MONEY AS A LEGAL INSTITUTION[1]

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This essay summarizes the case for considering money as a legal institution. The Western liberal tradition, represented here by John Locke's iconic account of money, describes money as an item that emerged from barter before the state existed. Considered as historical practice, money is instead a method of representing and moving resources within a group. It is a way of entailing or fixing material value in a standard that gains currency because of its unique character. As the second half of the essay details, the relationships that make money work are matters of governance carried out in law.

Money has long played a central role in the character and culture of the Western world. It is seminal to economic activity and analysis: money provides the unit in which prices appear, supplies a medium of exchange, and acts as a store of value. Money is essential as well to critics of economic orthodoxy: according to Marx, capitalism arrived when individuals moved from exchange aimed to reproduce equal values to exchange aimed to accumulate monetary capital. Other commentators agree on the centrality of money, for better or worse. Karl Polanyi argued that money carried Western societies across a threshold that threatened the fabric of social life. Describing the 19th century, he wrote, 'All transactions are turned into money transactions, and these in turn require that a medium of exchange be introduced into every articulation of industrial life.' Popular culture restates that theme, whether observers identify the Gold Standard as 'the standard of civilization' or bemoan 'the almighty dollar.'[2]

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[1] To be published in David Fox and Wolfgang Ernst, *Money in the Western Legal Tradition* (2014).

[2] For a synopsis of economic approaches to money, see James Tobin, *Money* (2d edn, 2008) 3. For Marx's argument that society moved from the trade of equal commodities through the intermediary of money (C-M-C), to the sale of commodities for monetary profit (M-C-M'), see Karl Marx, *Capital: a Critique of Political Economy* (1976) 188. Karl Polanyi, *The Great Transformation: The Political and Economic Origins of our Time* (2nd edn, 2001) 44. For popular commentary on the dollar, see, e.g., William Jennings Bryan, '"Cross of Gold" Speech ' <http://historymatters.gmu.edu/d/5354/> ;

In an account that became iconic, John Locke agreed that money played a pivotal role in the development of European societies. For Locke, the medium was transformative: money allowed men to accumulate property through labor without violating the natural prohibition against waste. Before money, each man appropriated to himself only what his labor and the 'conveniences of life' allowed him. That measure 'did confine every man's possession to a very moderate proportion,' because 'no man's labour could subdue, or appropriate all; nor could his enjoyment consume more than a small part.' For the philosopher, man's labor created the right to property and man's capacity to use what he claimed provided a natural limit to that right:

> He that gathered a hundred bushels of acorns or apples, had thereby a property in them, they were his goods as soon as gathered. He was only to look, that he used them before they spoiled, else he took more than his share, and robbed others.[3]

According to Locke, money lifted that natural limit on the right to property. It allowed men to trade something durable for the material that would otherwise gone to waste. The impact was emancipatory: it released men from the strictures that discouraged their work and motivated them instead to invest in their land, to improve its cultivation, to enlarge their possessions. Money amounted, in other words, to the font of economic productivity. In Locke's words, 'he that encloses land, and has a greater plenty of the conveniences of life from ten acres, than he could have from an hundred left to nature, may truly be said to give ninety acres to mankind.' For Locke, money marked the difference between the civilized environs of Europe, and the wild landscape of the New World, 'Thus in the beginning all the world was America, and more so than that is now, for no such thing as money was any where known.'[4]

For all its miraculous effect, money arrives so quietly in Locke's chapter on property that readers need not think about what it is or how it works. The mystery is packed into the end of a paragraph about the labor theory of value and the prohibition against waste. A man could, notes Locke, give away any extra fruit he collected to avoid letting it spoil. Alternatively, he could trade it for something that would not decay:

Washington Irving, 'The Creole Village' in Roberta Rosenberg (ed), *The Complete Works of Washington Irving*, vol 27 (1979 [1937]).

[3] John Locke, *Second Treatise of Government* Ch. V.

[4] Ibid.

> And if he also bartered away plums, that would have rotted in a week, for nuts that would last good for his eating a whole year, he did no injury; he wasted not the common stock; destroyed no part of the portion of good that belonged to others, so long as nothing perished uselessly in his hands. Again, if he would give his nuts for a piece of metal, pleased with its colour; or exchange his sheep for shells, or wool for a sparkling pebble or a diamond, and keep those by him all his life he invaded not the right of others, he might heap up as much of these durable things as he pleased; the exceeding of the bounds of his just property not lying in the largeness of his possession, but the perishing of any thing uselessly in it.[5]

The next paragraph confirms that Locke has said all he will about how money enters society. As Locke puts it there:

> And thus came in the use of money, some lasting thing that men might keep without spoiling, and that by mutual consent men would take in exchange for the truly useful, but perishable supports of life.[6]

Scanning back for the operative moment, we find that money is 'a piece of metal,' that a man might accept in trade because he was 'pleased with its color,' 'shells,' or 'a sparkling pebble or a diamond.' The equation is arresting in its simplicity and its subjectivity. We have an account of one man's trade for a lovely object, an appealing vignette about an early world. But as a tale intended to explain money, it raises as many questions as it answers.

Why would anyone living on the edge, in a subsistence world with little margin, work to 'heap up' shells, or pieces of metal? Why is that person an incipient capitalist rather than a naïf, willing to work for baubles? In a world that was, by definition, uncivilized, why wouldn't a stronger man just take back the bauble if he so desired? Why would people ever begin to measure goods in terms of a material that no one needed? What good comes to hand in units like that? How, in other words, is the singular act that Locke portrayed generative of a collective and continuing consensus, one that explains rather than assumes the 'fancy or agreement' that would attribute value to 'money'?

Locke's account typifies a modern trend, one that ellipses the making of money and declares rather than explicating the way that medium works. Indeed, the

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[5] Ibid.
[6] Ibid.

philosopher's account may well have triggered the trend.[7] The narrative most commonly offered to explain what money is and why it holds value suggests that people create money when they start to use a commodity of natural value, like Locke's piece of metal, as a medium. According to the conventional wisdom, they do so gradually, eventually adopting an object that all value in common because barter without currency is awkward. People who have certain goods that they would like to trade, pigs for example, need to find trading partners who both have want they want, cheese perhaps, and want pigs in return. Often, this 'double coincidence' of wants does not occur and the farmer with pigs must trade for items that may be of more interest to the cheese seller. The farmer may trade his pigs for hens, then trade hens for corn, then corn for wood, if he anticipates that the cheese seller wants wood and will give cheese to get it. All the deals are made difficult by time and distance.[8]

The problems created by barter would be alleviated if everyone recognized one commodity as the 'universal equivalent,' a material that each person accepted as a valuable good that could be traded in the future. In that case, the pig farmer could take the universal equivalent in payment from whoever wanted his pigs, and he could use that material as payment when he bought cheese. Some accounts imagine that the choice is made by mutual consent – a social consensus of sorts. Locke in his later years argued that silver claimed status as the 'equivalent to all other things' because of 'that estimate which common consent has placed on it.' That acclaim made it 'the universal barter or exchange which men give and exchange.'[9] Others imagine a teleology that produces convergence: 'As economizing individuals in social situations became increasingly aware of their economic interest, they everywhere attained the simple knowledge that surrendering less saleable commodities for others of greater salability brings them

