

Money Talk and Conduct from Cowries to Bitcoin

Asif Agha, *University of Pennsylvania*

ABSTRACT

What role do forms of money play in social life? What kinds of sociocultural variation do they exhibit? What variety of things do people do with varieties of money? How are activities involving money differentiated into registers of money conduct in specific times and places? How are specific forms of money conduct recognized and differentiated from other cultural routines by those who encounter them? It has long been understood that money is intimately linked to varied forms of discursive semiosis through which distinct forms of money are created and endowed with distinct use characteristics; that specific forms of money are readily linked to (or appropriated by) group-specific interests or ideologies; and that differences in types of money conduct readily differentiate social roles and relationships among persons and groups in social history. Yet the role of discursive semiosis in the existence and use of money is not well understood, a lacuna that links most descriptions of “money” to voicing structures (or discursive positionalities) that are not grasped for what they are by those who offer such descriptions (e.g., “speaking like the State” without knowing it). This article clarifies the role of discursive semiosis in the social life of money. It shows that such clarification is a prerequisite on ethnographic answers to the questions listed at the beginning of this abstract. It presents a comparative framework for reasoning about forms of money in forms of life.

My main concern in this article is with processes of enregisterment through which money tokens get linked to activity routines that are differentiable within a society as socially recognized registers of conduct. A register is a cultural model of conduct that links specific perceivable behaviors, which I call the exponents of such conduct, to a model of how these be-

Contact Asif Agha at at Department of Anthropology, University of Pennsylvania, 3260 South Street, Philadelphia, PA 19104 (asifagha@sas.upenn.edu).

Earlier version of this essay were presented at the School of Anthropology of the University of Arizona (March 24, 2016), the Department of Philosophy, History, Culture and Art of the University of Helsinki (May 19, 2016), and as a plenary address at the annual meetings of the Linguistic Society of Australia (December 7, 2016). I thank organizers for the opportunity to participate in these events.

Signs and Society, vol. 5, no. 2 (Fall 2017). © 2017 by Semiosis Research Center at Hankuk University of Foreign Studies. All rights reserved. 2326-4489/2017/0502-0005\$10.00

haviors are carried out, who is understood to be doing them, and what they index to others in participation frameworks of social interaction. To describe these variables is to describe the cultural model. Any describable register is simply a sociohistorical snapshot of a process of enregisterment through which such models are born and die or acquire relatively stabilized forms for a while for some given subpopulation in society. Most previous work has concerned itself with registers of speech (Agha 2005, 2015a), a case where the exponents of conduct are spoken utterances. My concern here is both with registers of money-token conduct—cases where money tokens are deployed in social interaction—and with the forms of social indexicality associated with such cases.

It has long been known that money is intimately linked to language. Here, for example, are some observations made a half century ago by the economic anthropologist Karl Polanyi:

In general terms, money is a semantic system similar to speech, writing or weights and measures. (1966, 174)

Money is an incompletely unified system, a search for its single purpose a blind alley. This accounts for the many unavailing attempts at determining the “nature and essence” of money. We must be content with listing the purposes to which the quantifiable objects actually called money are put. This is achieved by pointing to the *situation* in which we operate those objects and with what effect. (1968, 175)

Yet attempts to characterize what Polanyi calls a “semantic system” (or, sometimes, a “system of symbols”) have failed, mainly because they rely too heavily on Saussurean ideas about “language” (Agha 2007b) or ideas about “symbols” that once prevailed in symbolic anthropology, which are wholly inadequate for reasoning about the relation of speech to conduct. Moreover, the issue of how the exponents of money-token conduct rely on “pointing to the situation” in which they occur is entirely an issue of indexical semiosis. We need to consider forms of discursive semiosis that were not well understood in Polanyi’s time and to reach beyond what is now lamented as the “erasure of deixis” (Guyer 2004, 67, 22–23) in work on money since then.

By “discursive semiosis” I mean the entire range of ways in which human discourse can be used to typify actual or imaginable states of affairs of the universe, including forms of interpersonal conduct and the attributes of those whose conduct it is (Agha 2007a). Money is not a “unified system,” because it is intimately linked to a great many forms of discursive semiosis—whether oral,

written, numerical, algorithmic, customary, or law based; whether manifest as fiscal policy, computer code, or common sense—through which distinct types of money tokens are created and endowed with distinct use characteristics and taken up into distinct registers of interpersonal conduct by distinct social domains of people in the same society. This is why money is not a “unified system,” why all attempts to describe its unitary “nature and essence” fail.

Yet the real trouble with the thing called “money” is that our folk terminology for talking about it is wholly inadequate, and thus a source of perennial mystification, a fact with which we must begin.

