Babylonian Madness: A Brief History of Some Debates over Money and Credit[1]

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In memory of Perry Mehrling

In the introduction to his classic history of economics *The Worldly Philosophers*, Robert Heilbroner recalls that he knew the name of the book needed to use a term other than "economist".[2] His initial title was "the money philosophers", but he sensed that wasn't right. Was money really what his subjects were interested in? Heilbroner's eventual change of title was wise. Money and credit have historically been the concern of practical business people on one side and radicals and reformers on the other. They occupy a much smaller part of the history of economic thought than an outsider might expect.

For the classical economists – from Smith through Ricardo and Malthus to Marx – the central questions were the division of income between the different classes of society, and the evolution of the productive system over time. From the mid-19th century, the focus became – as it remains in introductory classes to this day – the allocation of scarce resources between alternative ends. While money has never been entirely ignored, for neither set of questions is it an essential feature of the economic world.

In the world of economic policy, money and credit are harder to ignore; their management has been a central concern of economic policy, and central bankers have often occupied a preeminent place among economic policymakers. This preeminence reached new heights at the start of this century. With the establishment of the supranational European Central Bank and the enshrinement of central bank independence through much of the world, it seemed that we now lived, in the contemporary Keynesian economist Brad DeLong's words, in "the republic of the central banker."[3] Yet the flipside of this prestige and power was a strict circumscription of both the tools used by central bankers and the ends they aimed at: a single policy interest rate set in order to stabilize inflation, ideally by a predetermined rule. The direction of credit to serve broader social ends was deemed off-limits, or simply impossible.

Alongside these orthodox efforts to quarantine money from the larger economic conversation, however, there has always been a countertradition. This essay

[1] This essay was originally written as a chapter in our book *Against Money*. It would go between chapters 1 and 2 of the book as published.

[2] Heilbroner, R. L. (2011), *The Worldly Philosophers: The Lives, Times and Ideas of the Great Economic Thinkers*. Simon and Schuster.

[3] J Bradford Delong (2008), The Republic of the Central Banker, *The American Prospect*. Available at `https://prospect.org/features/republic-central-banker/`

offers a sketch – necessarily selective, a set of representative examples rather than a comprehensive survey – of this countertradition, which sees money as central to questions of production and distribution, and whose outstanding representative is John Maynard Keynes.

Among the canonical writers in the history of economics, Keynes was perhaps unique in putting money at the center of his conceptual universe. His (re)discovery of the centrality of money to larger economic questions was in debt to a samizdat heritage of "cranks and brave heretics" whose precedence he acknowledged in *The General Theory.*[4] In the 1920s, as he struggled to understand the nature of money, Keynes turned not only to the heterodox monetary debates of his own time but to a much deeper historical record. For several years he immersed himself in the metrology and monetary practices of the ancient Near East—a period he later referred to, half-seriously, as his "Babylonian madness."[5]

This historical work challenged the familiar story in which money emerges naturally from barter as a commodity chosen to facilitate exchange. Instead, it directed attention toward money as a unit of account, a means of recording and settling debts, and an institution embedded in political and social authority. These insights informed the *Treatise on Money*, where Keynes made the money of account—not a commodity—the starting point for his theory of money. Keynes would not fully work out all the implications of this insight, and some of it receded between the *Treatise* and the *General Theory.* But the trajectory is important: his historical and theoretical investigations helped reopen a question that orthodox economics had largely closed. The history sketched out in this essay is a story of a recurring intellectual problem—how money, credit and production are related—that Keynes rediscovered, systematized and, for a time, brought to the center of economic theory.

Among contemporary economists, Perry Mehrling stands out as an exponent of "the money view" – the idea that the basic units of the economy should be seen as a network of money payments and interlocking balance sheets. Our perspective in *Against Money* owes a great deal to Mehrling, but our focus is somewhat different. We are less interested in the internal workings of the monetary system - this book has little to say about specific financial institutions and markets – and more interested in its interface with the social world outside itself. Ignoring or downplaying money, as economic theory has historically done, requires imagining the "real" world as money-like. Recognizing money as a distinct social institution, then, requires a reconception of the social world outside of money. We must ask both how monetary claims and values evolve independently of the non-monetary world of real activity, and how money builds on, reinforces or undermines other forms of authority and coordination. And we must ask how the institutions of money and credit both enable and constrain our collective decision making. All these questions are

[4]Keynes, John Maynard (1936), *The General Theory of Employment, Interest and Money*, chapter 23. Macmillan.

[5]Zachary Carter, *The Price of Peace: Money, Democracy, and the Life of John Maynard Keynes*, p. 187. Random House.

unavoidably political; and debates over money and credit, perhaps even more than other questions in economics, have always been tightly linked to larger political projects and developments.

The money view itself has three overlapping elements. First, the atomic units of the economy are money flows (and commitments to future money flows), as opposed to prices and quantities. Second, quantities are quantities of money; different forms of productive activity can't be quantitatively compared except insofar as they involve money payments. Finally, the active agents of the economy are seeking to expand money income or wealth, not to end up with some preferred consumption basket.

The next step – beyond the money view itself, but building on it – is to focus on the relationship between the network of financial assets and liabilities recorded on balance sheets, on the one hand, and the concrete social activities of production and consumption, on the other, evolving as a historical process. These two worlds are linked but not collapsible -- the system of contingent money payments recorded on balance sheets is a distinct social activity, and not simply a reflection of the allocation of goods and services. It is thus an arena of social and political contention.

The fullest development of this view is found in Keynes's vision of the economy as a system of "monetary production."[6] For Keynes, modern capitalism is best understood as a strange imbrication of money and production. For the orthodox economics of Keynes's day (and ours), by contrast, the basic model was one of "real exchange" in which a given endowment of goods and a given set of preferences yielded a vector of relative prices. This is one, perhaps the, key point of departure of Keynes: The economy is imagined as a system of *monetary production.* (For Keynes, the emphasis is on the first word; for other heterodox traditions, it is on the second.) The binding constraints in this vision are not scarce resources, but demand and, more broadly, coordination. Money plays a coordinating role and in doing so is quintessentially a social and political institution. Attempts to depoliticize money are futile and the most fruitful theorizations see it as not simply a technology, but a social relationship.

This view of money has a long pre-history, even if it is only under modern industrial capitalism that it comes into full flower, and that money payments become the organizing principle of production. Minsky goes so far as to say that "Capitalism is *essentially* a financial system" (his emphasis).[7] This claim marks a site of conflict between radical thinkers in the Keynesian tradition and those more influenced by Marx, as we will discuss later in this essay. But first we will consider some of its early antecedents.

[6]Keynes, John Maynard (1933), A monetary theory of production. *The Collected Writings of John Maynard Keynes*, vol. 13, p. 408-11.

[7]Mehrling, P. (1999). The vision of Hyman P. Minsky. *Journal of Economic Behavior & Organization*, 39(2), 129-158.

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The question of whether money is merely a yardstick for objectively existing values, or a human-created institution that itself shapes those values, goes back to classical Greece.[8] (And no doubt earlier and elsewhere, but we have to start somewhere.) In Aristotle's writings on the topic, he distinguished between *chremata* or wealth and *nomisma*, coinage or currency issued by some political authority. The latter is identified specifically as a system of measurement or accounting; wealth is defined as "anything that can be measured by *nomisma*." While the ultimate source of value in things is their "use", these uses cannot be directly compared with each other, so "money comes along to do exactly this ... it measures all things."

It is easy to read this as a precursor to the idea of money as solving the problem of coincidence of wants, anticipating Adam Smith and other early economists. Whatever use things may have is a property of their things themselves; money simply allows them to be more easily compared and exchanged. This is consistent with the discussion of money's role in long-distance trade in the *Politics*. Based on this, Aristotle is often seen as an early commodity theorist, who saw money as simply one good among others, which happened to be more convenient for exchange.

But there is another strand in Aristotle's writing on money, more central in the *Ethics*, in which money plays a specific political role by creating equivalence where it did not previously exist. As applied to social obligations in particular, money creates the possibility of quantitative comparisons where it did not previously exist. As political theorist Stefan Eich summarizes this side of Aristotle's argument, money "serves as a powerful medium of civic commensurability to equalize citizens. ... By denoting legal fines in the city's currency, paying a monetary compensation to those attending the law courts and the assembly, as well as awarding coins to celebrated poets and athletes, currency acted as a constitutive medium of the Athenian polis through which a civic bond was established." This, suggests Eich, is why even small cities in classical Greece insisted on minting their own coins. The goal wasn't to smooth the wheels of trade, but to establish the fundamental equivalence among their own citizens (and the sharp line between them and everyone else.)

The Greek practice of paying for attending the assembly and other forms of public service was central to democratic politics not just because it allowed poorer citizens to take part, but because it separated political roles from the individuals occupying them, allowing them to be filled by interchangeable citizens. In this way, argues the Berkeley classicist Leslie Kurke, money payments "represented a tremendous threat to a stable hierarchy of aristocrats and others."[9] In this context, money was not merely expressing a comparison that pre-existed it (I would rather possess

[8] This and the following two paragraphs draw on chapter 2 of Eich, Stefan (2022), *The Currency of Politics: The Political Theory of Money from Aristotle to Keynes*. Princeton University Press.

[9] Leslie Kurke (1999), *Coins, Bodies, Games, and Gold: The Politics of Meaning in Archaic Greece* , p. 47. Princeton University Press.

this thing than that one) but creating the possibility of equivalence between things – and people – that would otherwise be qualitatively distinct and incommensurable.

Are the equivalences expressed through money already present in the things being valued in it, or do they come into being only through the use of money itself? Is money just a convenient solvent for the "real" activity of production or exchange, or does the use of money create the possibility for new kinds of social organization that could not exist otherwise? These tensions in Aristotle's writing on money remain central to debates about money down to the present.

To be clear, there is not much point in looking for antecedents to most contemporary debates about money and credit in classical Greece, or in trying to affiliate Aristotle with either modern-day economic orthodoxy or its critics. Debates over how, or whether, the form and availability of money could be used to transform and expand productive activity became possible only much later, requiring both the orientation of a critical mass of production around the acquisition of money, and modern states that could make "the economy" an object for political choices.

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One of the first examples of the association of heterodox views about money with efforts to use credit policy to boost real activity is the early-18th century conflict between the Swedish "Hats", a party of big merchants, and the small-merchant "Caps", as described by the late Keynesian scholar Lance Taylor.[10] The Hats argued that encouraging the extension of credit could boost the country's real wealth and commerce, as against the orthodox Cap view that more money would bring only inflation and an outflow of gold. The Hats dominated the Swedish government for a number of years in the mid-1700s, but don't seem to have left any lasting intellectual legacy.

Their better-known contemporary John Law similarly convinced the French monarchy that the creation of new development banks could spur French commerce and industry. Unlike the Caps and other early-modern monetary reformers, Law's plans were based on a fundamental, if not fully worked out, insight into the nature of money. He is remembered today mainly for the failure of his projects (and its contribution to the fiscal troubles of French monarchy), but unlike earlier monetary reformers he had a clearly articulated theory behind his proposals. Schumpeter goes so far as to put him "in the front rank of monetary theorists of all times."[11] As one of the earliest examples of someone who both developed heterodox theories on monetary and credit and was in a position to apply them to policy, he is worth discussing at length.

[10] Lance Taylor (2009), *Reconstructing Macroeconomics: Structuralist Proposals and Critiques of the Mainstream*, ch. 3. Harvard University Press.

[11] Joseph Schumpeter (1954), *A History of Economic Analysis*, p 294-5.

The dominant view among 18th century economic thinkers -- as of many later ones -- was that the choice of what served as money was essentially arbitrary and inconsequential. Money just meant some commodity that was easily transferred and could be conveniently used as a standard for prices; its own value was determined in the same way as anything else. Law's great insight was that money is not simply a commodity whose value comes from its non-monetary uses. Facilitating exchange is itself a very important function, which makes whatever is used for that purpose valuable even if it has no other use.

Like Smith and others, Law began his analysis with an imaginary world of barter, in which silver was initially, one good among others. But as the advantages of trading goods for silver, rather directly for each other, became clear, silver "received an additional Value" beyond its worth as a metal. While this additional value was, for historical reasons, attached to a material with substantial intrinsic value, there was no reason in principle that this had to be so. (To be clear, Law's fable of an original state of barter is no more historically grounded than other such fables.) "Money," he wrote, "is not the Value for which goods are exchanged, but the Value *by* which goods are exchanged."[12] (emphasis added) In other words, money need not be something that already has a value, and is then exchanged for something else with an equal value; rather the value of money comes precisely from the exchanges that it allows that would not otherwise take place.

The fact that money's value comes from its use in facilitating exchange, and not merely from the labor and other real resources embodied in it, means that a scarcity of money need not reflect any physical scarcity. In fact, the scarcity of money itself may be what limits the availability of labor: "'tis with little success Laws are made, for Employing the Poor or Idle in Countries where Money is scarce ... the best Laws without Money cannot employ the People, Improve the Product, or advance Manufacture and Trade." Also worth noting is Law's argument that more money would allow for credit "at less use," i.e. lower interest. The question of whether or not the interest rate is the price of money is a central focus of debates around money down to the present, as we will explore in a later chapter.