[7] For an account of Locke's influence, see Christine Desan, *Making Money: Coin, Bank Currency, and the Coming of Capitalism* (2014) [Ch.10].
[8] See, e.g., Tobin 3; Ross Levine, 'Financial Development and Economic Growth: Views and Agenda' 35 Journal of Economic Literature 688, 690.
[9] According to Locke, the consensus was global, and 'even the *Indians* rightly call it, *measure*.' John Locke, *Further Considerations Concerning Raising the Value of Money* (1696) 410. Examples of similar reasoning from the 19th and 20th centuries abound. See, e.g., Joseph B. Felt, *An Historical Account of Massachusetts Currency Microform* (1839) 10; Tobin 1.

substantially closer to the attainment of their specific economic purposes.' Exchanging awkward objects for more commonly demanded objects, eventually people came to recognize one commodity as the medium that all would give and take. 'No one invented it,' concludes one author, 'money is a natural product of human economy.'[10]

But the convergence story raises as many questions as Locke's early account. Each entails a kind of circularity, a Catch-22 of causation. First, the objects that appear as 'money' in the historical record – shells and metal tokens most commonly – are not obviously the most 'saleable' commodities in a subsistence economy. They are of little intrinsic use to those eking out a meager living – until, of course, they are money.[11] Second, objects of value would need to be standardized in order to be able to act as a uniform measure or constant unit of account. But it would not be worth anyone's time to standardize them until they had attained stature as the unit of account. Third, the convergence story assumes conditions of order – contract and property rights in the materials transferred. But that assumes a polity or community with the resources to enforce contract and property rights. The world of barter would not likely support a mode of governance that enforced monetary transfers, unless the group could use money to pay for that governance work. Fourth, the fact that an object began to circulate as money would not ensure its continued circulation. A powerful person or group could easily hoard the conventional resource, forcing everyone to trade with them or destroying the consensus that supported money. Only devices that ensured that the units acting as currency constantly entered and left circulation—only a working money supply in other words—would keep the system functioning. Fifth, and enough for the moment, whatever the origins of money in an object of value, money today is made of paper. If the consensus that supported silver ever occurred, its days are over. According to the economics books, we value a dollar only because everyone else does, but the strength of that 'network' effect is an untested assertion, made for lack of another explanation.

[10] Carl Menger, *Principles of Economics* (James Dingwall and Berthold Frank Hoselitz trs, 1981) 263.
[11] Livestock and other perishable commodities were probably not as commonly chosen as money as once thought. See, e.g., Mark S. Peacock, 'Accounting for Money: The Legal Presuppositions of Money and Accounting in Ancient Greece' Business History.

We might imagine answers to the mysteries created by the convergence story and the ongoing efficacy of money, even money made of paper. For centuries, however, the practice of money has suggested another story. Money in the Western world is a legal institution, a means of packaging value that depends on a set of opportunities and obligations defined by the polity. That process is an ongoing one, one that affects the way people relate to each other and to the larger community. In that sense, the process of making money involves people both as individuals and as a collective. It serves both private and public purposes. Like any other mode of governance, it can be structured in ways democratic or dictatorial. For good or ill, it is designed by those using it. Likewise, it is susceptible to redesign that changes the way it circulates and the exchange it enables.

The case for considering money as a legal institution can start where Locke left us. If we add to his story the conditions that would make it work, we can indeed produce a 'money.' That money is neither an object—the lump of silver that the philosopher imagined—nor an abstraction— the convention that those observing paper money assume. Money is, instead, a method of representing and moving resources within a group: it is a way of referencing or entailing material value that creates a unit to measure other resources over time, pay off obligations finally, and transfer value immediately.[12]

The description of money as a legal institution revises the Lockean story in three dimensions. First, there are individuals in the revised story, but there is also a group—the set of people who are claimants to a pool of resources. We might imagine a collective (a family, clan, tribe, or polity) bound together at least for protection against those who would simply take their property. Locke's primitive man could otherwise be quickly disappropriated by a passing barbarian. Second, there is a process in the revised story, an interaction that brings Locke's individual and the group he inhabits together to recognize value in a unit that has relevance to all of them. Otherwise, there is no reason to assume that the unit coveted by one individual would gain status as a common referent for value. Third, the process that creates a relevant unit is perpetuated; it operates through an agreement, a set of rules or norms—we might call them laws. Money, it turns out,

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[12] For the standard definition of money as a unit of account, store of value, and medium of exchange, see, e.g., Tobin 4. On the payment function of money, see Stephanie Bell, 'The Role of the State and the Hierarchy of Money' 25 Cambridge Journal of Economics 149.

depends on a set of concepts—'credit,' 'debt,' 'commodity,' 'payment,' 'sale,' 'contract,' even (or especially) 'property'—that are legal categories. Only by recapturing money's legal architecture can we understand how it operates to transfer goods, effectuate a deal, or generate stable exchange.

The next pages unpack each dimension to develop the story that explains money as an institution, one that creates a material referent for value, enhanced by its distinctive capacity as a measure, mode of payment, and medium. According to that story, individuals advance value to a group in exchange for a unit that everyone else recognizes; each person has reason to accept and use the token because the group endorses as the item that will pay off obligations to it. Through that arrangement, the public gains a way to mobilize resources on demand. Individuals, meanwhile, gain a shared technology of value that facilitates exchange. Legal relationships structure the dynamic; as they change, the money they produce changes also. Indeed, money has taken many different forms in the West, each a product of the legal process that shapes it.

I. MAKING MONEY 'REAL'

As in Locke's account, our story begins in a world without money.[13] People act together and separately in this world, like any other. They bond for many reasons, including social life, productive exchange, and the defense of their homes and goods. Their common stake can be rooted in family, land, shared resources, a commitment like mutual protection, or a combination of many such interests. They contribute to maintain their place in the group, providing labor, goods or supplies, or military service. Chris Wickham describes early Anglo-Saxon England in terms that offer one example. There, small rulers led communities often related by birth or loyalty in return for tribute in labor, produce, and military service. In other eras, kings or counsels, warlords, or more structured governing bodies may control or represent the group; we might call those

[13] For a more detailed history of money's construction in the early Anglo-Saxon era, see Christine Desan, 'Creation Stories: Myths about the Origins of Money' Harvard Public Law Working Paper No 13-20
<http://papers.ssrn.com/sol3/results.cfm?RequestTimeout=50000000> .

leaders 'stakeholders' to cover the variety while avoiding the implication that every collective activity is undertaken by a 'state.'[14]

The early Anglo-Saxon world furnishes a setting as well for the next stage of the story. According to most scholars, monetary activity in Britain broke down after the withdrawal of Roman forces in the early 5th century. The archaeological record, including numismatic evidence, suggests that the break with the imperial economy was virtually complete. Inhabitants experienced a 'drastic lessening of their living standards and political horizons' and a dramatic decline in the 'sophistication of material culture.' According to Wickham, 'exchange structures collapsed everywhere' after about A.D. 410. Pottery shards and looms indicate that production moved to the household, where families made ceramics and clothing for home use.[15] Other scholars argue for a more gradual decline and some survival of Roman influence, but even the revolution in numismatic evidence that has occurred with the advent of metal detecting and the increase in coin finds has not revised the basic consensus that a grave rupture in monetary activity occurred.[16]

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[14] Wickham argues that early Anglo-Saxon societies consisted of peasants who were fairly autonomous economically, men not locked into feudal tenancies but dependent instead by bonds of 'mutual obligation and loyalty.' Rulers collected tribute reliably, in food, labor in bridge-, and fortification-building, and 'above all, army service.' Chris Wickham, *Framing the Early Middle Ages: Europe and the Mediterranean, 400-800* (2005) 305.

