anthropologists and sociologists, that distinguishes it from

market exchange, is that its motivating grounds aren't simply economistic, nor are they broadly speaking utilitarian.

Rather, *Wergeld*, by assigning a moral value through societal consensus to injuries, makes money the measure of the severity of "punishment for the transgression of the values of the symbolic and sacred realms." (Ingham 2013, 92). These symbolic and sacred realms are supposed to be explanations for the formations of individual desires and preferences. If one understands an object as *sacred*, one is acting from a prior understanding of right and wrong, hence imposing limits on one's desire-based activities. Here the explanation of the value of money and the relative motivation for the individuals to participate in these activities would be grounded in the social *norm* regulating behaviour, not on their individual preferences of which the norm is an expression. Were this to be true, *Wergeld* would represent a strong sense of social construction and, possibly, even a non-desire-based motivation. But such accounts will also be extremely vulnerable to both alternative explanations and even slight empirical objections. ¹¹ One need only prove the presence of large scale social incentives or coercion which ground the practice to disprove the strong importance of "norms" in the philosophical sense.

A second question relates to what specifically the thing measured by money is, and here also *Wergeld*'s history can be illustrative. The goods in which the *Wergeld* was denominated were often of far too high a value to be traded without difficulties, pointing to the fact that it was unlikely that they would have acted the function of a medium of exchange (Grierson 1977, 18–

¹¹ Here the question of valid standards of explanation becomes crucial. The sociologist John Levi Martin has argued that some social sciences, especially sociology, employ a form of explanation he calls *field theory*. Field theory emerged in the physical sciences in the context of electro-magnetism and general relativity to explain gravitational phenomena. Though Martin names seven salient features of the approach, we might say that field theory is primarily distinguished from causal explanation by the fact that it employs locational information about interactants as explanans for their behaviour. The field represents a network of interaction where explanation takes the structural properties and the "type" of field the individuals are in as explanatory. Hence, for example, a certain ascendant career path will in part be explained through (*ceteris paribus*) that the individual is in an industry where ascendant career paths are typical (Martin 2003, 6–8). Such explanations would give us an *account* of the formation of game-theoretical interactions. For a fuller picture see also (Martin 2011).

22). Nonetheless, they were a form of bookkeeping, and in the long run the debts which were denominated in these more valuable instances could be cleared by other goods or deeds of the same value. This bookkeeping practice is a collective enterprise, which fundamentally involves imposing a status on an individual phenomenon. Properly speaking the value which money tracks is not thought by the credit theorists to be the commodities themselves, but in the abstract ratio of value between the two commodities, which only exists as a form of mental representation (Ingham 2020, 26). Opposed to credit theorists, commodity theorists often point to grain as an important step in the evolution of commodity money. But, as Grierson points out, the evolution of this form of money lies in the properties of grain that are conducive of using it as a unit of measurement or account:

"Where large numbers are involved, however, counting is a slow and laborious process, and a short cut may be provided for measurement ... Grain can be measured by volume, or more easily by weight. It was indeed through the discovery that seeds of the same species of any plant are on the average very uniform in weight that the traditional basic units of weight ... came into existence." (Grierson 1977, 21)

Grains became the standard for the measurement of money, not because of the general property of their tradeability, but because of their easy countability. The thing they were used to measure is still the relative value of the debts imposed on people. To settle a quarrel or a trade, we might say you owed me 8000 pieces of grain, but this was simply a stand in which could be *weighed* against a relative weight of a valuable metal, for example, which in turn could be used to price oxen from your herd which you would pay me with. Money is neither the gold, nor the animals, nor the grain. Rather, these things are *measures* of the severity of the debts and credits possessed by the parties. The final feature of credit theory, for our purposes, is the special emphasis its advocates place on trust. Barter, when it does take place in a pure form, is usually carried out only between complete strangers or enemies. It is rather clear why one would not like to be a creditor to a stranger from another community: there is no guarantee of continued interaction, nor are there mechanisms of sanction for uncompleted transactions. Hence, economics, usually using gametheory, returns the concept of trust to our *knowledge* of the likelihood that someone will carry out a course of action. You don't trust someone because they say they will do something, you trust someone "because knowing what you know of his disposition, his information, his ability, his available options and their consequences, you expect he will choose to do it." (Dasgupta 1988, 56). But some respond, this form of trust is in fact not trust. "Trust" is a concept antithetical to knowledge on which the above economistic concept of "trust" is based. We shall call the first concept of non-knowledge-based trust "brute-trust" and the second "knowledgetrust". As Ingham puts it "money is assignable trust. ... [The] long-term trust [characteristic of money] is rooted in a social and political legitimacy whereby potentially untrusthworthy strangers are able to participate in complex multilateral relationships" (Ingham 2013, 74, emphasis in original). But, as I will note in the next section, brute-trust needs more clarification before it can withhold scrutiny by game theorists, and even its advocates usually support a variety of background mechanisms to guarantee knowledge-trust.