Several important things follow from all this. First, if money's value is independent of its non-monetary uses, it could just as well be something easy to produce, rather than scarce and expensive precious metals. Second, if the capacity to pay for things -- and make commitments to future payments -- is valuable, the community could be made better off by providing more of it. Law's schemes to set up credit-money issuing banks – in Scotland before the more famous efforts in France – were explicitly presented as programs for economic development. Without sufficient money to facilitate exchange, argued Law, the productive powers of land, labor and human ingenuity could not be developed. In Law, as in later monetary reformers, the flipside of the claim that monetary reform can yield real wealth is

[12] John Law (1705), *Money and Trade Considered with a Proposal for Supplying the Nation with Money.* Accessed online at `https://avalon.law.yale.edu/18th_century/mon.asp`.

the assumption that productive resources are not already fully utilized – that there is a surplus of "Poor or Idle" people, as he puts it, who are not currently engaged in useful activity but could be.

Implicit here is a recognition that the organization of production through exchange is not a timeless fact of human existence, but something that requires specific institutional underpinning -- which someone has to provide. Like Hamilton's better-starred *Report on Manufactures*, which we will discuss shortly, Law envisioned the provision of abundant liquidity as part of a broader project of promoting commerce and industry. In Schumpeter's words, Law's system was aimed not merely at raising revenue for the monarch but at "controlling, reforming, and leading on to new levels the whole of the national economy of France ... [which] makes Law's 'system' the genuine ancestor of the idea of managed currency."

Law's period of greatest success was from 1717 to 1720, when, as head of the Compagnie d'Occident and then as Controller General of Finances, he effectively controlled the finances of the French monarchy. His company (also known as the Mississippi Company) and its associated bank stood between the French crown and the public both on the revenue side and the debt side, gaining the right to collect a number of important taxes (or farms) on the one side, and substituting its own shares for public debt issues on the other. The next step – how much based on a plan and how much in response to exigencies is hard to say – was to pay off existing holders with company shares, which were effectively monetized. Finally, shortly before the collapse of his system in 1620, Law was able to win legal demonetization of gold and silver, briefly giving France a pure fiat currency.

In effect, the Company first bought out all the national debt with its own stock, and then bought out the money supply. At that point, one company "collected all taxes, owned most colonies, monopolized all overseas trade, and freely issued fiat money which was sole legal tender. Its director, John Law, became minister of finance on January 5, 1720."[13]

Naturally this also made Law extremely rich, at least on paper. He was perhaps not, as he claimed, the richest man who ever lived; but he was certainly in a position to buy up a long list of aristocratic properties, including the palace of Cardinal Mazarin and the Guermantes estate later made famous by Proust.[14] It also made him widely reviled. An often-reproduced contemporary engraving shows Law consuming gold and silver coins and excreting paper banknotes.[15]

Law's system unraveled over the course of 1720, and he was forced to flee the country at the end of the year. Despite the references one hears to the "Mississippi

[13]Velde, F. R. (1999), Was John Law's System a Bubble? The Mississippi Bubble Revisited. In *The Origins and Development of Financial Markets and Institutions: From the Seventeenth Century to the Present*, 99-120.

[14]Antoin E. Murphy 2018, John Law: A Twenty-First Century Banker in the Eighteenth Century?

[15]Freud would have had something to say about that. As Doug Henwood observes in *Wall Street*, classical psychoanalysis makes much of the association between money and excrement.

Bubble," the failure mode here was a bank run rather than a deflating bubble. The value of the Company's shares had been carefully managed by Law, leaving no room for speculative excess, and, backed by real assets, they retained much of their value even after his fall. The crisis came rather from people's refusal to accept the bank's notes as payment. To be clear, the fact that it failed does not mean that it had to fail, or that it was a con job from the beginning. The Company did pay dividends, and the stock's price at its height implied a yield of about 2 percent.[16] That is quite low if you are looking at it as a speculative asset, but not so low if you are looking at it as currency. Nonetheless it did fail, and its failure remained a watchword against fiat money and more broadly any systematic economic or financial reforms, right down to the Revolution.[17]

How one assesses Law's system depends in large part on which side one looks at it from. As a device to reduce borrowing costs for the monarchy, it seems to have been successful while it was in operation. But looking at that side in isolation, the potential gains there were limited; insofar as shares in the Company and notes from its bank simply represented claims on the fiscal resources of the Crown, there was a limit to how much more favorable terms the public would hold them on than other debt. On the other hand, if one focuses on the effects on private balance sheets rather than the government's – on the advantages of what might be called "public equity" over public debt for its holders, rather than its issuer – then the potential benefits were more open-ended, coming through increased liquidity and the new transactions it would enable. The liquidity of the new currency – its value by which goods are exchanged, to use Law's phrase – is also what made it plausible for the government to issue it at much lower rates than less liquid forms of debt.

Law no doubt discussed both sets of advantages – to the Crown and to the economy – depending on who he was talking to; but it is clear that it was the second ones that really motivated him, and that justified at least some of the utopian hopes that surrounded the system.[18] When writing in defense of his system from exile, he claimed that while it was in operation "There were no longer uncultivated lands or workers without work. Peasants were fed and clothed and owed nothing to either King or master. Manufactures, navigation and trade increased and were valued." He did not say that the public finances were in better order.[19]

Even Law's personal enrichment looks a bit different when one looks at the transactions from the other side. In some cases, it appears, the goal was less to acquire the properties themselves than to support the Company by allowing wealthy but cash-poor property owners to continue to purchase shares. As Montesquieu observed after meeting him, "he is much more interested in his ideas than in his

[16] Velde 1999.

[17] Spang, R. L. (2005), The Ghost of Law: Speculating on Money, Memory and Mississippi in the French Constituent Assembly. *Historical Reflections/Réflexions historiques*, 3-25.

[18] For a view of Law as representing a larger Enlightenment vision of radical social transformation, see Amaud Orain, *The Politics of Utopia: A New History of John Law's System, 1695–1795.*

[19] Quoted in Murphy 2018.

money." From this other-end-of-the-telescope perspective, Law looks less like a failed private financier and more like a pioneering, albeit still failed, central banker. Replacing government debt with shares in a private company certainly looks strange from a modern perspective. But the early modern period is full of corporations that draw the line between public and private differently than we are used to, and many central banks continued to blur it well into the 20th century. There's no reason to think that the line of evolution followed by modern public finance was the only viable one.

One lesson to draw from the Law experience is that the combination of ambitious financial reforms with proposals for social improvement is a very old one. People sometimes talk about our current period as one of financialization, a new era in which finance has seized hold of the commanding heights of politics. But these complaints would have felt very familiar to residents of Regency France three centuries ago.

Another lesson, and for our purposes perhaps the critical one, is the inseparability of ideas of transformative finance from the elasticity and open-endedness of real production. If public finance is simply a matter of channeling some part of a fixed quantity of output from the private to the public sector, then Law's projects could never have fulfilled the promises made for them. But if finance matters because of the new capacities it creates for exchange and production, then a scheme that could not work on private financial terms may be more than justified based on its larger effects. In the early 18th century, a government that tried to issue bonds or equivalent yielding 2 percent was heading for financial disaster, if nothing else changed – no wealth owner of the period would willingly hold them. But something else might change. If the bonds were sufficiently useful in exchange, the yield might be less important; and if the greater liquidity provided by the bonds fostered enough additional activity and the state's revenues rose accordingly, it would be possible to take whatever additional steps were needed to stabilize the new state liabilities.

This is what we should keep sight of as we consider other monetary-financial reforms historically and in the present. The question is never simply a matter of how sound or sustainable they are on their own terms, or their immediate winners and losers. The question is what possible space – uncertain but not unknowable – of new forms of production they might open up.

It's impossible to know how close Law's system came to succeeding. How much would have had to be different in early 18th century France for a flexible fiat currency to be accepted by the public, and for the state to successfully manage it? But we know that something like Law's system *could* work. Because around the same time – albeit with less drama and less conscious theorizing behind it – a lasting transformation of the English public debt was taking place that in important ways achieved what Law was aiming for.[20] And, as discussed below,

[20]The classic account of the English "financial revolution" of the early 18th century is Dickson,

Alexander Hamilton's program for economic development in the early United States had important parallels with Law's system.

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Reformers like Law and his successors saw in the autonomy or ungroundedness of money an opportunity to transform the real world by loosening the monetary constraints on it. Another important strand of reformers have also recognized the ungroundedness of money, but found it threatening, offensive and anomalous, and proposed alternative forms of money that would have a more objective anchor. An early, and strikingly absolute, version of this second strand is found in David Hume, who suggested that banks and paper and credit money should be abolished, with only precious metals themselves used for payments. In his essay "Of Money," referred to anything other than specie as "counterfeit money", and argued that "no bank could be more advantageous than such a one as locked up all the money it received, and never augmented the circulating coin." Interestingly, some years later Hume wrote admiringly of how lines of credit issued by Edinburgh banks allowed Scottish merchants to "in a manner coin his houses, his household furniture, the goods in his warehouse, the foreign debts due to him, his ships at sea; and can, upon occasion, employ them all in payments as if they were the current money of the country." It's not clear if Hume recognized this as a reversal of his earlier position. But it is a striking example of how the vision of a nonmonetary economy oscillates between imagining strictly fixed liquidity, and infinite liquidity.

Hume's earlier view is an extreme case of the fixed-liquidity pole, the idea that money should exist in a fixed quantity, outside of anyone's control. Most later reformers who saw the independence and elasticity of credit money as a problem wanted to find some automatic rule for regulating it, rather than abolish it altogether. The outstanding example of such a rule is, of course, the gold standard. Its main competitor in the 19th century was the real bills doctrine, which held that as long as banks limited themselves to providing short-term trade credit – that is, lent only against invoices or bills payable – they would automatically create the correct quantity of money. In the 20th century, they were joined by money-growth rules like Milton Friedman's, and later by monetary policy rules oriented around a "natural interest rate".

The real bills doctrine is an interesting example of a common evolution in the history of economic thought, from a descriptive claim to a prescriptive rule. As originally formulated by early Scottish writers and popularized by Adam Smith, it was a claim about how an unregulated banking system would naturally operate. But in the 19th century it was transformed by English writers into a rule that

P. G. M. (2017). *The financial revolution in England: a study in the development of public credit, 1688-1756*, originally published in 1967. See also Brewer, J. (2002). *The sinews of power: war, money and the English state 1688-1783*. Routledge.

needed to be imposed on banks by law. As Samuel Knafo puts it, while the real bills doctrine started out "as a defense against state intervention, English authors interpreted Smith's description of how banks operate as an ideal situation to be achieved *through such interventions*" (emphasis in original).[21] This transformation of a description of how the economy works on its own to an ideal outcome to be consciously brought about by the authorities happens repeatedly in economic thinking, perhaps especially on matters of money. An important contemporary example is the "natural" interest based on the tradeoff between present and future consumption, which in abstract models is simply what the interest rate is, but in a policy context guides the choices made by a central bank.[22] Returning to the present context, the important point is that in its original form, the real bills doctrine was meant as defense of a flexible monetary system that could accommodate itself to the needs of trade; but in its later form it became an argument for limiting that flexibility, for legal restrictions to force money to confirm to an imagined fixed "real" economy.

Law himself inadvertently contributed to this strand of monetary conservatism. His scheme contributed to one of the first great financial bubbles, an early reminder that recognizing the creative power of money is not sufficient to wield it effectively. Toward the end of the 18th century, however, a somewhat similar experiment was carried out more successfully across the Atlantic. The independence-era United States combined a dependence on local credit networks for commerce, on the one hand, with a deep-seated conviction that only metallic money was real, and concomitant suspicion of the elasticity provided by banks, on the other. John Adams expressed Independence-era orthodox opinion when he declared, echoing Hume, that "Every dollar of a bank bill that is issued beyond the quantity of gold and silver in the vaults represents nothing and is therefore a cheat upon somebody."[23]

This suspicion of credit money was directly challenged by Alexander Hamilton in his "Report on Manufactures."[24] He argued that a lack of financing for investment, or "monied Capital" was a key obstacle to development of domestic industry. Like Law, he linked his case for public action to increase the availability of money with the existence of untapped potential for production: "It is manifest that our immense tracts of land occupied and unoccupied are capable of giving employment to more capital than is actually bestowed upon them." His proposals included the "the introduction of Banks, ... [which] has a powerful tendency to

[21] Knafo, S. (2013). *The Making of Modern Finance: Liberal Governance and the Gold Standard.* Routledge.

[22] The tension between these two two ways of thinking about the interest rate are explored in chapter 4 of *Against Money.*

[23] Hammond (1991), *Banks and Politics in America from the Revolution to the Civil War.* Princeton University Press. Adams later wrote that "banks have done more injury to the religion, morality, tranquility, prosperity and even wealth of the nation than they can have done or ever will do good." Hammond 1991, p. 36.