[15] See Wickham 307; Gareth Williams, 'The Circulation and Function of Coinage in Conversion-Period England, c. AD 580-675' in Barrie Cook and Gareth Williams (eds), *Coinage and History in the North Sea World, c AD 500-1250* (2006) 158; Richard Abdy, 'After Patching: Imported and Recycled Coinage in Fifth- and Sixth-Century Britain' in Barrie Cook and Gareth Williams (eds), *Coinage and History in the North Sea World, c AD 500-1250* (2006) 75; Peter Spufford, *Money and its Use in Medieval Europe* (1988) 9; Stewart, in C. E. Challis, *A New History of the Royal Mint* (1992) 3.

[16] For a review, see Williams 154; see also Abdy 94; Rory Naismith, *Money and Power in Anglo-Saxon England: The Southern English Kingdoms 757-865* (2012) 15; T. S. N. Moorhead, 'Roman Bronze Coinage in Sub-Roman and Early Anglo-Saxon England' in Barrie Cook and Gareth Williams (eds), *Coinage and History in the North Sea World, c AD 500-1250* (2006); Christopher; Dobney Loveluck, Keith; Barrett, James, 'Trade and Exchange -- The Settlement and the Wider World' in *Rural Settlement, Lifestyles and Social Change in the Later First Millenium AD: Anglo-Saxon Flxborough in its Wider Context* (2007) 112.

The inhabitants of 5th and 6th century Britain were, then, largely bereft of a common measure and media of exchange. They lacked a shared unit of account to value goods; according to current consensus, they used the old Roman coins that still circulated as jewelry, commodities, or weights.[17] Barter was an illiquid alternative. Rather than a world of easy exchange, deals were fragmented by distance, difficulty of travel, and the absence of information about the availability of goods. Households that engaged in subsistence production surely traded among themselves; scholars find evidence of gift-exchange as well as tribute changing hands, even as the remaining coin appears most often in ornamental use. But as a recent history concludes, 'all forms of market exchange, beyond the simplest . . . must have ceased.'[18]

In such circumstances, most individuals would be hard-pressed to set aside silver, much less gold. Both metals were scarce; they took skill and equipment to work; neither had a practical use beyond the aesthetic. Each would be risky to hold and foolhardy to hoard. Given their high cost, the supply of silver or gold would be as erratic as demand. The argument that people would, acting incrementally and in parallel, predictably converge upon a shared money, let alone one made of metal, is far-fetched under those conditions.[19]

The community as a whole, however, was in a somewhat different situation. If anything, its need for a measure and mode of payment was especially great. While individuals could engineer idiosyncratic trades, groups collected goods and services from many hands and deployed them to a variety of uses. Communities in early Britain repeatedly rallied to construct bridges and fortifications, defend themselves, and support their forces.[20] That work could be done on the basis of in-kind contributions; charters from the English 7th and 8th centuries list the produce collected by the Anglo-Saxon kings—vats of honey, 'ambers' of ale, cows, loaves of bread, geese and chickens. But

[17] Abdy 75; Williams 145; Moorhead. Some bronze Roman coinage may have been used locally. See Abdy 93.
[18] Wickham 307.
[19] Carlo Cipolla's comparison between subsistence and wartime survival makes the point powerfully. See Carlo M. Cipolla, *Money, Prices, and Civilization in the Mediterranean World, Fifth to Seventhteenth Century* (1967) 9.
[20] See Wickham 315 for the prevalence of these projects by the small polities of the early Middle Ages.

romantic as in-kind collections may sound, the supplies must not always have fit the function. Conversely, collecting support in-kind created difficulties for stakeholders: the peripatetic habit of the early Anglo-Saxon rulers may have been driven in part by the need to move to gather support in-kind.[21]

If groups, considered in the figure of those who governed, had particular need for a currency, they also had unique capacity to create it. Their location at the hub of a community meant that they could easily invent money. The innovation occurred when a stakeholder identified a unit and began to use it as a kind of receipt to represent resources given to the group. That could happen without much planning—in fact, weak leaders without clear command of the resources in their community may have been especially inventive. Finding themselves unable to time their demands to match scheduled contributions, one such stakeholder could instead take an amount of goods or services early, giving in return a token that the recipient could provide later, at a time of reckoning, as proof that the service had been rendered. Continuing the technique, the stakeholder could mark other contributions in the same way.

The intervention, taken by an actor to whom many people were obligated, would create a standard of value across many goods. While no pair of people making deals could establish a unit of account for the exchange of others, the stakeholder could use his position as the common partner of all to set a unit apart. The novelty of a commensurable and circulating measure is easy to overlook from the vantage point of the 21st century, a world awash with different forms of liquidity, from money market mutual funds to Eurodollars. But in a world bereft of any shared unit of account, a token that entailed value relevant to people in common was an extraordinary accomplishment.

First, the strategy enabled public action: it opened up new ways to marshal and mobilize resources for the stakeholder. It effectively allowed him to choose the goods or services he needed when he needed them in return for a token, while retiring the token afterwards by taking it back. That is, innovating money allowed the stakeholder to spend now and tax later, a material achievement. Note that each unit of account represents an amount due to the center. In that sense, every unit of account has a material referent: it is worth as much as the in-kind amount it represents. Indeed, the material referent for the

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[21] Ibid; Naismith 29.

unit of account is regularly made real in physical terms. Once the system is up and running, revenue can be routinely collected in money. But if those owing the stakeholder do not pay in money, the authority will confiscate other goods—house, tools, produce, whatever will pay off the obligation due.

A number of economic models confirm the fiscal component of money's value. As they suggest, money can be considered an asset with a value set according to its future utility in extinguishing a tax obligation. According to those models, the stakeholder can spend by giving people notes that they can use to pay their taxes. As long as the center reliably taxes in the notes, they will maintain their value.[22] The dynamic can also be captured in more classic, quantity theoretic terms. Under this approach, money holds its value insofar as its supply remains constant relative to the demand for it. Spending by the government and taxing by the government enlarges and constricts money's flow. As

[22] More precisely, the models assume that the notes will be spent at a discounted value, as people selling to the government calculate the value of the note by considering its use in the future for taxes. The discount occurs if the notes are useful only to pay taxes, and not as cash in the interim. In that case, those earning them have labored early and received a token that holds value only in the future. If they had put the same labor into something that grew in the meantime (presumably by the rate of the real interest rate), they would have more wealth by the time of the tax. In that sense, unless they are paid more at the outset, they will lose value by working early and earning a nonproductive asset. Here, see the asset-pricing models of early American bills of credit, Bruce D. Smith, 'American Colonial Monetary Regimes: The Failure of the Quantity Theory and Some Evidence of an Alternate View' 18 Canadian Journal of Economics 531; Charles W. Calomiris, 'Institutional Failure, Monetary Scarcity, and the Depreciation of the Continental' 48 Journal of Economic History 47; Bruce D. Smith, *Money and Inflation in Colonial Massachusetts* (2002), and the responses to them, Scott Sumner, 'Colonial Currency and the Quantity Theory of Money: A Critique of Smith's Interpretation' 53 Journal of Economic History 139; Peter Bernholz, *Inflation, Monetary Regime and the Financial Asset Theory of Money* (1988). See also Farley Grubb, *Is Paper Money Just Paper Money? Experimentation and Local Variation in the Fiat Monies Issued by the Colonial Governments of British North America, 1690-1775* (2012) (abstracting out liquidity value and modeling paper money as a zero-coupon bond). We could analogize the situation to an 'origins' story in which the stakeholder provides a token that will exonerate the holder from a future tax, but takes a lower in-kind contribution than would be due in the future. Alternatively, the stakeholder could simply coerce early labor or, as below, use a token to buy the same in-kind contribution that is due eventually but that will provide cash services in the interim.