To recapitulate, we have formulated three central claims of some credit theorists which they lift through the history and sociology of money. 1) There are historically witnessed forms of money, which induce motivation for action that are not simply grounded in individual desire, but in which individual desire is formulated in terms of a broader societal symbolic system, usually a religious one. 2) Money has to be an abstract value *between* goods, and properly speaking the interesting question is not whether an individual good will function as tradeable for another, but simply whether it represents a stand-in of the goods, and finally 3) money represents a non-

calculating form of trust, which is irreducible to something like anticipations about future behaviour. Only 2) is extremely fundamental and constitutes the departure from credit theory from the commodity theory. It also turns out that it is the only one of the three that game theoretical accounts of sociality cannot countenance.

4.2. Credit theory: Searlean or game-theoretic?

Though credit theory might be more popular in social sciences outside economics, a prominent account of institutions by Francesco Guala has claimed that its basic tenets can be accounted for by methods familiar from economics (Guala 2016, 36–42), i.e. the game-theoretical account we introduced in section 3.1. Guala's characterisation of the credit theory¹² of money is too narrow, but it does hold bite against two of the aspects of credit theory shown above. It will turn out that only money's nature as a *unit of account* for debts survives the challenges presented by game theory and can be described as constitutively socially constructed in the sense put forward in §2.

Both 1) and 3) from the previous sections are vulnerable to objections from the game-theorist, whereas 2), I wish to show, is extremely difficult to capture in game-theoretical terms. This is because it seems to fundamentally include something like Searle's concept of an institutional fact, which is non-reducible to game-theoretical interactions.

Francesco Guala has claimed that the credit theory of money can be incorporated into the game theoretical account of sociality. He claims that the primary claim of the credit theory is that the state enforces the use of money. This takes place in two steps:

(i) The state pays civil servants with vouchers

¹² Guala calls it the "claim theory" but the two terms are used interchangeably in the literature.

(ii) the state forces all citizens to pay taxes using these vouchers. (Guala 2016, 39)

This misrepresents the claims of the credit theory. While credit theorists *do* usually claim that something like a state (or in the case of early *Wergeld*, the local community) is necessary for the establishment of a money-standard, the *thing* that the money standard measures is debt. In fact, tokenless money can and does exist. According to the credit theorist Guala has not identified a story about the origins of money, but only state-issued *currency*. Remember, the primary question about the establishment of money is *not* how individuals come to use it as a medium of exchange, but how the common *standard* of money comes to be established in the first place, i.e. how communities can establish a unit of account for debt-relations. As we saw in the previous section, early money emerged as an accounting method, sometimes for non-tradeables, i.e. damages done to individuals, and other times simply a commodity useful for bookkeeping (i.e. grain), which was itself not necessarily traded, but simply used as a stand-in for the value of the debts owed.