[24] All quotes from the version at `https://founders.archives.gov/documents/Hamilton/01-10-02-0001-0007`.

extend the active Capital of a Country," and the welcoming of foreign investment. "In a Country situated like the United States," he wrote, "with an infinite fund of resources yet to be unfolded, every farthing of foreign capital, which is laid out in internal ameliorations, and in industrious establishments of a permanent nature, is a precious acquisition." Here again we see the link between proposals for liquidity-boosting monetary reform and a vision of real productive activity as open-ended and potentially unlimited.

Most interestingly, Hamilton's third suggestion for increasing the supply of "monied Capital" was for the federal government to permanently maintain a large debt. Anticipating contemporary heterodox economists, he argued that rather than crowding out private investment, federal borrowing would in effect crowd it in, because government debt was a close substitute for money. (In modern terms, it was a source rather than a use of liquidity.) Government bonds "answer the purpose of Capital, from the estimation in which they are usually held by Monied men; and consequently from the Ease and dispatch with which they can be turned into money. ... in a sound and settled state of the public funds, a man possessed of a sum in them can embrace any scheme of business, which offers, with as much confidence as if he were possessed of an equal sum in Coin." In support of this, he attributes to unspecified "sagacious theorists" the view that the great public debt in Britain was an important factor in the development of industry there.

The protective tariffs also called for by Hamilton in the "Report" were adopted and largely maintained well into the 20th century. Later cases for infant industry protection in Germany, Japan and elsewhere explicitly drew on Hamilton's "Report" as both a practical and intellectual model.[25] Hamilton's financial proposals had more mixed fortunes. His national bank was established, then shuttered, re-established, and finally abolished for good under Andrew Jackson, whose administration also paid off the federal debt. Until the creation of the Federal Reserve close to a century later, there would be little direct involvement by the federal government in meeting the liquidity needs of the economy.

Tellingly, opposition to the Bank of the United States came from both sides – from those who opposed banks in general, and from those who resented the limitations the Bank of the United States imposed on the free establishment of local "wildcat" banks. Jackson himself believed that banks as such were unnecessary, destructive, and forbidden by the federal Constitution. "I do not dislike your Bank any more than all banks," he wrote to the Bank of the United States' Nicholas Biddle, explaining his refusal to renew its charter. This view was shared by important politicians like Senator Thomas Hart Benton, who believed that only metallic coins were a legitimate form of payment, and who later expressed dismay that the suppression of the Bank of the United States had only led to "a national paper cur-

[25]This filiation is traced out in Ha-Joon Chang (2002), *Kicking Away the Ladder: Development Strategy in Historical Perspective*. Anthem Press

rency of a thousand local banks."[26] But for other leading opponents of the bank, this was exactly the desired outcome. These included ambitious Western politicians who resented the Bank's efforts to regulate credit creation and saw free banking as way to encourage development in the frontier states and reduce their dependence on eastern business and finance; they shrewdly mobilized their constituents' suspicion of banks in general to open up space for the "wilderness of local banks" that Senator Benton decried. Even more important, probably, were New Yorkers like Vice President Martin van Buren, who saw an opportunity to secure their state's domination of American finance. It is somewhat ironic that the main beneficiaries of this early mobilization of anti-finance populism were the big New York banks, as the defeat of the Philadelphia-based Bank of the United States moved the nation's financial center decisively to Wall Street.

This pattern has been repeated in many debates since. The natural, unmediated world of market exchanges can be imagined as one in which there is a fixed, unambiguous thing called "money" which everything else is exchanged for; or as one in which anyone can make binding, transferable commitments to deliver anything to anyone at any time. It can be imagined, in other words, as a world with no banks, or a world where everyone is a bank. By either of these standards, the intermediate degree of liquidity of real economies, and the specialized institutions that provide it, will be found wanting.

Hamilton's proposals for an elastic money supply, however incompletely executed, had a profound effect on the early economic development of the United States. But he did not frame them in terms of any systematic account of money or production, and they did not enter into the tradition of economic thought, despite their lasting influence on economic policy.

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While Hamilton was laying out his proposals, in Britain a more self-consciously theoretical counter-tradition of monetary thought was beginning to develop. Rather than growing smoothly alongside the "real-exchange" orthodoxy, this counter-tradition asserted itself episodically, at moments when developments in the real world made it impossible to see money as a passive veil over the real economy -- moments when it became clear, in the words of Bagehot, one of the outstanding figures in this tradition, that "money will not manage itself."

The first expression of something like the money view within a recognizably economic idiom came during the Napoleonic wars, when the British government was forced to suspend convertibility of bank notes into gold. This was something that would have been unthinkable a few years earlier, but in the event it proved less disruptive to the monetary system than to theories about it. Ending gold convert-

[26] Quoted in Hammond 1991.

ibility removed the natural principle that was supposed to govern a decentralized monetary system, and revealed it for an arbitrary human creation with a definite center. The Bank of England's efforts to stabilize trade and prevent bank failures by issuing its own liabilities as necessary, regardless of what might have been possible under the old system, came under immediate attack from conservatives, on grounds that might be familiar to anyone who has heard today's denunciations of Fed "bailouts" and "debasing the currency." A typical response was that of Walter Boyd, a leading Bullinonist – the hard-money side in this debate – who accused the bank of creating "an increase in the representative sign of money ... [through] the rash attempt to extend the empire of credit beyond those limits which the eternal laws of nature had marked out for it."[27]

In defense of the Bank, the anti-Bullionists led by Henry Thornton challenged both the qualitative claim that its liabilities were merely a "sign" of money and not money itself, and the quantitative claim that they had been issued in excess. Thornton argued that bank liabilities of all kinds had as good a claim as precious metals to be considered money. "A large portion of what are term cash payments is effected," he pointed out, "merely by the transfer of the debts of one merchant to another, in the books of the banker." The availability of credit, meanwhile, couldn't be governed by convertibility or any other mechanical principle, but had to be actively managed in the public interest.

In the course of defending the Bank, Thornton rejected Adam Smith's argument that a trade deficit could be painlessly remedied by a fall in the price level, which in turn could be brought about by restricting the amount of money in circulation. (This argument, revived by Mill, became the orthodoxy of the later 19th century.) Smith, he said, "leaves totally out of his consideration ... whether the bank, in the attempt to produce this very low price, may not, in a country circumstanced as Great Britain is, so exceedingly distress trade and discourage manufactures as to impair ... those sources of our returning wealth." The question of whether restricting credit will improve a country's trade balance by making it more price competitive, or whether it will instead reduce real activity and degrade its productive capabilities, has echoes down to the present, for instance in the debates over "internal devaluation" during the euro crisis.[28] More broadly, Thornton here is challenging the prevailing wisdom that money is just a convenience for circulating existing goods, arguing instead that it plays an essential role in the production of those goods.

In rejecting a sharp line between money and not-money, and arguing for the need for the active management of credit by a central bank, Thornton was laying out a position that would not become widely accepted until the 20th century – a position that, however central it is to the practice of modern central banking,

[27] This and the following two paragraphs are based on Arie Arnon (2011), *Monetary Theory and Policy from Hume and Smith to Wicksell: Money, Credit, and the Economy*, ch. 6-7.

[28] See for example Storm, S. and Naastepad, C. W. M. (2016), Myths, mix-ups, and mishandlings: understanding the Eurozone crisis. *International Journal of Political Economy*, *45*(1), 46-71.

remains in tension with theoretical orthodoxy. While they stand in important ways in opposition to each other, both gold convertibility and the real bills doctrine (the idea that banks should make loans only against short-term trade credit) offer automatic guides for central bank credit creation. In terms of modern debates over monetary policy, Thornton, by contrast, was an early advocate for discretion rather than rules.

In the debate between the Bullionists and anti-Bullionists, we see for the first time something like a complete outline of modern debates over money. In these early exchanges, a number of central themes emerge that will appear again and again over the ensuing two centuries.

First, there is a difference in the basic image or metaphor for money -- on one side, money is imagined as coin or other tokens that exist in a definite quantity, while on the other, it's a form of record-keeping whose material form is irrelevant. Second, and related to this, is a sort of figure-ground reversal between money and credit, over which is prior and which is a reflection or derivative of the other. One of the main things that distinguishes Thornton and later credit-money theorists from the mainstream is that they don't draw a sharp line between money and credit, or more precisely, that they see credit as fundamental and currency as just one particular form of it.

Third, on a more concrete policy level, there's the question of whether there is some simple or "natural" rule that governs the behavior of monetary or credit aggregates, or whether they require active management. In the early debates, these rules were supposed to be gold convertibility or the real bills doctrine; a similar intellectual function was performed by Milton Friedman's proposed money-supply growth rule in the 20th century or the Taylor Rule that is supposed to govern monetary policy today.

Fourth, there is the basic question of whether money is a passive reflection of an already existing real economy, or whether production itself depends on and is organized by money and credit. And fifth, less often explicitly stated, but the essential complement to this, there is the question of how the non-monetary economy is imagined. In the real-exchange vision, there is a definite quantity of commodities already existing or potentially producible, which money at best helps to allocate. In the monetary production view, goods only come into existence as they are financed and paid for, and the productive capacity of the economy comes into being through an open-ended process of active development.

Not all of these questions get equal emphasis in a given debate. But they form the background to almost every dispute over the structure of the financial system and how it should be managed.

After gold convertibility was restored, the controversies between Thornton and the Bullionists largely receded from view. The economics profession that took

shape in the first half of the 19th century was organized around a vision of an ideal barter economy. A central goal was to give a nonmonetary account of the relative values of commodities -- first in terms of labor values, later in terms of utility. (As Piero Sraffa emphasized, the construction of an invariant standard of value was a lifelong quest for Ricardo.) This nonmonetary vision conquered economic thought, in Keynes' famous phrase, "as completely as the Holy Inquisition conquered Spain" banishing both concerns over the volume of spending as a constraint on production, and the idea of the monetary system as an active force shaping economic activity.

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The next major upsurge in debate over money came in the 1840s, around the rules governing the Bank of England. (On money as in other areas, economic theory tends to follow in the trail of political conflicts.) With the end of the Napoleonic wars and return of gold convertibility, there had been a wide expectation of monetary and financial stability. But continued crises in the 1820 and 1830s created pressure for further reform. There were diametrically opposed views of what this reform should look like, however.

On the one side were those (known as the Currency School) who believed that the problem was that the Bank of England retained too much autonomy, and needed to be subject to an ironclad rule governing the quantity of money it could issue. The goal, in Arie Arnon's summary, was to "make the money supply ... behave as would a 'pure', coins only currency."[29] On the other side, the Banking School rejected the idea that any rigid, automatic rule could stabilize the monetary system; emphasized the lack of a sharp line between money and credit and the inherent flexibility of the latter; and recognized the Bank of England's role in actively stabilizing the banking system during periods of stress. On how this role should be strengthened and regulated, however, they did not reach any consensus. The leading figure in the Banking School was Thomas Tooke. (Karl Marx, in rare words of admiration for a contemporary, called Tooke "the last English economist of any value.")

The dominant Currency School, following the Ricardian orthodoxy of the day, drew a sharp line between money and other financial instruments, and saw a direct connection between the quantity of money in circulation and the price level. Like later theorists such as Irving Fisher in the early 20th century or the monetarists in the later 20th century, they saw stabilizing the price level as the overriding goal of banking policy and controlling the growth of the money supply as the means. In the short run, they won the argument. The 1844 Bank Act rigidly separated the Bank of England's Banking Department and Issue Department; the former was to act as a normal commercial bank, while the latter would issue currency in strict proportion to its gold reserves. This idea of rigidly separating lending from money creation is

[29] Arnon 2001, ch. 11.

a staple of monetary reform proposals, mostly but not always from the right, down to the present. Similarly, the Currency School's view that all that can be expected from money is a stable standard of value, which requires only that the quantity of money grow at a steady rate, has echoes in Milton Friedman and beyond.

For the Banking School, on the other hand, stable growth in the quantity of money was neither achievable nor necessary. It was not achievable because a wide range of instruments could serve as money; strictly limiting the issue of banknotes by the Bank of England would not stabilize the rate of credit creation by the rest of the banking system. But it was not necessary because credit would on its own adjust to the needs of trade. The so-called Law of Reflux, put forward by Tooke's ally Fullarton, held that if banks created more money than real activity required, the remainder would simply return to the banking system to settle existing debts or to be held as idle deposits.[30]

The arguments between the Currency and Banking schools set the terms for many later debates over money. The names themselves capture the central question of whether, in Schumpeter's words, we "start from the coin" in thinking about money, or whether we rather think of it fundamentally as a set of social accounts. To be clear, there are a number of distinct theoretical divides around money, which do not always line up with each other or with policy views or political commitments. Following a scheme proposed by Lance Taylor, we might imagine a space with at least four dimensions: money versus credit; prices versus quantities; whether money has real or only nominal effects; whether it is passive or autonomous. Different theorists and political programs will occupy various quadrants, with the main lines of conflicts falling along different dimensions in different eras. It is perfectly possible, for example, to believe (with the Bullionists and the Currency School) that money matters only for the price level and not for real activity, but also (with the anti-Bullionists and the Banking School) that money must be actively managed by a central bank. (As we'll see shortly, this was more or less the position of Irving Fisher.)