they anticipate expansion and contraction in supply relative to demand, people determine how much to value to attribute money.[23]

Second, money as a strategy changed relations in the private world: a unit of account that entailed value could be used by individuals as well as the stakeholder. The worker who initially received the token in our story need only be allowed to trade it to another, who could use it on his or her own behalf at the reckoning. Making a token transferable would be a simple modification but—in a world without a shared measure, medium, or agreed upon mode of payment —a revolutionary one. Once the token was allowed to travel, the person with it held an item that every other person who owed a contribution the center would be willing to take in exchange for goods. That is, we have a unit that represents material value relevant to everyone (or virtually everyone) in the society, given their common relationship to the stakeholder. Thus assured of the token's value, each person would be willing to give and take it. The unit creates a shared standard of value, thus making prices possible; it can move hand-to-hand; and it provides a payment that is secure as long as the stakeholder (or the political society he often symbolizes) lasts.

Between the time a token issued and the time it was taken back, then, the tokens provide an interim service to individuals that is just as substantive as their fiscal value to the group. That service would be very valuable—singularly valuable—in a world that was otherwise without any shared standard of measure or any mode of exchange and payment made reliable by enforcement. In that world, a person will work early for tokens because he can use the tokens to make productive transactions. In the world where the innovation of money is helpful as cash, those with goods to trade will want the tokens too. The economic models that theorize money's fiscal value, described above, recognize that people attach additional value, a kind of cash premium, to money insofar as they value the services it provides. According to those models, rather than discounting a token good for taxes in the future as if they were holding a nonproductive asset, they

[23] See, e.g., Sumner. Sumner's model, like the asset pricing alternatives, was built to explain colonial America, a world without circulating credit. The proliferation of credit would complicate the way people calculate price.

may discount it less or not at all. In the latter case, they are treating money as an asset that provides just as much productivity as another resource.[24]

Early English history supports the notion that money is engineered on a fiscal frame and offers a singular service to individuals as an object that be counted, transferred, and used to pay off obligations. According to most accounts, the Western Roman Empire ran its highly monetized economy on a fiscal base: it drove coin into circulation by spending and taxing robustly to support its expansive military and administrative state. Indeed, Simon Esmode-Cleary argues that the British economy collapsed so completely in the 5th century because it was tied so closely to the Roman system: when imperial taxation ended, so also did the pump putting money into the system.[25] There is little doubt that the economic meltdown in post-imperial Britain—a recent history calls the event catastrophic—occurred when the systems of exchange supported by Rome fell apart. For two centuries, the archaeological record suggests that money ceased to function. People lived of their own, rather than by specializing their production to any significant extent.[26] Their experience suggests that when a working money arrived, people would attach a premium to it as cash.

Money becomes 'real,' then, when we adjust the Lockean story. Rather than emerging from a convergence of independent deals, money arises from a coordinated initiative, one fiscally engineered and productive of cash services to individuals. In fact, many accounts about money suggest just that character—we might sample the evidence provided by coin itself, the practice of free minting, judicial commentary, and academic theorizing.

Coins provide testament to their own creation. They began to circulate in Britain in the early 7th century, appearing first as gold scillingas and expanding when the English

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[24] People are acting as if the service provided by money is worth the real interest rate, a cost they are paying by holding cash without the deflation that would effectively return value to them (as prices fell and the token gained value). See, e.g., Smith, 'American Colonial Monetary Regimes: The Failure of the Quantity Theory and Some Evidence of an Alternate View' 533; Calomiris.

[25] A. S. Esmonde Cleary, *The Ending of Roman Britain* (1989) 138; see also Spufford 14; Wickham 308.

[26] See supra TAN. The evaluation that the breakdown of material culture was a 'catastrophe,' compared to the merely recessionary crisis in Gaul, is from Chris Wickham. Wickham 307.

began minting silver sceattas in the 670s.[27] While gold coin often imitated Roman imperial precedents, silver sceattas boasted beautiful and varied designs, including animal forms, diademed busts, and a longhaired or helmeted figure with a hawk. For some scholars, the variety suggests that money emerged as a private industry.[28] For others, however, the plethora of types reflects the political geography of Britain at the time—small 'closely governed' kingdoms and maritime towns or 'wics,' each of which could well have produced its own coin. According to that reading, many of the symbols that grace sceattas—the bust, certain animals, the helmeted figure—are imprimaturs of the community's stakeholder, here a small ruler or one of his delegates.[29] That diagnosis fits neatly with the notion that collectives of many types can 'make money' according to the strategy described above.[30]

In any case, by the end of the 8th century, English rulers made their authorship of coin unambiguous. Beginning in Northumbria and then in the Mercian and Wessex, kings unified larger territories and built stronger political structures. Their authority was imprinted on their money: like the coin of the Roman Empire, it carried their names and portraits and was produced by moneyers they controlled. Both dues and tax burdens and exchange increased, along with specialization in production of commodities like pottery. That is exactly the pattern we should expect if money is created on a fiscal frame and provides cash services along the way.[31] The power of the Anglo-Saxon kings that followed, along with sophistication of their minting and revenue-raising machinery, has become legendary.[32]

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[27] Naismith 5; Williams 161.

[28] Naismith 37; Philip Grierson and others, *Medieval European coinage: with a catalogue of the coins in the Fitzwilliam Museum, Cambridge* (1986) [].

[29] D. M. Metcalf, *Thrymsas and Sceattas in the Ashmolean Museum Oxford*, vol 1 (1993) 12.

[30] It gains additional force when we note the versatility of the strategy: a community can put a coin into play partially and improvisationally. Similarly, the tokens might travel only within certain circles, elites for example, or among town-dwelling traders who paid dues, bought, and sold in coin.

[31] Metcalf 113; Naismith 7. For the political development of these early kingdoms, see Wickham 303; compare Loveluck 119.

[32] Patrick Wormald, *The Making of English Law: King Alfred to the Twelfth Century*, vol 1: Legislation and its Limits (2001); Naismith 87; Ian Stewart, 'The English and Norman

The practice of making commodity money provides another form of evidence that corroborates the 'real' story. Note that in the account above, tokens produced by the stakeholder acted as the unit of account. The tokens could be made of anything, as long as they were exclusive to the stakeholder and could not be imitated; otherwise, people could fraudulently multiply the number of receipts that circulated.[33] Making tokens out of a material that was scarce, durable, and difficult to work—thus long-lasting and hard to counterfeit—made great sense under the circumstances. The English, like most Europeans more generally, turned to silver. Under a system called 'free minting,' they opened mints that sold inhabitants coin on demand: buyers brought in a pound of bullion, for example, and got it back in coined form less a small charge for the work. Thus the mint might produce 242 pennies from a pound of silver, keep a fee of 12 pence for the moneyers and the king, and return 230 pennies to the buyer.[34] (The counterintuitive label, 'free minting,' came from the fact that the government stood ready to coin as much money as people wanted, provided they paid the fee.)