While Guala's account does not capture this one central claim of credit theory, it does present a problem for claim 3, which said money involves a form of trust not reducible to knowledgebased expectations. While it is plausible that trust in money cannot be trust in the individuals, it can, under Guala's picture, represent knowledge-trust in *institutions*. Hence, money is "*assignable* trust", because the state is a "credible enforcer" and one has an incentive to trust its monetary backing (Ingham 2013, 90; Guala 2016, 40): if the state is a credible enforcer, you know that people who disrespect debt obligations will be punished, and competing forms of currency crowded out. Simply because modern money does not represent a direct trust in the individual, it can represent the trust of its users in the continuing functioning of the institutional framework. So, against the idea that only brute-trust could capture monetary relations, the game-theorist could simply respond that the expectations which lead an individual to trust money stem from their *knowledge* of institutions. A similar problem arises for claim 1), which connected money to religious and symbolic forms of motivation. Here we might only note two claims by the historians of money who themselves invoke these features of *Wergeld*: A) that *Wergeld* was likely a way to "prevent resort to the bloodfeud and all the inconvenient social consequences that might flow therefrom" (Grierson 1977, 19), and B) that the hierarchy of compensation relating to social rank. It is much more plausible that the reason these sanctions ranged to a higher degree and connected to damages is a direct feature of the motivations of each individual in their societies: simply because the desire-structure of individuals is conditioned by "symbolic" things, i.e. the loss of face etc. does not invalidate the game-theoretical account of preferences. Here the game theorist can respond that these forms of motivation, and why individuals value money, is that they are much more ready to take on a debt relation than a society-scale bloodfeud. Similarly, even if an individual's desire for something *stems* from a belief about the divine or symbolic, this is still a *desire*. Desires in turn, can be represented as a part of the individual's utility function.

So this leaves us with 2). Can Searle's theory of social ontology account for it? One apparent problem might arise. Recall that Searle thought that the imposition of status functions on objects is the fundamental form social objects take, i.e. "this piece of paper counts as a dollar in the context of the United States of America". But, as we saw before, the credit theorists emphasise that the goods by which we account for money are simply accounting *tools*, they aren't money itself, which is an abstract measure of value taken to stand *between* goods. In fact, Searle himself faced this criticism from Barry Smith who pointed out that while Searle's theory might bide well with paper currency and traffic lights, what should we think about money which exists in central bank reserves or as computer data? Don't they much rather represent than "count" as money (B. Smith and Searle 2003, 287–89)? Searle's response was to fall back on his concept of deontic power: what is important is not the *object* on which a status is imposed, but the real

centre of the view are the deontic powers which impositions grant individuals (Searle 2005, 16; B. Smith and Searle 2003, 307).

The position of deontic power may here be assumed to take the form of debts and credits. Money then tracks these debts and credits, the individuals who hold money being creditors to the general social product or having the power to clear themselves of their debt obligations. Since the value money tracks doesn't exist in individual goods, it cannot only be a question of the individual anticipations and intentions, but of a collective intention. The game theorist owes us an explanation of how incentives are formed in an institutional context, i.e., how a certain amount of money *comes* to represent a certain amount of social value. As we saw, the accounting method taking place is not a question of incentivising individuals to hold onto a certain amount of money, but of *instituting* this *standard* in the first place. The question is not why I would want to hold this or that much commodity *X* or act a certain way, but how in the first place the piece of paper comes to be an object which is a sanctioned form of account and transfer of value: and the credit theorists say that this cannot simply derive from the state threatening us.

While any individual money-token's value might be a question of the expectations of individuals in the sense of knowledge-trust that holding this token will allow them to clear a debt relation or lay a claim to x amount of credit, the fact that the piece of money comes to *stand in* for x amount of credit in the first place, has to be something else than the simple anticipations of the participants about the future. Individual debts, most likely between strangers, may be cleared by simple barter exchange in the case that one of them can threaten the other's life, but the social practice of accounting for debts this way in general must come to lay a standard to *all* claims to the social product. Hence, the desire of the individual to get x amount of good, is subjected to the prior standard of setting up a rate at which debts are cleared by a given amount of goods. Money comes *prior* to the broad-based accounting of debts by

trading goods, because the practice of standardising and accounting these debt-relations *is what money is*. All instances of instituting money, therefore, tell us something about what *counts* as clearing a debt contract under a given condition, i.e. a Searlean constitutive rule. Hence, money, according to the credit theorists, is fundamentally grounded in social practices which enable us to take part in a new range of activities.