Tooke and the Banking School were, along with Thornton a generation earlier, the outstanding early figures in the history of what we may now call the money view. They did not, however, offer a clear proposal for how money and credit should be managed to serve broader social goals. In practice, the divide between the Banking and Currency schools often seemed to be more over which automatic rule was preferable – fixing the quantity of money via a tight link to gold, or fixing the kind of credit created through something like the real bills doctrine.

Further development of the case for active management of money would have to wait another generation, until the Bank of England had – haltingly, under the pressure of events, and in defiance of the 1844 Banking Act – begun to take on this role. Here as usual, developments in theory followed in the wake of practical policy.

[30] Arnon 2011, ch. 12.

As the 20th century Nobel Laureate John Hicks observed, "monetary theory ... belongs to monetary history."[31]

The iconic figure in this next period is the early editor of *The Economist* Walter Bagehot, whose *Lombard Street* is often credited as the first articulation of the case for something like modern central banking. He is often credited with being the first to describe the central bank's function as the lender of last resort in crises, but his interests were much wider than this. At a time when orthodox economic theory was settling on interest as a reward for waiting or "abstinence," he offered an explicitly monetary account of the interest rate, based on banks' willingness to discount commercial debt. Unlike most later theorists of central banks – including Keynes of the *General Theory* as well as Wicksell and his modern-day successors – he was attentive to what we would today call the transmission mechanism of monetary policy, and the limits to central banks' ability to influence private financial markets.

One interesting thing about reading *Lombard Street* today is how, unlike many of his successors in the financial press, Bagehot is interested not only in the internal workings of the financial system but also its articulation with the larger world of production and trade. He was, for example, quite aware that the division of labor between countries might depend less on their inherent productive capacities than on the organization of money payments. The ready availability of credit for English businesses, he says,

> gives us an enormous advantage in competition with less advanced countries -- less advanced, that is, in this particular respect of credit. In a new trade English capital is instantly at the disposal of persons capable of understanding the new opportunities... In countries where there is little money to lend, ... enterprising traders are long kept back, because they cannot borrow the capital without which skill and knowledge are useless. ... The Suez Canal is a curious case of this ... That London and Liverpool should be centres of East India commerce is a geographic anomaly ... The main use of the Canal has been by the English not because England has rich people ... but because she possesses an unequalled fund of floating money.

In the context of orthodox thinking on international trade – which presents it in terms of the optimal allocation of labor, land and other material resources – there is something quietly radical in Bagehot's suggestion that what matters is not the absolute quantity of real resources but their organization through money, and that financial power allows a country to reorganize the international division of labor to its own advantage.

Bagehot's unhesitating description of interest as "the price of money" marks another long-standing cleavage in debates over money. Arguments for monetary

[31] Hicks, J. (1967), Monetary theory and history: an attempt at perspective. In *Critical Essays in monetary theory*, 155-173

neutrality from Hume onward postulated a "real" rate of interest, expressing a tradeoff between prevent and future that had nothing to do with money. Critics and reformers, on the other hand, insisted that the interest rate was a monetary phenomenon and pointed to a lower rate of interest as a benefit of monetary reform. – recall Law's promise of "money at less use." (Today's orthodoxy, as we discuss at length in our book *Against Money*, tries to square this circle by allowing the central bank to control interest rates in the short run but postulating a "natural rate" they must eventually conform to.)

Because Bagehot was praising an existing system rather than proposing a new one, he remains respectable in a way that most other money-view thinkers are not. Nonetheless, he falls well outside the recognized tradition of economics. Despite his importance as an early formulator of the principles of central banking, he is not even mentioned in most textbooks on the history of economic thought.[32]

More often, efforts to rethink the relationship between money and the real economy are accompanied with proposals for more or less radical reform of the monetary system. From John Law onward, monetary reformers often appear, in Karl Marx's words, as "the pleasant character mixture of swindler and prophet".[33]

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Marx's own views on money, as on much else, resist summary. Keynes, who had little time for the "dreary, academic controversializing" of *Capital* or "the rubbish of the Red bookstores," unhesitatingly gave Marx credit for recognizing the essentially monetary nature of capitalism.[34]

In terms of the debates discussed earlier, Marx does not fall squarely on either side. Like Thornton and Tooke, Marx rejected the idea that capitalism could be understood as a generalized system of barter of pre-existing commodities. But unlike them, and like their Bullionist and Currency School opponents, he insisted on a sharp line between money and credit. Marx often saw money as the embodiment of a quantity of abstract labor. A commitment to the labor theory of value would seem to imply the existence of a set of relative values that exist prior to and distinct from money prices. (This question, under the heading of the transformation problem, has occasioned a great deal of debate among subsequent Marxists, but we will not let us detain us here.) And he, like most later Marxists, was generally scornful of suggestions that the waste and injustice of capitalism could be addressed by reforms

[32] We reviewed half a dozen textbooks and readers on the history of economic thought and could not find one that discussed him.

[33] *Capital Volume III*, Part V, Chapter 27.

[34] The quote is from Keynes (1926), Laissez-faire and Communism. The acknowledgement of Marx's insight that capitalist production is oriented around the accumulation of money rather than the production of commodities as an important anticipation of his own views was found in early drafts of *The General Theory*, though not the book as published. See *The Collected Writings of John Maynard Keynes*, Vol. XXIX, p. 81-83.

to money and credit.[35]

For many readers of Marx, both admiring and critical, these facts make him a believer – fundamentally if not in every detail – in commodity money. Money, at the end of the day, is a commodity like any other. It gets its value in the same way as anything else, from the labor embodied in it. Later Marxist theorists like Prabhat Patnaik similarly emphasize that the value of money is to be found exogenously in the price of labor, or in some other commodity like oil.[36] The particular form taken by money is not relevant for relative values nor, except in a negative, disruptive way, for the operation of the system. In Stefan Eich's summary of this view, Marx was "a more or less closeted adherent of metallism who essentially accepted ... gold-standard presumptions." (Eich himself attributes a more nuanced view to Marx.)

Whether or not this is fair, what is true is that by the time he wrote *Capital*, Marx had unambiguously rejected reform of the monetary system as either a vehicle for socialist politics or a meaningful goal in its own right.

Marx's arguments on money developed in response to the arguments of socialists like Robert Owen and especially Proudhon. For these socialists, scarcity of gold and limits on credit were obstacles to free exchange and cooperation, preventing people from undertaking all kinds of productive activity on a collective basis and creating conditions of material scarcity and dependence on employers. Democratizing credit was a necessary step toward democratizing production. For Proudhon, a democratically controlled banking system was an essential precondition for a right to meaningful work. Ordinary people, he argued, are capable of doing much more socially useful (and remunerative) work than the jobs offered by employers. But under the prevailing monopoly of credit, we have no way to convert our capacity for work into access to the means of production we would need to realize it.

Why, we can imagine Proudhon asking, do you need to work for a boss? Well, because he owns the factory. And why does he own the factory? Is it because only he had the necessary skills, dedication, and ambition to establish it? No, of course not. It's because only he had the money to pay for it. Democratize money, and you can democratize production.

Marx turned this around. Rather than money being the reason why a small group of employers control the means of production, it is, under capitalism, simply an expression of that fact. And if we are going to attribute this control to a prior monopoly, it should be to land and the productive forces of nature, not money. The

[35]This section only scratches the surface of debates over Marx's views on money and credit. Discussions of Marx's views on money that we have found helpful include de Brunhoff 1976, *Marx on Money* (especially p. 107-123); Foley, "Marx's Theory of Money in Historical Perspective"; Hein 2004, "Money, Credit and the Interest Rate in Marx's Economics"; Nelson 2001, "Marx's Theory of the Money Commodity"; and Panico 1980, "Marx's Analysis of the Relationship between the Rate of Interest and the Rate of Profits".

[36]The possibility of oil or some similar scarce natural resource, rather than labor time, as the basis for value is suggested by, among others, Prabhat Patnaik (2009), *The Value of Money*, Columbia University Press.

capitalist class inherits its coercive power from the landlord side of its family tree, not the banker side.[37]

In Marx's view, Proudhon had turned the fundamental reality of life under capitalism — that people are free to exchange their labor power at its value for any other commodity — into an ideal. Proudhon attributes the negative consequences of organizing society around market exchange to monopolies and other deviations from free market exchange. (This is a criticism that might also be leveled against many subsequent reformers, including the "market socialists" of our own time.)

One version of Marx's response to Proudhon might go like this. In a world where production was not organized on capitalist lines, we could still have market exchange of various things. But the prices would be more or less arbitrary, based on convention. Productive activity, on the other side, would be embedded in all kinds of other social relationships. We would not have commodities produced for sale by abstract labor, but particular use values produced through particular kinds of activity carried out by particular people. Given the integration of production with the rest of life, there would be no way to quantitatively compare the amount of labor time embodied in different objects of exchange; and even if there were, the immobility of embedded labor means there would be no tendency for prices to adjust in line with those quantities. The situation that Proudhon is setting up as the ideal — prices corresponding to labor time, which can be freely exchanged for commodities of equal value — reflects a situation where labor is fully proletarianized. Only when workers have lost any social ties to their work, and labor has been separated from the rest of life, does labor time become commensurable.

In the real world, the owners of the means of production have harnessed all our collective efforts into the production of commodities by wage labor for sale in the market, in order to accumulate more means of production – that is to say, capital. In this world, and only in this world, quantitative comparisons in terms of money must reflect the amount of labor required for production. Changes to the money system cannot change these relative values. In a typical statement in *Capital* (one could multiply similar examples), Marx writes that money is "the necessary form of appearance of the measure of value which is immanent in commodities, namely labor time." There is a great deal to unpack in a statement like this. But the conclusion that changes in the quantity or form of money can have no effect on relative prices does indeed seem to be shared with the gold-standard orthodoxy of his time (and of ours).

The difference is that for Marx, that quantifiable labor time was not a fact of nature. People's productive activities become uniform and homogeneous only as work is proletarianized, deskilled, and organized in pursuit of profit. It is not a general fact about exchange. Money might be neutral in the sense of not entering into

[37]In the "Critique of the Gotha Program," for example, Marx observes that "the monopoly of property in land is ... the basis of the monopoly of capital," and emphasizes that socialists must target the former as well as the latter.

the determination of relative prices, which are determined by labor time. But the *existence* of money is essential for there to be relative prices at all. The possibility of transforming authority over particular production processes into claims on the social product in general is a precondition for generalized wage labor to exist.

While Marx does look like commodity money theorist in some important ways, he shared with the credit-money theorists, and greatly developed, the idea – mostly implicit until then – that the productive capacities of a society are not something that exist prior to exchange, but develop only through the generalization of monetary exchange. Much more than earlier writers, or than Keynes and later Keynesians, he foregrounded the *qualitative* transformation of society that comes with the organization of production around the pursuit of money.

As Stefan Eich notes in a fascinating chapter on Marx's views on money, when Marx was writing his critique of Proudhon's monetary-reform proposals in the 1840s, he and Engels still believed that public ownership of the banks was an important plank in the socialist program. Democratically-controlled banks would "make it possible to regulate the credit system in the interest of the people as a whole, and ... undermine the dominion of the great money men. Further, by gradually substituting paper money for gold and silver coin, the universal means of exchange ... will be cheapened."[38] At this point they still held out the idea that public credit could both alleviate monetary bottlenecks on production and be a move toward the regulation of production "according to the general interest of society as represented in the state."

By the 1850s, however, Marx had grown skeptical of the relevance of money and banking for a socialist program. In a letter to Engels, he wrote that the only way forward was to "cut himself loose from all this 'money shit'"; a few years later, he said, in an address to the First International, that "the currency question has nothing at all to do with the subject before us." In the *Grundrisse* he asked rhetorically, "Can the existing relations of production and the relations of distribution which correspond to them be revolutionized by a change in the instrument of circulation...? Can such a transformation be undertaken without touching the existing relations of production and social relations which rest on them?" The answer, obviously, is No.

The reader of Marx's mature published work might reasonably come away with something like this understanding of money: Generalized use of money is a precondition of wage labor, and leads to qualitative transformations of human life. But control over money is not the source of capitalists' power, and the logic of capitalism doesn't depend on the specific workings of the financial system. To understand the sources of conflict and crises under capitalism, and its transformative power and development over time, one should focus on the organization of pro-

[38]This is from "Demands of the Communist party in Europe," written just after the Communist manifesto. It is quoted in Eich 2022, as are the Marx passages in the following paragraph.

duction and the hierarchical relationships within the workplace. Contra Minsky, capitalism is essentially a system of hierarchical control over labor. Money and finance are at best second order.