By definition, the system identified the value of silver in coined form with the value of the tax obligation. When a person turned in 230 pennies in taxes, he or she used it only for its fiscal value.[35] Hypothetically, the taxpayer could hand over the pound of bullion, leaving the government to make coin and pay itself its minting fee. (The tax and the fee could be conceptualized together as a larger levy.) Despite that possibility, people went to the mints and paid for coin independent of the time their taxes were due. They acted because they valued the cash services of money: when others felt the same way, prices in coin were low because people would give more goods for each coin. That

Mints, c. 600-1158' in C. E. Challis (ed), *A New History of the Royal Mint* (1992) 49; Spufford 90.

[33] Indeed, units of account could be entries in an account book, so long as they could not illicitly reproduced. See, e.g., Morgan Ricks, 'Preface and Introduction' in *A Monetary System Design* (2013).

[34] See, e.g, Angela Redish, *Bimetallism: An Economic and Historical Analysis* (2000) 27. For a contemporaneous account, comparing English charges to others on the Continent, see, e.g., 'Assay of the New Money' (1248); and 'A Treatise on the New Money' (c. 1280) in Nicolas Oresme, *The De Moneta of Nicholas Oresme and English Mint documents* (Charles Johnson tr, 1956) 53.

[35] 230 pennies would be an absurdly high tax; it is only used here to show the relationship between coin and bullion values most simply.

is, they preferred having money to having bullion, even bullion that amounted to a greater amount of silver. People 'bought' coin, then, because although they received less silver from the mint, they received it in the form of coin—and coin carried a premium that made the cost worthwhile. Eventually, as people continued to go to the mint to buy coin, prices would rise: pennies would lose value because more were circulating, all else equal. At a certain point, prices would be high enough that inhabitants would rather have their silver bullion than a greater supply of coins, and they would stop going to the mints.[36]

In its very design, free minting showcased both the fiscal component of money's value and the fact that coin often bore a premium as cash over silver bullion. As the system operated, it compelled people to buy enough coin to cover their obligations to the government; otherwise, they would pay the consequences in confiscated assets. The government had thus contrived a way to produce tokens, charging for them all the while. In turn, individuals supplemented the amount of coin needed to satisfy the fiscal needs of government: to the extent that they wanted more money, they bought more coin at the mint. All along, the system protected the government and community from inflation by controlling the amount of money produced: those buying additional money 'paid' for it by creating more coin that had innate value cognizable in the taxed unit (the tax had, after all, been identified with a certain amount of silver due), plus whatever cash premium it carried. Put another way, there was no danger from loss caused by oversupply of money because people stopped buying it as soon as they valued silver bullion more highly than coin, a decision prompted when prices rose above the point at which minting was worthwhile. In short, free minting produced money tied, coin-by-coin, to the value of the units due for taxes while allowing people to buy as much coin as they could to satisfy their desire for cash.

Commentators have theorized money in ways that comport with the account developed above. In many ways, the courts have witnessed most directly to the character of money as they enforce it. In keeping with the example of English 'free minting' is the

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[36] In fact, if prices kept rising, people might even begin to melt existing, increasingly low value, pennies. At the 'melting point,' they preferred to have the silver in coin than the coin. See generally Thomas J. Sargent and Francois R. Velde, *The Big Problem of Small Change* (2002).

early modern case that confirmed the sovereign power to define the unit of account. *The Case of the Mixt Money* arose in the early 17th century, occasioned because Elizabeth I had debased the silver coin circulating in Ireland. Her action left it unclear whether private creditors should be paid in the original, heavy-weight coin or their new, lighter replacements. If money depended on the stakeholder's authority to determine what passed current, a matter decreed by the government and implemented when it taxed and spent, then the new, lighter money must be a legal mode of payment. If, to the contrary, money meant an amount of silver, the product of private agreement, then the debased money was invalid. [37]

The Case, authoritatively discussed elsewhere in this volume, vigorously confirmed the Queen's authority.[38] '[T]he most precious and pure metal' could not be money, the jurists reasoned, without 'the extrinsic good' provided by the sovereign form. It was not the 'natural material of the body of money,' that composed it, they continued, quoting Molinaeus (Charles DuMoulin), 'but its imposed value that is the form and substance of money.' That was 'not of a physical body, but rather a contrived one.'[39] Invoking civilian as well as common law sources, they returned to Molinaeus ('By law it matters not whether more or less silver is contained within it, so long as it is official (*publica*), genuine, and legitimate'), quoted Balaus ('With coinage, one should pay more attention to its use and circulation than to its substance'), and finally came to Seneca ('Both the man who owes gold coins and the man who owes leather imprinted with an official stamp is said to be in debt.')[40] Each authority suggested that money was a matter collectively engineered to entail value anchored by its use in a polity.

The gathering of evidence ultimately includes, happily enough, academic commentators. Adam Smith's observation takes us forward to the world of paper money, a place consistent with the world of tokens we first imagined. Smith, without wasting a word, conveys both the logic that fiscal activity fixes value in a currency and the reality

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[37] *Le Case de Moneys Mixt (Case of the Mixt Money)* English Reports (Cobbett's Complete Collection of State Trials). The *Case* was decided by the Privy Council acting as the relevant judicial authority for Ireland.
[38] David Fox, 'The Case of the Mixt Money' in David Fox and Wolfgang Ernst (eds), *Money in the Western Legal Tradition* (2014).
[39] *Case of the Mixt Money* 124 [Latin text].
[40] Ibid [Latin texts].

that the currency can provide cash services as valuable as the silver or gold coin it displaces:

> A prince who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind might thereby give a certain value to this paper money, even though the term of its final discharge and redemption should depend altogether upon the will of the prince. If the bank which issued this paper was careful to keep the quantity of it always somewhat below what could easily be employed in this manner, the demand for it might be such as to make it even bear a premium, or sell for somewhat more in the market than the quantity of gold or silver currency for which it was issued.[41]

Smith spoke out of a century of experimentation with paper money. Bank money, public debt, commercial notes—all invited analysis as credit forms. By the following century, credit had become king: the rise of deposit banking would expand the money supply in real terms until it was more than five times larger than it had been on the eve of the Glorious Revolution.[42] In the early 20th century, Georg Knapp would dub money a 'chartal' form, adopting the Latin term for 'ticket' to denote money's character as a token that could pay off a debt, most particularly a debt of the state. The approach marginalized the commodity content of money. As Knapp pointed out, 'a man who gets rid of his debts' spent little time considering what material made up his means of payment.[43] He cared instead that the state 'when emitting it, acknowledges that, in receiving, it will accept this means of payment.' Knapp's 'state theory of money' emphasized the fiscal engineering that undergirded money's value.[44]

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[41] Adam Smith, 'Chapter II (continuation): On Money considered as a particular Branch of the general Stock of the Society, or of the Expense of maintaining the National Capital ' [The Modern Library, Random House, Inc.] An Inquiry into the Nature and Causes of The Wealth of Nations.