Conclusion

The social science discourse on money often throws around terms like "social construction" rather liberally. The antagonism of anthropology and sociology to contemporary economics, in turn, is often expressed in a philosophical key as a disagreement about the methodology of these various sciences. Meanwhile, Searle's writings on social ontology profess a deep dissatisfaction not only with the discipline of economics, but also "foundational figures [such as] Max Weber, Emil Durkheim, Georg Simmel [etc... and the] whole Western tradition of discussing political and social institutions that goes back to Aristotle's *Politics*, if not earlier." (Searle 2005, 2). What I wished to show by applying Searle's own account to the claims of the credit theorists, is that they, though they might at time be grasping at straws, aren't too far off the mark in even some of their more extravagant claims, and that, further, investigations in social ontology and social science should be thought of as radically continuous with each other. The disagreement about theorising social entities credit theorists point to is a real one: whether we can understand the social world only through networks of individual preference maximisers – this is a question which arises in both the philosophy and social science literatures.

Finally, I'd like to mention some features of the debates on money I was not able to get in to in the argument of the thesis. Above I presented one analysis of social constructivist discourse in credit theory, and finally applied this framework to specific claims made by historians, sociologists, and anthropologists of money. While this is one strain in the multiple discourses on money, another is simply the claim that our current monetary regime is a contingently formed one, and capable of being made more equitable or just. After the Great Financial Crisis, the most prominent public proponents of credit theories were supporters of state theories of money (e.g. Wray 2015; Pettifor 2017). They would usually invoke money's being a social construction in the context of contradicting claims about the spending capacities of states. One famous proponent of such theories deemed the idea that states can run out of their own currency "The Deficit Myth" (Kelton 2020). The arguments behind this account are explicitly credit theorists.

These claims were put forth in the context of great economic turmoil and large-scale stateintervention into the economy; in the first instance The Great Financial Crisis, in the second, the coronavirus shock. So, while in this thesis I advocated analysing a subset of social construction claims about money as a more theoretical discourse, as being about money's "constitutive construction", I think it is also important to remember that the debates on money constantly bubble out of academia into contemporary political life. When political theorists, sociologists, economists, politicians, and activists use such terms as "social construction", they are attempting to make practical interventions into a complicated political reality and redirect our gaze to the full range of possibilities at our disposal. While it can be a helpful conceptual exercise to show that such claims can be rendered "philosophically respectable", it is important to also try to capture some of the motivating energy behind these calls to arms. Elaborating the mechanisms by which money is social, and showing how, in a sense, it is in the range of *our* possibilities to change it is one thing. Developing a responsible position for philosophical inquiry about money at the intersection of conceptual clarification and politics is wholly different task.

Bibliography

Aumann, Robert J. 1987. 'Correlated Equilibrium as an Expression of Bayesian Rationality'. *Econometrica* 55 (1): 1–18. https://doi.org/10.2307/1911154.

Bliss, Ricki, and Kelly Trogdon. 2021. 'Metaphysical Grounding'. In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Winter 2021. Metaphysics Research Lab, Stanford University. https://plato.stanford.edu/archives/win2021/entries/grounding/.

Brentano, Franz. 1925. Psychologie Vom Empirischen Standpunkt, Mit Ausfuhrlicher Einleitung, Anmerkungen Und Register. Vol. 192. F. Meiner.

Caffentzis, Constantine George. 1989. 'Clipped Coins, Abused Words and Civil Government: John Locke's Philosophy of Money'.

Christensen, Wayne. 2012. 'Natural Sources of Normativity'. *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* 43 (1): 104–12.

Cudd, Ann E. 1993. 'Game Theory and the History of Ideas about Rationality: An Introductory Survey'. *Economics & Philosophy* 9 (1): 101–33. https://doi.org/10.1017/S0266267100005137.

Dasgupta, Partha. 1988. 'Trust as a Commodity'. In *Trust: Making and Breaking Cooperative Relations*, edited by Diego Gambetta, 49–72. Blackwell.

Eich, Stefan. 2020. 'John Locke and the Politics of Monetary Depoliticization'. *Modern Intellectual History* 17 (1): 1–28.

Giddens, Anthony. 1986. *The Constitution of Society: Outline of the Theory of Structuration*. Vol. 349. Univ of California Press.

Gilbert, Margaret. 2007. 'Searle and Collective Intentions'. *Intentional Acts and Institutional Facts: Essays on John Searle's Social Ontology*, 31–48.