As always with Marx, though, one must be careful about different levels of abstraction. As the late Marxist economist Jim Crotty argues in a classic article, in some of his other writing – mostly unpublished in his lifetime – Marx gave money and credit a central place in his accounts of economic crises.[39]

In real capitalist economies, commodities do not normally exchange directly for money, but for a promise of payment at some future date. The main function of money, in Marx's terms, is not as a medium of exchange – which can take place on the basis of credit – but as a means of settlement. The process of exchange thus "gives rise to private, legally enforceable contracts among commodity owners." The number and duration of these contracts tends to grow over time with the division of labor and with the role of long-lived assets in the production process; at any given moment, how tightly they bind depends on decisions that were made in the past. Or as Crotty puts it, with "the function of money as means of payment, the reproduction or accumulation process must drag its history with it as burden and constraint. ... Contracts and credit create a variable degree of rigidity or fragility in the reproduction process."

It is this web of pre-existing commitments for money payments that turns a fall in the rate of profit into a violent crisis, rather simply a slower pace of accumulation. Or in Marx's words: "The crisis arises and derives its character not only from the unsaleability of the commodity, but from the non-fulfillment of a whole series of payments which depend on the sale of this particular commodity."[40] Passages like this are a striking anticipation of modern theories of financial instability. Perhaps Marx and Minsky are not so far apart after all.

Eich for his part argues that Marx's rejection of finance as a site of political action was based on the specific conditions of his time. Today, the power and salience of organized labor has diminished, while central banks are more visible as sites of power and the allocation of credit is a major political issue. A Marx writing now might take a different view on the value of monetary reform to a socialist program. This is not, however, a judgment that most of those inspired by Marx seem to share.

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Both Bagehot and Marx stand well outside the main current of economic

[39] James R Crotty (1985), The Centrality of Money, Credit, and Financial Intermediation in Marx's Crisis Theory: An Interpretation of Marx's Methodology. In Stephen Resnick and Richard Wolff, eds., *Rethinking Marxism: Struggles in Marxist Theory*

[40] Quoted in Crotty 1985.

thinking on money. The consensus view among academic economists in the late 19th and early 20th centuries, which still forms one main strand of monetary common sense today, was the quantity theory. Historians locate the beginnings of this perspective, in the Prussian courts of the 16th century, with several figures who were attempting to understand the 'price revolution' of the times-a period of sharply increased inflation. (Figures that included Nicholas Copernicus, who seems to have struggled with the underlying causes of the price revolution. He had greater success with revolutions of a more celestial kind.[41])

By the early 20th century there were several versions of this view. In the US, the most prominent exponent was Irving Fisher, whose Equation of Exchange continues to be one of the main tools used to discuss money in economics classrooms (if no longer so much outside them) today. The equation is most often written as MV = PY, where M is the quantity of money, V is its "velocity" in circulation, P is the general price level and Y is the total output of goods and services, what today we would call GDP. (GDP itself was introduced a bit later.) Alternatively, it can be given as MV = PT where "T" is not just payments for production but all the transactions money can be used for – an ambiguity which practical applications of the quantity theory must skate past.

In either form, the equation expresses a number of assumptions that defined pre-Keynesian orthodoxy and remain influential today. First, there is an unambiguous quantity of money which can be regarded as fixed or exogenous. This implies a hard line between money and credit – an idea which, as we've seen, most of the thinkers associated with the money view have rejected. Second, it assumes that this money circulates at a fixed, technologically determined pace – "as fast as a messenger boy can run," in Knut Wicksell's words. This sits poorly with the use of bank transfers and similar credit money that had been in widespread use for centuries. Even worse, it depends on the rather odd behavioral assumption that economic units – businesses and governments as well as families – spend their money as soon as they have it in hand, something that might be true in hyperinflationary settings or of people on the brink of starvation, but not in normal conditions. On the right side of the equation, meanwhile, it implies that an increase in the stock of money (or an equivalent speed in its velocity) must result in some mix of higher prices and more activity. For Fisher and other exponents of the quantity theory, a central argument was that in practice changes in M led only to changes in P – more money in circulation would lead only to higher prices, with no effect on real activity. Yet as critics of the quantity theory have repeatedly noted, it is hard to see how the assumption that real activity is invariant to money is consistent with the idea that money is useful.

It may seem strange that such a vision could become accepted as common sense. But it served an important ideological function. As Fisher himself empha-

[41] Volckart, Oliver (1997), Early beginnings of the quantity theory of money and their context in Polish and Prussian monetary policies, c. 1520–1550. *The Economic History Review*. 50 (3)

sized, his goal with MV=PY was to refute the "supporters of unsound money" who were calling for easier credit, especially for farmers. (In the 1930s, Fisher would offer a much more realistic story about money, credit and the real economy in his justly famous 1933 article "The Debt Deflation Theory of Great Depressions.") The quantity theory offers a story with two important morals: The best that can be achieved by monetary management is stable prices, and the way to achieve that is by ensuring that money stock grows at the same rate as real activity. It is a device for bolting an account of money onto a non-monetary theory of the real economy. It is sufficiently useful for this purpose that it has been repeatedly revived despite its flaws.

Probably the other most influential thinker about money and credit around the turn of the 20th century was the Swedish economist Knut Wicksell. Wicksell accepted the quantity theory as a logically coherent description of an economy using commodity money, which he regarded as a reasonable approximation historically. (We can set aside whether this was ever true – recall that a century earlier Thornton had already observed the large share of payments that happened through banks rather than via coins.) But unlike most of his contemporaries, Wicksell recognized that at least by the late 19th century, "money" meant bank deposits, and that banks' ability to create new deposits through lending was largely unconstrained by the availability of gold reserves.

At the same time, Wicksell seems to have agreed with Fisher that real activity was basically independent of the availability of money (his statements on this point are somewhat ambiguous). So price stability was still the only goal of monetary management. But unlike Fisher, Wicksell thought that the way to achieve this was by ensuring that banks set the right interest rate for loans, not by fixing an exogenous stock of money. Furthermore - and this marks a radical departure from the orthodoxy of his day - he rejected the idea that there was any automatic market process that would cause private banks to set rates at the correct level. If, say, banks set their rates too low, the ensuing inflation would make the loans even more attractive to borrowers, without diminishing their profitability for lenders. So the volume of lending would only grow. It followed that price stability required active efforts by some public authority to keep market rates at their "natural" level. In this way, as Axel Leijonhufvud observes, Wicksell deserves credit as the originator of today's monetary-policy orthodoxy.[42]

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In the United States, an important milestone in thinking about money came

[42]Leijonhufvud (1981), The Wicksell Connection; Leijonhufvud (1997), The Wicksellian Heritage. More broadly Leijonhufvud seems to be responsible for the revival of interest in his fellow Swedish economist; for example, he was the one who introduced Wicksell to 2026 economics Nobel Prize winner Michael Woodford, whose *Interest and Prices* is named in conscious homage to Wicksell's *Geldzins und Güterpreise*.

with the establishment of the Federal Reserve Board. Debates around the structure and purpose of the prospective central bank had parallels with many earlier (and subsequent) arguments about management of the banking system, without repeating them exactly. The formation of the Fed is an outstanding example of how historical debates around money and banking often involve the same basic elements, but arrange them differently.

Prior to the creation of the Fed, the United States had not had a central bank since the end of the Second Bank of the United States under Jackson. The antebellum years had largely realized the Bank's opponents' vision of free banking, with a wide variety of local "dollars" circulating in different areas and exchanging at variable discounts. During the Civil War, the exigencies of war finance required some order to be imposed on this system, with federal greenbacks largely displacing private bank notes as currency. After the war, while the US officially returned to the gold standard, bank credit remained relatively localized and deregulated.

It's worth pausing here to say something about the gold standard. Broadly speaking this combined four elements. First, currencies had some defined value in terms of gold, which was supposed to be permanently fixed and unchangeable. Second, the national governments associated with those currencies were more or less firmly committed to exchanging "their" currency for gold at the stated rate. Third, owners of gold could move it across national borders – physically or notionally – without restriction. And fourth, banking systems were governed by rules to keep private credit creation consistent with the first three principles. When people speak of "the gold standard," they generally have the first principle, or the first two, in mind. But operationally what mattered was the fourth principle. And what it entailed in practice was not straightforward.

People sometimes imagine the gold standard era as one in which physical gold coins were used for transactions, or at least, where other forms of money were so rigidly linked to gold that they might as well have been. Gold could freely move across borders, and as it did so the money supply would immediately fall in the countries losing gold, and rise in those receiving it. Changes in the money supply would lead to proportional changes in the price level, which – via the relative prices of traded goods – would eventually bring gold flows back into balance.

This is David Hume's famous specie-flow story, often credited as the first explicit equilibrium model in economics.[43] Versions of it are still found in textbooks today. And not only there – the "internal devaluation" pushed on Greece by its creditors in 2011 was straight out of the gold standard playbook. But as critical observers from Keynes onward have noted, the system did not work this way in practice.

What *is* true is that adherence to the gold standard offered strong protections

[43]Hume, D. (2005). On the balance of trade. Reprinted in Eichengreen and Flandreau, eds., *The Gold Standard in Theory & History* (pp. 31-37). Routledge.

for wealth holders wishing to swap claims on one country for claims on another. The fixed exchange rate, free convertibility of national currency to gold, and unrestricted right to move gold across borders amounted to a promise that holders of a claim against a productive enterprise or government in one country could freely convert that to a claim against a unit in some other country, without legal restraint or risk of adverse exchange-rate movements. Gold, to be sure, seldom literally moved across borders – it was much easier to transfer claims on gold bars in a vault in London than to transfer the bars themselves – but the financial-mobility dimension of the conventional gold-standard story is essentially correct.

The second half of the story, though, is that the right of wealth owners to shift balance sheet positions across borders led reliably to changes in money, credit, prices and foreign trade that gave gold movements a self-equilibrating character. As the mid-century American Keynesian Robert Triffin observed in a classic essay, the real gold standard did not behave like this at all.[44] In the first place, nowhere in the late 19th century were precious metals used in more than a small fraction of transactions. Over the course of the 19th century, there was a tremendous expansion in the use of bank deposits and similar forms of credit money, largely unconstrained by the formal tie to gold. To the extent gold was held as reserves against this bank-created money, it was largely and increasingly in the vaults of national central banks, so any constraint that it imposed on credit creation was not automatic but a matter of policy and regulation. (Here is another example of a descriptive claim evolving into a prescriptive one.) This meant that any connection between gold flows and changes in the money stock were uncertain and indirect.

In practice, at the international level, it was not the case that countries facing gold outflows experienced falling prices while those experiencing inflows saw prices rise. Rather, rises and falls in the price level during the gold standard era were largely synchronized across countries, whatever their trade or balance of payments position. Sometimes prices rose everywhere; sometimes they fell everywhere. When persistent deficits left countries in danger of being unable to honor their commitments to foreign investors, this was not resolved by a fall in relative prices bringing the country into trade balance. In the core of the system, payments imbalances were resolved through active cooperation by central banks; in the periphery they resulted in crises and default. A story one sometimes hears about the failure of the effort to restore the gold standard after World War One is that, with the spread of unions and political democracy, countries could no longer tolerate the falling prices and wages that formerly allowed deficit countries to bring their gold flows back into balance. (Barry Eichengreen, one of the eminent monetary historians of our times tells an influential version of this story.[45]) But as another eminent economic historian Peter Temin points out, inflexible wages cannot be blamed for the breakdown

[44]Triffin, The Myth and Realities of the So-Called Gold Standard. Reprinted in Eichengreen and Flandreau, eds., *The Gold Standard in Theory & History.* Routledge.

[45]Eichengreen, B. (2019), *Globalizing Capital: A History of the International Monetary System*, ch. 2. Princeton University Press.

of the Gold Standard in the Depression – wages in the US and Western Europe fell faster in the 1930s than they ever had in the pre-World War One era of reliably fixed exchange rates.[46]

What the gold standard was, was a commitment by participating governments to wealth owners to exchange their claims in the domestic currency for claims in the world currency at a fixed rate. (In the shorthand, "for gold", though in practice, again, more often for a deposit at a bank in London.) This might have some implications for the creation of the credit-money that was used in actual transactions, but this was a matter of policy, not a direct link. In practice, as was realized with some consternation in the debates over restoring gold in the 1920s, central banks had never consistently followed "the rules of the game"; even at the height of the gold standard, they were as likely to loosen domestic credit in periods of gold outflow as to tighten it.

The gold standard also meant quite different things in different countries. In the US, banks were largely unconstrained in their creation of credit money, but all deposits were, in principle, backed by gold, or in practice by deposits at the major New York banks which were the interface between domestic credit and the international system. This gave the banking system a strongly hierarchical character, and made it subject to alternating periods of great credit expansion and collapse back toward the gold-imposed limits in moments of stringency. Given the centrality of credit-dependent agriculture to the economy, these alternations could happen annually as well as on longer and more irregular boom and bust cycles.