[42] The figure is adjusted for inflation and population. In other words, people kept on hand more than five times as much purchasing power in money form as they had previously held; that amount would rise even more precipitously in the century to come. B. R. Mitchell, *British Historical Statistics* (1988); Helen Lu, *Money Supply, Population, Prices, 1688-2009* (2012).

[43] Georg Friedrich Knapp, *The State Theory of Money* (H. M. Lucas and James Bonar trs, Abridged edn, 1924) 52.

[44] Ibid. Knapp actually held a 'convergence' view of money's origins, a curiously metallist twist on a mentality otherwise emphatically nominalist. In his view, 'money' took lasting shape when the state, inheriting an 'exchange commodity,' legislated a

Knapp himself spent little time analyzing the cash premium that money carried. That element was, however, a focal point for John Maynard Keynes, who recognized that people's desire to hold money drove a substantive wedge into neoclassical models of equilibrium in the market for real goods. The legacy informed later schools of monetary theory. Some explicitly reject the 'convergence' story of money. Modern monetary theory and a variety of sociological approaches locate the unit of account as a feat of fiscal engineering, which is expanded by modern credit relations.[45] Perhaps more surprising, theorists within the mainstream neoclassical tradition are beginning to explore fiscal theories of value and attend to the cash services of money.[46]

Given their great need and unique capacity, groups acting through stakeholders have likely invented money, again and again, in societies as different as Mesopotamia and early England.[47] When we embed an individual within a domestic community and consider the way they interact, money appears a relatively obvious strategy to mark and move resources. Intervening into the relationships of an individual and the group he or she inhabits, money fixes value that is neither abstract nor symbolic. To the contrary, it is as real as the relationships that give it substance. That takes us to law: it is the process that puts the relationships making money into practice.

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substitute for it that was of different commodity value. After the transition, money's value depended on its legal form. See ibid.

[45] See, e.g., L. Randall Wray, *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems* (2012); L. Randall Wray, *Understanding Modern Money: the Key to Full Employment and Price Stability* (1998); Bell; Geoffrey K. Ingham, *The nature of money* (2004); Peacock. Another group of post-Keynesian extend the logic of credit-based money creation to explore endogenous money creation by the banking sector. See, e.g., Marc Lavoie, *Understanding Endogenous Money* (2014); Augusto Graziani, 'The Theory of the Monetary Circuit' in Marco Musella and Carlo Panico (eds), *The Money Supply in the Economic Process* (1996).

[46] See, e.g., Grubb; Tcherneva, 'Fiscal Policy: The Wrench in the New Economic Consensus' 39 International Journal of Political Economy 24; Smith, 'American Colonial Monetary Regimes: The Failure of the Quantity Theory and Some Evidence of an Alternate View'; Smith, *Money and Inflation in Colonial Massachusetts*.

[47] See, e.g., Peacock; Desan, 'Creation Stories: Myths about the Origins of Money'.

II. THE PLACE OF LAW

Money persists over time because, or insofar as, it is institutionalized. The relationships described above are matters of governance. They are carried out in law, understood expansively to include the wide variety of formal and informal practices of decision and enforcement that communities adopt to channel human interaction.

Law, after all, sets up all the relationships in the story of money's invention. Perhaps most obviously, it defines the contributions that individuals make to maintain their stake in a community. As we have seen, the stakeholder as the governing agent holds a pivotal position because he is the only creditor common to everyone. They owe him 'tribute,' 'tithes,' 'rents,' 'dues,' or 'fees' for service, 'penalties,' or 'taxes.' The extent of those obligations—and thus reach of the center into the community — depends on the way those duties are interpreted and enforced. More, law shapes not only the extent but the nature of the obligations. It determines how they are distributed and by what criteria. Taxes or other fees may be widely shared and apportioned in ways the population accepts. Or, they may be harshly levied on weaker members. 'Money' can be a matter democratically engineered or coercively imposed, depending on the infrastructure that supports it.

That is just the beginning; a working money is a piece of legal engineering all the way down. The unit given to certify a contribution takes effect, to give another example, because the stakeholder recognizes it as a claim of service in the hands of its holder. Put another way, the token is a 'liability' that the center is committed to recognize.[48] 'Claim' or 'liability'—each word bespeaks a legal category that defines the content of commitment. Indeed, the most conspicuous disputes involving money arise when a government revises the unit of account it takes in payment, also known as devaluation (or, less frequently, revalution). The legal issue, as *The Case of the Mixt Money* framed it, is whether public needs dictate the monetary change or, by contrast, the sovereign liability should remain constant.[49]

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[48] See, e.g., A. M. Innes, 'What is Money?' 30 Banking Law Journal 377.
[49] For Knapp, the government's authority over the unit of account that it took was the root of its legal power to define money. See Knapp 39. The argument here, by contrast, locates that legal determination as one of many.

The stakeholder himself acts and reacts in ways channeled by his authority. That authority, generically assumed above, takes much more specific shape as societies work out the powers legitimately held by a warlord, king, executive or legislature, judge, bureaucrat, or for that matter, corporate head or religious leader. To leave the Anglo-Saxon stage for an early American example, colonial legislatures there restructured the imperial constitution when they asserted the authority to issue paper money. Those assemblies spent 'bills of credit' into circulation, claiming new powers to appropriate on behalf of their polities. Then, they routed the paper back to newly created colonial treasuries when they taxed, cutting the royal governors and their tax-receivers out of the action. [50] In effect, one stakeholder, or set of stakeholders, replaced another by rechanneling the authority to create money.

In fact, a community determines which goods and services can be alienated and thus what counts as a 'commodity' when it decides what items or services money can buy. The sale of land, chartered and unchartered, was a complex issue in the second half of the millenium; feudalism would take its character in part from those conditions.[51] Similarly, a contemporary code (AD 880) imposed restrictions on any sale involving 'slaves, or horses, or oxen.' Other provisions required transactions over a certain amount to be witnessed or made only in town.[52] Presumably, transactions involving money would not be enforced if they were improperly made or inappropriately targeted a resource that could not be considered a 'commodity.' Later societies would return, notoriously, to allow the sale of Africans. Debate over the sale of free labor continues, with disputes about what constitutes real choice—the option of other employment, a

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[50] See, e.g., E. James Ferguson, 'Currency Finance: An Interpretation of Colonial Monetary Practices' 10 Willam and Mary Quarterly 153; Jack P. Greene, *The quest for power; the lower houses of assembly in the southern royal colonies, 1689-1776* (1972); Christine A. Desan, 'From Blood to Profit: Making Money in the Practice and Imagery of Early America' 20 Journal of Policy History 26.

[51] Wickham 314.

[52] See Law Code of Alfred-Guthrum, reprinted in Ellen Screen, 'Anglo-Saxon Law and Numismatics: A Reassessment in the Light of Patrick Wormald's *The Making of English Law*' 77 British Numismatics Journal 148, 164 (requiring that the buyer have 'the knowledge of his warrantor,' assumedly as witness); I Edward, reprinted in ibid; II Athelstan, in ibid.

social safety net, equal educational opportunity?[53] Those debates are joined by myriad others, contests over what else is 'for sale,' from honors to votes, sex to kidneys.