Graeber, David. 2012. Debt: The First 5000 Years. Penguin UK.

Grice, H. P. 1957. 'Meaning'. *The Philosophical Review* 66 (3): 377–88. https://doi.org/10.2307/2182440.

Grierson, Philip. 1977. The Origins of Money. The Athlone Press of the University of London.

Guala, Francesco. 2016. Understanding Institutions. Princeton University Press.

Hacking, Ian. 1997. 'Review Symposium on John R. Searle: John R. Searle, The Construction of Social Reality. London: Allen Lane, 1995. Xviii + 241 Pp. £20.00, ISBN 0-713-99112-7'. *History of the Human Sciences* 10 (4): 83–92. https://doi.org/10.1177/095269519701000405.

. 1999. The Social Construction of What? Harvard University Press.

Hall, Charles AS, and Kent Klitgaard. 2018. *Energy and the Wealth of Nations: An Introduction to Biophysical Economics*. Vol. 511. Springer.

Hargreaves-Heap, Shaun, and Yanis Varoufakis. 2004. *Game Theory: A Critical Introduction*. Routledge.

Haslanger, Sally. 2012. *Resisting Reality: Social Construction and Social Critique*. Oxford University Press.

Hindriks, Frank, and Francesco Guala. 2015. 'A Unified Social Ontology'. *The Philosophical Quarterly* 65 (259): 177–201.

——. 2021. 'The Functions of Institutions: Etiology and Teleology'. *Synthese* 198 (3): 2027–43. https://doi.org/10.1007/s11229-019-02188-8.

Humphrey, Caroline. 1985. 'Barter and Economic Disintegration'. *Man* 20 (1): 48–72. https://doi.org/10.2307/2802221.

Ingham, Geoffrey. 2013. The Nature of Money. John Wiley & Sons.

------. 2020. Money. John Wiley & Sons.

Innes, A Mitchell. 2004. 'The Credit Theory of Money'. *Credit and State Theories of Money, Cheltenham, Edward Elgar*, 50–78.

Kelton, Stephanie. 2020. *The Deficit Myth: Modern Monetary Theory and the Birth of the People's Economy*. PublicAffairs.

Lewis, David. 2008. Convention: A Philosophical Study. John Wiley & Sons.

Mann, Geoff. 2017. In the Long Run We Are All Dead: Keynesianism, Political Economy, and Revolution. Verso Books.

Martin, John Levi. 2003. 'What Is Field Theory?' *American Journal of Sociology* 109 (1): 1–49.

——. 2011. The Explanation of Social Action. OUP USA.

Pettifor, Ann. 2017. *The Production of Money: How to Break the Power of Bankers*. Verso Books.

Schaffer, Jonathan. 2017. 'Social Construction as Grounding; or: Fundamentality for Feminists, a Reply to Barnes and Mikkola'. *Philosophical Studies* 174: 2449–65.

Schaffer, Jonathan and others. 2009. 'On What Grounds What'. In *Metametaphysics: New Essays on the Foundations of Ontology*. Oxford University Press.

Searle, John. 1996. The Construction of Social Reality. London: Penguin UK.

——. 2005. 'What Is an Institution?' *Journal of Institutional Economics* 1 (1): 1–22.

Short, Thomas Lloyd. 2007. Peirce's Theory of Signs. Cambridge University Press.

Simmel, G. 1978. 'The Philosophy of Money'. Routledge and Kegan Paul.

Skyrms, Brian. 2004. *The Stag Hunt and the Evolution of Social Structure*. Cambridge University Press.

—. 2010. Signals: Evolution, Learning, and Information. OUP Oxford.

Smith, Barry, and John Searle. 2003. 'The Construction of Social Reality: An Exchange'. *American Journal of Economics and Sociology*, 285–309.

Smith, Michael. 1987. 'The Humean Theory of Motivation'. Mind 96 (381): 36-61.

'The History of Money: From Bartering to Banknotes to Bitcoin'. n.d. Investopedia. Accessed 7 May 2023. https://www.investopedia.com/articles/07/roots_of_money.asp.

Wray, L Randall. 2015. *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems*. Springer.