Under these conditions, proponents of *both* monetary stability and greater flexibility could support the creation of a central bank. It could be said with justice both that the system was too flexible and not flexible enough – that it failed to produce a stable standard of value, *and* that in moments of crises, the link to gold prevented the creation of sufficient credit to meet the needs of farmers and business.

Historians of the creation of the Fed tend to emphasize either one side or the other of this contradictory reality. On the one hand, the establishment of a central bank can be seen as a response to demands by the populists for a more elastic currency.[47] On the other, it can be presented as an effort to create the stable national currency and financial system required by the new national corporations. There is not necessarily a contradiction between these views. In the early 20th century, both Populists and Wall Street had good reasons for unhappiness with a self-regulating private banking system.

Within the economics profession of the time, two distinct lines of thinking pointed toward establishment of a central bank, but on two distinct sets of principles. In Perry Mehrling's telling, on one side was Fisher, whose quantity theory

[46] Temin, Peter (1991), *Lessons from the Great Depression.* MIT Press.

[47] As for example in Jonathan Levy (2021), *Ages of American Capitalism: A History of the United States*, ch. 10. Random House.

implied a direct link between the quantity of some well defined stock of money and the overall price level.[48] From this point of view, the task of the central bank was to set an appropriate quantity of money for the economy as a whole in order to stabilize some price index. On the other side was Charles Laughlin, less well known today but a towering figure in an older tradition of American monetary economics. For him, the problem to be solved was an automatic mechanism to provide a reliable flow of credit to real activity. The model he proposed was a decentralized system of reserve banks, which could lend to private banks without limit as long as they had good commercial loans as collateral.

Both sides saw the same basic problem, a system that was too rigid at some times and too elastic at others. But they had different ideas of how to address this. In effect, Fisher wanted to add flexibility in the center, preserving or even strengthening the rigid link between a fixed stock of reserves and the volume of credit, but actively managing the size of that reserve. Laughlin, on the other hand, wanted to add flexibility in the transmission from reserves to lending, allowing local banks to make loans for productive activity with less fear of illiquidity in a crisis. These visions were sharply opposed, in ways that don't always map onto straightforward political categories. Fisher's support for active management of the currency at a national level aligned him with progressives who were seeking a more active federal government. But he defined the goals of this intervention narrowly as stabilizing the price level, rejecting the idea that better monetary management could contribute to economic development. Laughlin's proposal for a decentralized system operating according to a set of predefined rules fit better with traditional American skepticism of a strong central government. But in framing the problem in terms of the need for credit rather than the stability of the price level, he was responding to the real problems identified by the Populists, whom Fisher by contrast always viewed with disdain.

In some ways, this debate was a reprise of the currency versus banking school debate in England a century earlier, with Fisher taking the role of the former and Laughlin the latter. But while Fisher was certainly conservative in many ways, unlike his currency-school predecessors he believed that firmly linking private credit to gold was insufficient for monetary stability and that active management was required. Indeed, his rigidly orthodox insistence on a direct link from base money to prices ironically made his proposal seem like the more radical one, since allowing the central bank to set the stock of reserves would mean formally breaking the link with gold.

As far as the Fed's institutional structure and legal mandate went, Laughlin largely won the debate – what was created in 1913 was not a central bank responsible for the national money supply, but a network of reserve banks empowered

[48] Perry Mehrling (2002), "Retrospectives: Economists and the Fed: Beginnings." *Journal of Economic Perspectives* 16(4): 207-218. This and the following paragraphs draw heavily on Mehrling's analysis, both in this article and personal communications.

to discount a range of private debt to ensure a stable flow of credit. Fisher was more successful in shaping the popular understanding of the Fed – the idea that the central bank's job is fundamentally to control the money supply in order to stabilize prices has been hegemonic among the public and policymakers over most of its history, especially after its revival by Milton Friedman and the monetarist school a half century later. Fisher's promise that "economic science offered the prospect of keeping the politics out of money, even while embracing centralization and active management" has been the dream of central bankers ever since.

But as Perry Mehrling points out, when it came to the operation of the Fed in practice, the reality resembled neither Laughlin's vision nor Fisher's. Instead, it was closer to the proposals of Paul Warburg, an investment banker who represented the views of internationally-oriented New York banks in the debate. He shared with Fisher a belief in active centralized management, and with Laughlin a focus on the terms of credit provision rather than the money supply. Unlike either of them, he saw a benchmark interest rate as the key instrument for the central bank to control. Intellectually this was a big step forward from Fisher's orthodoxy. But it left the Fed's mission defined in terms of monetary stability, rather than the broader credit needs of the economy. To be sure, the Federal Reserve has always actively managed credit flows in support of broader economic goals. Since its inception, and even more since the consolidation of authority in the national Board after the reorganization of the 1930s, it has been one of the preeminent sites of economic planning in the United States. But this has been largely subrosa. And as the American Keynesian economist Jerry Epstein emphasizes, the industrial policy of the Fed (as of the Bank of England) has been primarily aimed at the development of the financial sector itself.[49]

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By the 1920s, the need for a central bank to actively manage money and credit was widely, though not universally, accepted at the level of policy. But at the level of theory, the consensus view on money was not much different from that of 100 years earlier. Money was a neutral numeraire, or measuring rod; changes in the form or availability of money could have no effect except on the price level. Economic orthodoxy still struggled with the idea that economic life was essentially monetary, or that banks were anything but passive intermediaries. Credit was conceived of in terms of the transfer of real resources from lenders to borrowers. The idea that bank lending creates new money, and that this money can in turn call forth new productive activity, remained somewhat scandalous. "The theory to which economists clung so tenaciously," observes Schumpeter, "makes [depositors]

[49] Gerald Epstein (2007), Central Banks as Agents of Economic Development, in Ha-Joon Chang, ed., *Institutional Change and Economic Development.* Anthem Press. Epstein, like Crotty, was one of our teachers at the University of Massachusetts.

out to be savers when they neither save nor intend to do so; it attributes to them an influence on the 'supply of credit' which they do not have."[50]

It was Keynes and his colleagues who produced a lasting, if not a complete or permanent, shift in this consensus. Earlier writers like Hamilton or Bagehot had important influence on practical policy but not on how money was discussed by academics. Scholars like Tooke and Thornton were influential in their own times but did not really have successors. Almost alone among thinkers we associate with the money view, Keynes redirected the main channel of economic thought on money, at least for a time.

Like almost all the writers we group under the money view, Keynes' vision grew directly out of the immediate problems of his time. As biographers like Robert Skidelsky and Zachary Carter emphasize, his theory evolved in response, and in service, to the practical debates he was engaged in. For some three decades, from the Versailles conference to the Bretton Woods conference, he was at the center of practical economic debates in Britain. His theoretical interventions were always tailored to the needs of the moment. His theoretical accomplishments are not in spite of this, but because of it – he is perhaps the outstanding example of his rival Hayek's dictum that great economists are never only economists, but always have one foot planted somewhere else.

The nature and management of money were central to these interventions, as a glance at the title of his major works – from *Indian Currency Questions* to *A Tract on Monetary Reform* to *A Treatise on Money* and on to the *General Theory of Employment, Interest and Money* – will confirm. The title of the latter expresses not just a list of topics but a logical sequence: Employment is determined by the interest rate, which is determined by the availability of money. But it took Keynes many years to get there.

According to Luigi Passinetti, the start of the Keynesian revolution has a very specific date: October 1932.[51] That is when Keynes returned to King's College in Cambridge for the Michaelmas term to deliver, not his old lectures on "The Pure Theory of Money," but a new set of lectures on "The Monetary Theory of Production". In an article of the same title written around the same time, he explained that the difference between the economic orthodoxy of "the theory which I desiderate" was fundamentally the difference between a vision of the economy in terms of what he called "real exchange" and of monetary production. The lack of such a theory, he argued, was "the main reason why the problem of crises remains unsolved."

As it happens, it was also in 1932 that Lionel Robbins gave perhaps the most

[50]Schumpeter, J. A. (2006; 1954). *History of Economic Analysis*, p. 1080. Routledge.

[51]Pasinetti, L. L. (2007). *Keynes and the Cambridge Keynesians: A "Revolution in Economics" to be Accomplished.* Cambridge University Press. See also Leijonhufvud, A. (2008). Between Keynes and Sraffa: Pasinetti on the Cambridge School. *The European Journal of the History of Economic Thought* 15(3), 529-538.

influential summary of the orthodox view, when he wrote that economics is the study of the allocation of scarce means among alternative uses. This is probably the definition of economics one will most often encounter in economics classrooms today. (Another common and bolder one is that economics is "the study of how people make choices.") For Keynes, by contrast, the central problem is not scarcity, it is coordination. And what distinguishes the sphere of the economy from other areas of life is that coordination here happens largely through money payments and commitments.

A natural starting point for thinking about Keynes' thought on money is the concept of *liquidity*. As the economist Mike Beggs observes in a brilliant essay, this is one of the trickier terms in economics; it is "a cipher, a noun depending on a network of verbs and adjectives, which has led multiple lives in multiple discourses, theoretical and practical."[52] We have much more to say about liquidity in *Against Money*, but for our purposes now we can define it as the capacity to make payments reliably at short notice.

We can think of liquidity as the property of the balance sheet as a whole – reflecting your capacity to borrow as well as what you own — or as a description of a market or a moment in time. But the simplest and probably the oldest approach to liquidity is to identify it with a particular kind of asset - most straightforwardly, with money itself.[53] Use of the term in this sense was introduced — apparently into the jargon of both economics and financial markets — by Keynes.[54] In the *General Theory*, "liquidity preference" means the desire to hold money rather than other assets. Money offers a lower return than other assets, but in compensation for this it offers flexibility, security, protection against unforeseen contingencies.

One reason this concept is important is that it offers a clear, productive way of thinking about the specific service provided by money. If money is not just a passive *numeraire* or measuring rod, we need to be able to talk about what its active role is. Liquidity offers a tool for incorporating John Law's "Value by which goods are exchanged" into a larger analytic structure.

Once liquidity is established as the specific service provided by money, that opens the way to seeing interest as the price of this service – thus Keynes' liquidity preference theory of interest. (In a waspish response to some critics, Keynes rejected the idea that his account of interest constituted a theory: "I am simply stating what it is, theories on the subject being subsequent."[55]) Rather than a tradeoff between goods today and goods in the future, the interest rate is the relative price of two assets in the present, one offering a higher income and the other offering the advantages of liquidity. Here again, Keynes is echoing other writers from Law

[52]Beggs, M. (2012). Liquidity as a social relation. Paper presented at the 38th Eastern Economic Association Annual Meeting.

[53]We discuss some problems with this approach to liquidity in chapter 5 of *Against Money*.

[54]John Hicks (1962), Liquidity, *Economic Journal*, 72, pp. 787-82.

[55]Keynes, John Maynard (1937), Alternative Theories of the Rate of Interest. *Economic Journal,* 47(186): 241-252.

onward, who saw interest as the price of money. But he is incorporating this idea into a more comprehensive and rigorous framework. As we discuss in chapters 4 and 5 of *Against Money*, these alternative accounts of interest are still a central faultline in debates over money today.

Drawing on his observations as a practitioner (his theories drew on his experience as a speculator as well as a public servant) Keynes also introduced the notion of self-confirming expectations into his account of financial markets. Someone buying an asset to sell in the near term is not interested in its "fundamental" value – the long-run flow of income it will generate – but in what other market participants will think is its value tomorrow. Where such short-term speculation dominates, asset prices take on an arbitrary, self-referential character. This idea is important for our purposes not just because it underpins Keynes' critique of the "insane gambling casinos" of modern financial markets, but because it helps explain the autonomy of financial values, their ability to evolve independently of the "real" economy. In a case of particular concern to Keynes, longer-maturity interest rates may remain fixed at some arbitrary level: "Any level of interest which is accepted with sufficient conviction as *likely* to be durable *will* be durable." (emphasis in original)

This vision of financial markets as governed by self-confirming conventions has been taken up by many later Keynesian economists.. Curiously it has entered into the mainstream only with respect to the price level, where the difference between "anchored" and "unanchored" expectations is considered critical for the behavior of inflation. All other expectations are assumed to be "rational," i.e. consistent with pre-existing fundamentals according to the theorist's preferred model.

Both liquidity and self-confirming conventions are tied to a distinctive epistemology , which emphasizes the fundamental unknowability of the future. In Keynes' famous statement in chapter 12 of the *General Theory*,

> By 'uncertain' knowledge ... I do not mean merely to distinguish what is known for certain from what is only probable. The game of roulette is not subject, in this sense, to uncertainty ... The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence, or the obsolescence of a new invention ... About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know!

The unknowability of the future is the reason why the flexibility provided by money – and by liquidity more generally – is valuable. It also rules out any explanation of asset values in terms of the true value of the incomes they will produce. Such true values do not exist, even as probability distributions.