Conversely, while parties can trade without reference to money, that medium carries particular authority in many transactions; it is a privilege that opens up economic exchange. As a product promoted by a stakeholder to mobilize resources within a community, money serves the center well if it circulates widely and is in increasing demand. Moreover, a stakeholder might independently value the faculty that money offers to expand certain kinds of exchange among subjects or citizens, understanding it as a moral or commercial good. For both reasons, officials often favor transactions made in money; enforcing those transactions furthers ends they understand as public. That proposition illuminates the norm, early adopted by the English common law courts, that the sovereign's coin 'counted' for purposes of paying off an obligation, regardless of changes in metal weight. Indeed, it was the only mode of payment *that* counted. By the high Middle Ages, the writ of 'debt' was defined in a way that excluded all pleas but those claiming payment in the unit of account, as currently decreed.[54]

The point is that the very definition of what can be 'sold' is determined by working out the legal operation of money. The outcome, created by keeping money out of some transactions and demanding it for others, shapes what we recognize as 'the market.' When we consider that conclusion in light of money's formative role engendering exchange in the first place, the market loses its aura of autonomy. Rather, the market has been dependent on its medium, money, from start to finish. And money, it turns out, has been dependent on law, that very human project of decision that defines our obligations, the government's commitments, its structure, and what we call commodities.[55]

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[53] See, e.g., Amy Dru Stanley, *From bondage to contract : wage labor, marriage, and the market in the age of slave emancipation* (1998); Robert J. Steinfeld and Stanley L. Engerman, 'Labor-- Free or Coerced? A Historical Reassessment of Differences and Similarities' in Tom Brass and Marcel van der Linden (eds), *Free and Unfree Labor: The Debate Continues* (1997).

[54] See Desan, *Making Money: Coin, Bank Currency, and the Coming of Capitalism* [Ch. 2]; Fox, 'The Structures of Monetary Nominalism in the Pre-Modern Common Law' 29.

[55] The aspects of legal decision sampled here only begin to unpack the important legal determinations. We could continue to consider other aspects of money's legal design,

Understanding money as a legal institution opens it to exploration. Rather than a neutral or constant medium, money is a process that has distinctively affected the communities that make it in ways that have changed over time. In closing, we can briefly tour a trio of monetary institutions, each with great stature in the Western tradition. Their power and peculiarities showcase the impact of money and its legal design.

Consider, for example, the monetary order that included 'free minting,' described above. England for more than five centuries used that method to produce its currency. The decision tied its money supply to a commodity content for coin, the scarce and expensive metal, silver. Because Europe more generally had adopted the same method, competition for silver across the region became a destabilizing force. Sovereigns lightened coin surreptitiously in peaceful times to attract more bullion to their mints; they debased money more frantically in times of war, throwing economic activity into tumult as they struggled to keep silver flowing to their mints and thus money flowing to their forces.[56]

The English manipulated their coinage much less than their European counterparts—but that decision created its own problems. While the Italian city-states, through repeated debasements, created low value moneys that supported active trading even at the level of small deals, England's penny remained so powerful that its purchasing power was too large for many transactions. Inhabitants made most everyday exchange on the basis of credit instead. But that borrowing, made to consume instead of invest, left a high proportion of the population vulnerable to debt litigation in hard times. Commodity money created a harsh environment for most of those who used it.[57]

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like the kinds of circulating public finance we assume (public bonds, annuities, lotteries?), the kinds of private credit we allow (futures? private derivatives?), or the limits on negotiability we impose (bills of exchange? promissory notes? claims to collateral securing debt?).

[56] See Carlo M. Cipolla, 'Currency Depreciation in Medieval Europe' [Blackwell Publishing on behalf of the Economic History Society] 15 The Economic History Review 413; Spufford 289.

[57] For dimensions of these dramas, see Spufford; Sargent and Velde; Maryanne Kowaleski, *Local markets and regional trade in medieval Exeter* (1995); N. J. Mayhew, 'Population, Money Supply, and the Velocity of Circulation in England, 1300-1700' 48 Economic History Review 238; Desan, *Making Money: Coin, Bank Currency, and the Coming of Capitalism*.

The search for silver led Europeans to expedients that eventually remapped the world: the ventures that took them to Africa and across the Atlantic were driven to find silver and gold, prime among other resources. The contest for control of those resources drove colonial conquest and extraction with consequences that were tragic for indigenous populations.[58] Commodity money had another impact on the New World that was transformative at the monetary level: England's attachment to its tradition money led its American colonies to experiment with a whole new kind of currency.

Given mercantilist regulations, North American settlers were unable to keep enough silver and gold coin on their shores. Chronically short of ways to support their militias, they began pay them with paper. Bills of credit were I.O.U.s issued by colonial legislators and accepted back for local taxes. In fact, the simple story of money's development, detailed above, describes the American experience closely, down to the presence of stakeholders and token money. Provincial assemblies claimed the first role and created the second when they inaugurated a fiat currency that had no commodity content. In fact, a more transparent form of tax anticipation money would be hard to find.[59]

The innovation had constitution momentum. Given how essential money creation was, it located the assemblies at the center of provincial politics. Paper money became an issue that brought people to the polls. Over the course of the 18th century, pamphlets reflect an expanding sense of economic self-determination among colonists as well as a building commitment to electoral politics. Legislative power increased, as the assemblies imposed taxes and wielded the appropriation power brought by paper money. When Parliament, after decades of somnolence, reasserted its claim over colonial revenue, the effect was inflammatory. The American slogan, 'No taxation without representation,' takes on new meaning in a monetary light: Americans were defending their right to shape their own political economies by controlling currencies—currencies they well understood to depend on local authority over taxation—when they rebelled.[60]

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[58] Marcello De Cecco, *The International Gold Standard: Money and Empire* (1984).
[59] See Leslie V. Brock, *The Currency of the American Colonies, 1700-1764, A Study in Colonial Finance and Imperial Relations* (1975); Ferguson.
[60] See, e.g., E. James Ferguson, *The Power of the Purse; a History of American Public Finance, 1776-1790* (1961); Joseph Albert Ernst, *Money and Politics in America, 1755-*

The early American system created a money that was just as quirky as commodity coin. Insofar as fiscal activity provided the only source of paper money, colonial money ebbed and flowed sharply as provincial governments spent and taxed. That fluctuation disrupted economic growth, and led Americans to experiment with ways to make money more available for private exchange. Just as in commodity money regimes, governments engineered methods to supplement the money supply. Rather than selling coin to inhabitants, they attempted land banks and expansions of public spending, strategies that reinforced the populist culture of early America.[61]

Other problems were more explosive, particularly the susceptibility of colonial tax anticipation currencies to lose value if participants began to doubt the government's ability to tax. At times of exigency—the Revolution for example—officials found it almost impossible to collect revenues and their moneys eventually depreciated. Some commentators, including Benjamin Franklin and John Adams, saw the loss of value as an inflation tax that inevitably and perhaps appropriately spread the costs of the War. Others, including Alexander Hamilton, understood devaluation as a national default.[62] The decline of the Continental dollar put the controversy over money's form at the heart of debate over the U.S. Constitution.

1775: A Study in the Currency Act of 1764 and the Political Economy of Revolution (1973); Desan, 'From Blood to Profit: Making Money in the Practice and Imagery of Early America'.

[61] Land banks offered a new way of tying popular demand for cash to a supply designed to offer security. Rather than putting up silver, people put up land as collateral for notes and paid interest on their loans. See, e.g, Theodore Thayer, 'The Land-Bank System in the American Colonies' [Cambridge University Press on behalf of the Economic History Association] 13 The Journal of Economic History 145; Terry Bouton, *Taming Democracy: "The People," The Founders, and the Troubled Ending of the American Revolution* (2007); Richard Lester, 'Currency Issues To Overcome Depressions in Pennsylvania, 1723 and 1729' 46 Journal of Political Economy 324; Richard Lester, 'Currency Issues to Overcome Depressions in Delaware, New Jersey, New York, and Maryland, 1715-1737' 47 Journal of Political Economy 182.

[62] See Benjamin Franklin, 'Remarks and Facts Relative to the American Paper Money' *Pennsylvania Chronicle* (Philadelphia, PA) 76; John Adams, 'Letter to the Compte de Vergennes' in Francis Wharton (ed), *The Revolutionary Diplomatic Correspondence of the United States* (1780, June 22); [Report on the Subject of a National Bank] Alexander Hamilton, 'Report of the Secretary of the Treasury, Dec. 14, 1790' in Charlene Bangs Bickford and Helen E. Veit (eds), *Documentary History of the First Federal Congress of the United States of America*, vol 4 (1790).

Americans would ultimately choose another candidate altogether. Rather than free-minted coin or tax anticipation money, bank-issued currency would become the major money form in the United States and in much of the modern West. The ascendance of bank-issued currency, a monetary revolution in its own right, returns us in a curious way to Locke. The philosopher approached money as a matter that should flow from private agreement. A similar politics informed the decision to involve private investors in money creation.

Pioneering modern bank money in the 1690s, the English government licensed the Bank of England to produce notes representing the sovereign unit of account. The privilege was novel; both free-minted coin and legislatively issued tax anticipation currency had always remained government monopolies. Now, the government borrowed from a group of investors, lodging public debt with the enterprise and taking its loan in bank currency that promised to pay specie on demand. The Bank kept a store of coin on reserve; later bank systems would also use government bonds or bills of credit as an asset.[63]

The English government spent in Bank notes and, from early on, accepted those notes for taxes. (The government could simply set the notes it collected off against its outstanding debt with the Bank.) Given that arrangement, Bank notes remained a sovereign liability; in fact, they could be theorized as simply another form of tax anticipation money. But the new architecture mattered enormously. It institutionalized the government's commitment to tax, formalizing it in the figure of a debt to investors that needed to be repaid. Those investors constituted an elite lobby at the political level and asserted contract rights to payment at the legal level.[64]

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[63] See An Act for granting to their majesties several rates and duties upon tonnage of ships, 5 W & M, C. 20, S. 19 (1694), Great Britain, Statutes at Large, 3d ed., vol., 3, 1768-1770, 561; William Paterson, *A Brief Account of the Intended Bank of England* (1694); J. H. Clapham, *The Bank of England, A History* (1970). For an example of a bank built on government debt, see *Briscoe* v. *Bank of Commonwealth of Kentucky*, 36 U.S. 257 (1837).

[64] See *Case of the Bankers* A Complete Collection of State Trials Court of the Exchequer Chamber
House of Lords. For the influence of Bank creditors, see Bruce G. Carruthers, *City of Capital: Politics and Markets in the English Financial Revolution* (1996).

Even more remarkable, the trigger for money creation was now a financial one. Bank notes issued when the government decided to borrow and the investors agreed to lend. The government paid for the arrangement, legitimating a profit-incentive as the appropriate driver for money creation. Almost contemporaneously, the government began selling circulating bonds to the public. Both bank investors and bond holders drew 'interest.' Far from a vice, self-regarding calculation came to seem an act that could also benefit the public.[65] Modern money, as it developed, was restructuring the way government operated, politics played out, and people conceptualized their own actions.

The changes wrought by bank currency only accelerated in the centuries that followed. Other governments established banks of issue and, in turn, expanded the licenses they granted. In the modern world, commercial banks issue state-denominated units of account to private as well as public borrowers. Highly integrated into the legal design of money, commercial banks depend on national payment systems to clear and on central banks to provide support at lenders of last resort. Working according to the profit-centered logic modeled by the Bank of England, they charge individuals a fee for creating money.[66]

The activity of commercial banks effectively supplements the money supply, analogous in that sense to the coin available for purchase under free minting, and the notes issued by colonial land banks. The scale has increased enormously however. By the end of the 20th century and using the English pound as an example, deposit creation by commercial banks had helped expand the money supply in real terms to 70 times its

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[65] See Desan, *Making Money: Coin, Bank Currency, and the Coming of Capitalism* [chapter 7]; Henry Roseveare, *The Treasury, 1660-1870: The Foundations of Control* (1973) []. Albert Hirschman recaptures the earlier disapprobation attached to "interest," and the timing of its transformation, in his history. Albert O. Hirschman, *The Passions and the Interests: Political Arguments for Capitalism Before its Triumph* (Twentieth anniversary edn, 1997).

[66] See, e.g., Wray, *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems*; Perry Mehrling, *The New Lombard Street: How the Fed Became the Dealer of Last Resort* (2011); Marc Lavoie, 'The Monetary and Fiscal Nexus of Neo-Chartalism: A Friendly Critique' XLVII Journal of Economic Literature 1; Stephanie Bell, 'Do Taxes and Bonds Finance Government Spending?' 34 Journal of Economic Issues 603.

size when the Bank opened.[67] In the last two decades, that tide of money has been approximately doubled in the shadow banking sector, an improvised industry that produces short-term claims with high liquidity.[68]

As the Financial Crisis of 2008 (and on) demonstrated, the issues raised by the new process match the magnitude of the money and near-money that it creates. The debate over the power and responsibilities of banks and shadow banks can be understood as a struggle to find new ways to tie money creation safely to a stakeholder's unit of account, today's sovereign currency. Those buying money still put up material resources, tying up collateral in the form of houses or earning potential. They still pay a fee, demonstrating their desire for a resource that offers cash services. The government's new agents still produce tokens, issuing deposits instead of coin. But there the similarity ends. The production of money is more prolific—it rests on the representation of future earnings rather than the acquired capital of bullion. It is also more fragile—it fails more frequently because that promise is harder to cash out than a pound of silver.

The Crisis dispelled the notion that money is a simple matter, one that comes spontaneously into effect. In 2008, responsibility for the system devolved onto the taxpaying public, the collective whose contributions ultimately undergird it. In the years that followed, issues of money design remain front page news, rightly enough. The role of reserves, capital requirements, portfolio management; the reach of deposit insurance; the relationship of financial institutions to lenders of last resort—they form the vocabulary of reform in a world with bank-based money. All are issues of legal process. As we make the legal decisions, we will (re)make the money.

[67] See Lu. Deposit creation by commercial banks now accounts for close to 94% of the bank-based money supply, compared to a monetary base of about 6%. Tobin 6.
[68] See, e.g.,Gary Gorton, *Slapped by the Invisible Hand: The Panic of 2007* (2010); Morgan Ricks, 'Regulating Money Creation After the Crisis' 1 Harvard Business Law Review; Mehrling.

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