It follows from this that an economy making use of long-lived capital goods (and long-lived business enterprises, and scientific knowledge) cannot be thought

of in terms of the allocation of scarce resources. First, because the future fruits of our present actions cannot be known. And second, more concretely, because uncertainty about the future creates endless coordination problems. The reason that many potentially valuable activities are not undertaken is not that they would require real resources that people would prefer to use otherwise. It is that people don't feel they can risk the irreversible commitment those activities would entail. Many long-lived projects that would easily pay for themselves in both private and social terms are not carried out, not because people are not willing to wait, but because an insufficient capacity for trustworthy promises means that large-scale cooperation appears too risky to those in control of the required resources, who prefer to keep their their options open. Or as Keynes put it:

> That the world after several millennia of steady individual saving, is so poor as it is in accumulated capital-assets, is to be explained, in my opinion, neither by the improvident propensities of mankind, nor even by the destruction of war, but by the high liquidity- premiums formerly attaching to the ownership of land and now attaching to money.

With Keynes, we see clearly how recognizing the autonomy of money transforms one's vision of the nonmonetary world. If money is merely a veil, that implies that the real world resembles money – it is composed of measurable quantities with well-defined ownership rights, which can be swapped and combined in straightforward ways. Seeing money as a distinct institution frees us to imagine economic life in terms of concrete human activity, with its own logics and structures. It also opens space for a vision of the good life as something quite different from an endless accumulation of commodities – a central strand of Keynes' thinking since his early study of the philosopher G. E. Moore.[56]

In contemporary debates – over climate change in particular – a "Keynesian" position is often opposed to a degrowth one. But as the British Keynesian economist Victoria Chick observes in a perceptive essay, there are important affinities between Keynes and anti-growth writers like E. F. Schumacher.[57] Keynes looked forward to a world in which accumulation and economic growth had come to an end, daily life was organized around "friendship and the contemplation of beautiful objects," and the pursuit of wealth would be regarded as "one of those semi-criminal, semi-pathological propensities which one hands over with a shudder to the specialists in mental disease."[58]

Keynes' vision of productive activity as devoted to its own particular ends, and of the good life as something distinct from the rewards offered by the purchase and use of commodities, suggests a deeper affinity with Marx and the socialist tradition. In his last book, Jim Crotty persuasively argues that the gradual replacement

[56]The lasting importance of Moore to Keynes's thought is discussed in Skidelsky, R. (1983). *John Maynard Keynes: Hopes Betrayed, 1883-1920*. Macmillan.

[57]Victoria Chick (2013), Economics and the Good Life: Keynes and Schumacher. *Economic Thought* 2(2): 33-45.

[58]J. M. Keynes, Economic Possibilities for Our Grandchildren.

of market coordination of production with conscious planning was central to his thinking.[59] The call for the "more or less comprehensive socialization of investment" at the end of the *General Theory*, Crotty argues, is not the throwaway line that it appears as in that book, but reflects a program that Keynes had been developing and struggling with since the 1920s. The Keynesian political program was not one of countercyclical fiscal policy, which he was always skeptical of. Rather it envisioned a number of more or less autonomous quasi-public bodies – housing authorities, hospitals, universities and so on – providing for the production of their own specific social goods, in an institutional environment that allowed them to ignore considerations of profitability.

However compelling one finds this rehabilitation of Keynes as a socialist, it is not this strand of his thinking that made him the most influential economist of the 20th century. Indeed, much of the development of "Keynesian" economics can be seen as efforts at domesticating him and expunging the more radical implications of his analysis. While there has, of course, been plenty of outright repudiation of Keynes by revived classical traditions, the central tendency in macroeconomics – a discipline that Keynes largely invented – has been to preserve his policy framework while strictly quarantining its theoretical underpinning.

To be fair, this process of domestication was begun by Keynes himself. His student Joan Robinson once remarked that Keynes sometimes had trouble grasping what his own revolution was about.[60] The notorious difficulty of the *General Theory* as a book (despite the fact that Keynes was one of the greatest prose stylists that the economics profession has seen) comes not only from the fact that he is working his ideas out for the first time, but also from the efforts he makes to accommodate more orthodox views. Robinson often dismissed the later neoclassical synthesis as "bastard Keynesianism," but given the effort Keynes himself went to prepare the way for it, it's hard to deny that it's his legitimate offspring – albeit not the only one.

These efforts at accommodation begin with the very first positive statement in the book, that the wage is normally equal to the marginal product of labor, which declines with output. (To be fair, he later described as the error he would most want to correct in a revised edition.[61]) More important for our purposes, they also include the retreat from the deeper analysis of money and credit in his earlier work, especially the *Treatise*. In that earlier work, liquidity played a role in a whole range of portfolio choices by banks. The ultimate terms on which credit was offered to the general public were determined within the financial system – money and credit were endogenous, in today's jargon. But as Joerg Bibow perceptively observes, banks

[59] James Crotty (2019), *Keynes against Capitalism: His Economic Case for Liberal Socialism*. Routledge.

[60] Robinson, J. (1973). What has become of the Keynesian revolution? In Robinson, J., ed. *After Keynes*. Basil Blackwell.

[61] J. M. Keynes (1939), Relative Movements of Real Wages and Output, *The Economic Journal*, Vol. 49, No. 193, pp. 34-51

have almost entirely disappeared in *The General Theory*.[62] Now, "the analysis of the motives for liquidity apparently refers to the general public only. The behavior of banks ... is hidden behind some given quantity of money generally assumed to be constant." In *The General Theory*, unlike in *The Treatise*, Keynes appears to share with Fisher and other mainstream quantity theorists the assumption that money is one distinct asset, sharply marked off from credit, whose quantity is fixed by the stock of gold reserves or the monetary authorities.

The marginal efficiency of capital (m.e.c.) is another area where Keynes' efforts to build bridges with his opponents muddles his argument. Formally, m.e.c. refers to the expected profitability of new investment, a subjective value that depends on an array of social as well as economic factors. But the language suggests something like physical productivity, an impression that is reinforced by Keynes' suggestion that it will steadily decline as investment is carried out. This rather un-Keynesian argument is later contradicted by the more reasonable claim that expected returns will be lower in the weak demand and pessimism of a downturn than in a boom, but it nonetheless is relied on at various points in the argument.

A third important concession to orthodoxy in the *General Theory* is the insistence in the book's concluding chapter that its criticism of contemporary capitalism applies only to the level of production, and not what is produced: "When 9,000,000 men are employed out of 10,000,000 willing and able to work, there is no evidence that the labour of these 9,000,000 men is misdirected." This seems to concede in advance to the postwar neoclassical synthesis, which limited the Keynesian program to the provision of an aggregate demand "thermostat," with production otherwise coordinated by the market. Taken in isolation the statement might seem defensible, but the specific mechanisms that Keynes blames for unemployment are in fact very relevant for how the labor of those who are employed is directed. The same self-regarding behavior in financial markets under conditions of uncertainty that push the interest rate away from the level consistent with full employment, can also push the expected return on specific types of real investment away from any rational calculation of private or social return, especially insofar as investment decisions are sensitive to the behavior of the stock market. This is a point Keynes is quick to acknowledge elsewhere. As he writes a few chapters earlier, "when the capital development of a nation is the byproduct of a casino, the job is likely to be ill done." Here and elsewhere, the book often seems to be in argument with itself.

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The domestication of Keynes did not happen overnight. The generation after him saw a flowering of inquiry into the relationship between money and credit

[62] Bibow, J. (2000), On exogenous money and bank behaviour: The Pandora's box kept shut in Keynes' theory of liquidity preference? *European Journal of the History of Economic Thought*, 7(4): 532-568.

and the world of production, with Robinson and her colleagues in the UK and writers like John Gurley and Edward Shaw in the US significantly extending Keynes' framework. A perusal of journal articles from the 1950s and 60s will find a much richer and wider-ranging conversation on monetary topics than today's.

The zenith of the monetary production view came during the period of ascendant Keynesian economics after World War II. The idea of money and credit as active forces shaping production fit naturally with the shift in the focus in economics away from efficient allocation of existing resources toward development and growth, active processes of transformation requiring direction by government, and in the vision of the economy itself from decentralized markets toward large, professionally managed enterprises.[63] Keynes' great American exegete Alvin Hansen wrote a discussion of money and credit in 1949 that is worth quoting at length:

> The issue of private money by privately owned banks was ... an extension of ... private credit. By setting up a bank, a business could arrange for the monetization of its own private credit. Privately issued bills of exchange were used to finance trade transactions, but only to a limited extent could ... circulate as media of exchange. ... Because trade and commerce required an adequate supply of money, banks were set up to "manufacture" money.
>
> ... Credit provided access to productive resources, and it promoted technological developments. It was not enough that rich natural resources were available to be exploited ... New undertakings had to be established and new production had to be set going. And this required money. ... *New* money was needed to set up a *new* circuit of production...
>
> ... Free banking was a natural development in an unrestrained frontier economy. ... The problem was to permit such manufacture of money as was *needed* in order to promote enterprise and commerce....
>
> The process of bidding resources *away* from others already using them efficiently is likely to result in price inflation, not in increased production and employment. If new money has this effect, the results are bad. But if new money facilitates an increase in employment and output, it serves a useful purpose.
>
> This is the great "money conundrum". The issue of new money *may* create wealth. No wonder every age has its money cranks. Money is magic. What economist ... does not get almost daily mail expounding "monetary cures" for all the ills of society....

[63] The definitive discussion of the tension between the growth of large corporations and the vision of the economy in terms of decentralized market exchange is chapter 6 of Doug Henwood's *Wall Street*.

> But the extreme monetary conservatives are as mistaken as the monetary cranks. Afraid of monetary "tinkering," they become monetary "prohibitionists." Yet what is required is *temperance*.[64] (all emphasis in original)

What's notable here is, first, the vision of money as an extension of private credit – a way of generalizing the promises people and businesses made to each other, and making their obligations transferable. Money is also seen as an active element in production, not just a "representative sign" of existing goods. Hansen emphasizes that the creative powers of money are not unlimited, but the recognition that monetary-reform programs often slip into crankery does not imply that nothing can be achieved through the expansion of credit. The idea of banks as manufacturers of something valuable rather than as intermediaries between savers and lenders would have been scandalous to economists just a short time earlier. (As Schumpeter observed, through the 1920s "it proved extraordinarily difficult for economists to recognize that bank loans and bank investments do create deposits.") But here it is taken for granted. Finally, and perhaps most characteristic of postwar American Keynesianism, there is Hansen's confidence that it is possible to strike the right balance - that "temperance" was an attainable virtue in monetary management.

Similar shifts happened elsewhere. In both postwar France and Japan, for example, conventional monetary policy was almost entirely displaced by credit policy, affirmatively directing bank lending both in quantity and kind. The primary goal in both cases was initially reconstruction and then industrial development; in both cases central banks were fully integrated into the larger program of industrial policy. Here again, the idea of money as neutral or objective is linked to the idea that the real world of production can be thought of in terms of fixed or given quantity of resources, while the idea of credit as active and elastic is linked to the idea of production as an open-ended process requiring conscious development. As Eric Monnet perceptively notes, the turn toward credit policy in France was linked to a broader "anti-Malthusian consensus" in postwar French politics.[65]

In the newly independent countries of the South, it was widely agreed that active industrial policy was essential to development, and that management of credit was an integral part of it. Alice Amsden observes that the nationalization of the banks was a "critical move" for South Korean industrialization, allowing the government to direct credit to promising export industries and prevent capital flight.[66] The United States and the new international institutions of the Bretton Woods order, in contrast to their later insistence on financial openness, were in this period often supportive of these efforts to manage credit at the national level. In the 1950s, a Federal Reserve's historian could report with satisfaction that, compared

[64] A. H. Hansen (1949), *Monetary theory and fiscal policy.* Pickle Partners Publishing..

[65] E. Monnet (2018), *Controlling Credit: Central Banking and the Planned Economy in Postwar France, 1948–1973.* Cambridge University Press

[66] A. Amsden (1989), *Asia's Next Giant: South Korea and Late Industrialization.* Oxford University Press

with older institutions, the new central banks being set up with the Fed's assistance were more likely to employ "instruments of general and selective credit control" and to pursue "a monetary policy designed to promote economic development."[67] In its first decades, the IMF required countries in balance of payments difficulties to *impose* capital controls, rather than - as it would from the 1980s onward – insisting on their removal.

The ascendance of Keynesian ideas about money and credit was relatively short-lived. The rolling-back of credit policy through much of the world was part of the broader neoliberal turn in economic policy, a broader topic we cannot explore here. But we will briefly discuss the corresponding developments in economic theory.

In a fascinating article, Victoria Chick describes the rise and fall of one key component of the money view, endogenous money, over the 20th century.[68] For an economist educated in the 1950s or 1960s like herself, it was obvious that the basic form of money in modern economies was bank deposits, and that these were created by the banks in the course of their lending activities (thus "endogenous" to the banking system). This meant that questions about money had to start from the choices made by banks and borrowers about extending and paying back loans. But, she observes, this understanding of money was not generally shared by economists of earlier generations, nor was it by those a generation younger.

For older economists, the image of money was gold or its paper equivalent; banks were strictly intermediaries, who could only offer claims to the money deposited with them. "Money proper" meant metallic coins or government-issued fiat currency, which banks merely transferred from one holder to another. In a much-quoted 1921 article, the English economist Edwin Cannan compared banks to cloakrooms; bankers could no more create money by lending than cloakroom attendants could create bags beyond those entrusted to them. A contemporary American economist insisted that "banks cannot make something out of nothing; they cannot create wealth, or money. The operations of legitimate banking are always ultimately based on salable goods, or property; if they are not so based, the operations cease to be legitimate and are purely speculative."[69] (This latter formulation, as Chick notes, wavers between a positive and a normative claim.) As late as the 1920s, there were textbooks on money that did not mention banks at all.

Somewhat surprisingly, this attitude seems to have been shared by bankers themselves, who one would think would know better. Chick quotes the chairs of the Westminster and Midland Banks, respectively, saying that "banks are strictly limited in their lending operations by the amount which the depositor thinks fit to leave with them", and that "the bank merely stands as an intermediary between the

[67] Quoted in Epstein 2007.

[68] Chick, Victoria (2005), Lost and found: some history of endogenous money in the twentieth century." In *The Monetary Theory of Production: Tradition and Perspectives.*. Palgrave Macmillan

[69] Quoted in Chick 2005.

depositor and the borrower." (These were public statements; perhaps they spoke differently in private.)

Even before the Keynesian revolution, this idea of banks as pure intermediaries (or cloakrooms) began losing ground. By the mid-1930s, a textbook could say, "Deposits are not something a bank has, but something it owes.... The picture ... of the banks receiving money from their depositors for"safekeeping", and lending some of this money out to others and buying investments with the rest is very far from the truth ..." (Altho with the apologetic proviso that that "this fact is very peculiar.") A bit later, the author expected readers to accept the idea that loans create deposits, and not vice versa, as not merely correct, but familiar – "an old banker's maxim." At midcentury, the idea of a fixed stock of money, which banks merely passed on from savers to borrowers, seemed definitively obsolete.

Keynes himself, as we have seen, played a somewhat ambivalent role in this shift. *The Treatise on Money* gives a clear and uncompromising statement of endogenous bank-created money. But in *The General Theory*, banks have disappeared and money is exogenously fixed, either by the "the moon" (metallic reserves) or a "green cheese factory under public control" (the central bank). On this specific question his position is not obviously different from that of old-fashioned quantity-theorist Irving Fisher, although of course his reasons for preferring the green cheese factory go beyond the price stability that Fisher focused on.

Be that as it may, the Keynesian revolution in macroeconomics went hand in hand with a recognition of the autonomous role of bank lending in money creation. By the 1970s, however, this recognition was once again fading, giving way to the money multiplier story of modern textbooks. In this story, while banks do create deposits, their ability to do so is strictly constrained by the availability of central bank-supplied reserves. And since banks are assumed to normally be fully "loaned up" to the limit of available reserves, the quantity of money can be treated as exogenously set by the central bank. As Chick documents, in the mid-20th century the availability of central bank reserves was typically mentioned as one factor among others that might influence the pace of credit creation. But as the century wore on, it became a binding constraint, and then the sole determinant, with deposit money described as a fixed multiple of central bank-controlled base money. This story – associated with Milton Friedman and his monetarist school before it became a neutral textbook fact – allowed economists to acknowledge that yes, technically, money was created by banks and was continuous with credit more broadly, while carrying over reasoning from a world of finite commodity money.

At this point, observes Chick, "The stage is set for the central bank to be seen not just as controller but as the prime cause of monetary change" – and indeed of macroeconomic outcomes in general. The irony, as Axel Leijonhufvud, ruefully observed, is that at the same moment as this intellectual evolution was taking place, the regulatory system that provided whatever quantitative control central banks had

once had over credit creation was in the process of being dismantled.[70] With the deregulation of banks in the US and elsewhere in the 1980s, just as textbooks were once again describing a fixed quantity of "M" set by central banks, central bank reserves had in reality ceased to be a meaningful constraint on bank lending.

In recent decades, any residual correlation between central-bank created "base money" and observable monetary and credit aggregates has entirely disappeared. (This was most dramatically evident following the crisis of 2007, when interventions by the Fed and other central banks led to an enormous expansion of base money, with no discernible effect on private money creation, credit conditions or the price level.) At the same time - and closely linked to this - the proliferation of new financial institutions and assets made the identification of money with commercial bank deposits increasingly obsolete. Today there is no meaningful way to even measure the quantity of money, let alone control it. Economics was swinging back toward Ricardo even as real economies continued to move the other way.

The retreat from the midcentury vision of endogenous money and credit had two stages. In the first – coming in the 1970s and 1980s in the economics profession, though with a longer afterlife in undergraduate textbooks and popular understanding – there was a return to the old idea of money as an exogenously fixed stock; changes in this stock determined changes in the price level but were irrelevant for real activity. (How this view of monetary neutrality could be reconciled with inflation control as a critically important policy goal was never really resolved.) This vision, associated with Milton Friedman and his fellow monetarists, was little different from that of Irving Fisher at the start of the century.

This revived quantity theory was embraced by central banks – the Bank of England first and then briefly by the Federal Reserve – in the late 1970s and early 1980s. In Friedman's telling, targeting the money supply would allow central banks to bring down inflation with no negative effects on real activity. It's doubtful how much the authorities ever believed this optimistic promise, which was quickly disappointed. For many central bankers, it is clear, the appeal of monetarism was rather that it offered a way to push through a sharp hike in interest rates without taking responsibility for it.[71]

During the 1990s, central banks definitively abandoned money-supply targets and - following the historical pattern – economic theory trailed after them. In the New Consensus Models that developed from the 1990s into the mid-2000s, central banks set the interest rate directly, which in turn determines the level of aggregate expenditure and thus inflation. The money stock became an unimportant residual quantity or even – as in Michael Woodford's highly influential work – disappeared from the models entirely. In the canonical models taught in graduate

[70] Leijonhufvud (1997), The Wicksellian Heritage, *Economic Notes* 26(1): 1-10.

[71] Some clear statements of this motivation from policymakers at the Federal Reserve can be found in Greta Krippner (2011), *Capitalizing on Crisis: The Political Origins of the Rise of Finance*, Harvard University Press.

macroeconomics classes today, money and credit do not appear; the interest rate – still somehow set by the central bank – is simply the relative price of current versus future consumption goods.

The Keynesian tradition, though in retreat, did not disappear, but has split into a number of distinct streams. Paul Krugman divides readers of the *General Theory* into "Part 1ers", who see its central message that the level of economic activity is determined by aggregate demand, and "chapter 12ers," who see it as fundamentally about the problem of decision making under radical uncertainty.[72] (Krugman, unsurprisingly, puts himself in the former group.) These imply quite different visions of the economy, but both are essentially monetary. Aggregate demand, as a flow of spending, has no meaning in a world where goods are exchanged directly for goods, while the positive content of fundamental uncertainty comes mostly through its implications for financial commitments.

In the US, the chapter 12ers are most obviously represented by Hyman Minsky (though his own intellectual formation owed less to Keynes than to Schumpeter and Kalecki). Paul Davidson, the founding editor of the *Journal of Post Keynesian Economics* is another outstanding figure here. On the UK side, G. L. S. Shackle may be the most important example.

Overlapping with but arguably distinct from Krugman's "Part 1ers" – these taxonomies are always a bit arbitrary – is what we might call structural Keynesianism, focused on the formal modeling of stable relationships between aggregate outcomes like output, unemployment, prices, and trade flows, without any explicit reference to individual markets or optimization. This lineage could be traced from Keynes' contemporary Harrod – whose own employment multiplier lacked Keynes' distinct epistemological framing – through development economists like Simon Kuznets and Hollis Chenery and mid century liberal Keynesians like James Tobin and Robert Solow, on to more self-consciously heterodox structuralists like Lance Taylor, the outstanding figure in this tradition until his death in 2023. Money and credit is a less central topic for this group, though it does come in through the use of sectoral accounting matrices tracing the flow of payments between various sectors.

Beyond the structuralists are the Cambridge (UK) Keynesians, led by Joan Robinson, who trace their lineage to Piero Sraffa and Keynes's Polish contemporary Michal Kalecki as much as to Keynes himself. This tradition emphasizes the "production" side of the "monetary production" dyad, admittedly at a high level of abstraction. The famous Cambridge controversies between Robinson and the American Keynesians at MIT, led by Paul Samuelson, have echoes of earlier debates around money, insofar as the central question was whether a profit rate could be derived from the conditions of "real" production in a hypothetical economy. But from a distance of fifty years, what's striking about the controversies is how much

[72] Krugman, Paul (2011), Mr. Keynes and the Moderns.

common ground the two sides shared, at least compared with today's mainstream.

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In recent years, the money view has faded to the fringes of the profession, kept alive in a handful of institutions by Post-Keynesians like Minksy and his followers, and by historically-minded scholars like Perry Mehrling. In its stead, the period through the late 2000s saw an increasing 'consensus' about the role of monetary management in the mainstream of economics. In this tradition, there was no role for monetary management except to deal with momentary mismatches between the prevailing benchmark interest rate and the 'natural interest rate' , or the rate of interest which leads to full employment. (In chapters 4 and 5 of *Against Money* we discuss this view in greater detail.) Here the role of monetary management was seen as entirely technocratic, involving no tradeoffs between social groups or objectives, but rather – when correctly carried out – operating in the common interest of everyone in the economy. In the late 1990s, as this view was coming to dominate, the OECD economies also experienced a period of relative macroeconomic calm, prompting a premature, as it turned out, declaration of victory over monetary instability.

The period before the 2008 crisis was characterized by a series of fulsome tributes to the wisdom of central banking "maestros" (the title of Bob Woodward's fawning biography of Alan Greenspan). Christina Romer — soon to head President Obama's Council of Economic Advisers — described the defeat of postwar Keynesian macroeconomics as a "glorious counterrevolution" and explained that

> better policy, particularly on the part of the Federal Reserve, is directly responsible for the low inflation and the virtual disappearance of the business cycle . . . The story of stabilization policy of the last quarter century is one of amazing success. We have seen the triumph of sensible ideas and have reaped the rewards in terms of macroeconomic performance. The costly wrong turn in ideas and macropolicy of the 1960s and 1970s has been righted and the future of stabilization looks bright.[73]

The date on which the "disappearance of the business cycle" was announced? September 2007, two months before the start of the deepest recession in fifty years.

Romer's predecessor on Clinton's Council of Economic Advisers (and later Fed vice-chair) Alan Blinder was also impressed by the philosopher-kings at the central bank and proposed extending the same model to a range of decisions currently made by elected governments.

We have drawn the line in the wrong place, leaving too many policy

[73]Romer, Christina (2007), Macroeconomic Policy in the 1960s: The Causes and Consequences of a Misguided Revolution. Speech delivered at the Economic History Association Annual Meeting

> decisions in the realm of politics and too few in the realm of technocracy. . . . [T]he argument for the Fed's independence applies just as forcefully to many other areas of government policy. .... Perhaps the model should be extended . . . The tax system would surely be simpler, fairer, and more efficient if . . . left to an independent technical body like the Federal Reserve rather than to congressional committees.[74]

The 2008 crisis, emanating as it did from the failed workings of monetary systems and settlement institutions resulted in a renewal of interest in the money view and monetary operations. As in the wake of earlier crises, there were renewed calls for reintegrating money into models and for Minsky's body of work to be disinterred and installed in the canon. Endogenous money, fragility and the vulnerability of financial and macroeconomic contracts in the face of uncertainty and illiquidity once again become legitimate topics for research and teaching. Still, it seems fair to say that there remains a wide gulf between the money view approach and orthodox economics. With few exceptions, economics textbooks still begin with the building blocks of the 'real' side, and add financial frictions only as a secondary detail. Money-view scholars like Perry Mehrling and his student Zoltan Poszar (and some of those in the self-consciously heterodox traditions) may reach a larger audience than they would have before 2007. But there is still little overlap with the central current of macroeconomics – and even less between work on the new world of international money and shadow banking (Daniela Gabor's work is the outstanding example here) and textbook accounts of international trade.

At the time of writing, we do seem to be at a moment of greater openness in discussions of money and economics more broadly than in many years – perhaps since the 1970s. But it remains to be seen whether the Keynesian vision of a monetary production paradigm can be revived or reconstructed. History suggests that whatever new thinking develops around money and credit, it will follow, rather than lead, developments in practical politics and policymaking.

Whatever the specifics, an economics that wants to understand our collective activity of transforming the material world through property rights, market exchange and workplace hierarchies – the domain we call "the economy" – needs to keep sight of the existence of money as a distinct institution, not reducible to any prior facts about the material world.

This draft as of October 29, 2026.

[74] Blinder, Alan S (1997), Is Government Too Political? *Foreign Affairs* Vol. 76, No. 6 , pp. 115-126