For instance, none of you have money in your pocket. What you have in your pocket is currency. Although the currency in your possession may consist of pieces of paper or metal, these objects only function as money when you do certain things with them, and only if—and as long as—sufficiently many others do similar things with them. Coins and currency notes are simply rather specific types of “pecuniary media” (Herskovits 1952, 14). You can do similar things with pieces of plastic too (like credit cards) or with handy little booklets (like checkbooks), which are not usually called “money” but are associated with it. To linger overlong on currency is to miss the point: only 11 percent of the world’s supply of US dollars exists in this form (Ferguson 2008, 30); the rest exists as computer code in bank ledgers, whose exponents are perceivable only as pixels on an LCD screen. If you chuck the greenbacks, most of the world’s dollars will survive just fine, thank you. And indeed credit cards are perhaps best described as devices for moving pixels around—from bank account to bank account, ledger to ledger, screen to screen.

A second issue is that pecuniary media differ in limitlessly varied ways across human societies, and activities of using them as money tokens indexically locate a user in a particular stretch of social history, a specific slice of place-time-and-community, and is emblematic (Agha 2007a, chap. 5) of the user’s belonging in it. In table 1, I list a few of the pecuniary media that are attested in the historical record. I use boldface for pecuniary media that are familiar to many of us today, and italics for ones that are less familiar.

Table 1. Pecuniary Media

Bold stuff	Slant stuff
Coins, paper notes, credit cards, checkbooks, pixels. . .	<i>Cowries, beaver pelts, salt, arrowheads, corn, tobacco, woodpecker scalps. . .</i>

We are accustomed to the bolded kinds (i.e., those shown in boldface in table 1); others have been accustomed to the slanted kinds (those shown in italics). Think of the bold stuff as emblematic of our practices, of our stretch of social space-time, and the slant stuff as emblematic of other places and times: That is to say, wherever the bolded kinds occur as pecuniary media, folks like you and me are right there using them. You and I don't belong to the cowrie shell stretches of money-token conduct, nor to the beaver-pelt stretches, nor to the corn or tobacco stretches of money-token conduct; but European settlers in early America, folks who lived in colonial Massachusetts or in colonial Virginia in the seventeenth century, did use some of these pecuniary media, a fact that indexically situates them in associated stretches of money-token conduct, in stretches of social space-time very different from our own.¹

A third issue is that anyone who engages in activities involving money tokens—in whatever society—is not familiar with most activities involving money tokens in their own society. All of us can buy tubes of toothpaste with pieces of paper, but few can describe how hedge funds or derivatives work (in fact, after the events of 2008, it seems that folks on Wall Street don't know how they work either, but that's another story; the despondency of Wall Street is a distraction best left aside for now). People here and now are very interested in the bolded stuff. But our talk is all funny.

For instance, just after we conflate money with currency we are readily inclined to say that the activities in which money occurs are best described as—even most naturally described as—“buying and selling.” Part of my goal is to show that this idea is absurd, that this is an absurdly parochial point of view. In fact, producing such talk indexically locates the one whose talk it is as a consumer or retailer. By contrast, the central banks of every country, who are also very interested in the bold stuff, don't speak of money in the sense of individual currency bills but in terms of the “total money stock”; and describe what they do with it not as “buying and selling” but as “creating” it, or “managing” it, or as “regulating” its “domestic supply capacity,” or as “monitoring” its “inflationary pressures.” Each form of money talk has a voicing structure that indexically specifies the social positionality of the one talking.

Most activities involving money-token conduct that occur in any society are not known to all of its members because no one is familiar with all the forms

1. It will be evident that all such statements rely on indexical anchoring through shifters. That is to say, if you belong to a stretch of social history different from the contemporary United States, the referents of expressions like *we*, *our*, *you*, *I* and *me* shift correspondingly throughout sentences in the above paragraph, as does what is predicable of them, as does the organization of entries in the bi-columnar display of table 1.

of money talk that occur in it. And sociological asymmetries in forms of money talk indexically differentiate social categories of people linked to each other through it. I have argued elsewhere that such asymmetries of enregisterment by social domain within a society are characteristic of *all* register phenomena (Agha 2005, 2007a, 2015b). Indeed, such sociological asymmetries are not an inconvenience for us, but precisely what we wish ethnographically to study.

Getting clearer about these issues will require showing that getting from beaver pelts to greenbacks was, in part, a process of standardizing forms of money talk and conduct that is partly analogous to the processes through which a so-called Standard Language is differentiated from other speech registers and managed and promoted and made known to a population. And just as Standard Language ideologies obscure facts of speech variation in any community, a standardization of forms of money talk and conduct severely impairs our reportable intuitions about our own uses of money today.

For a long time, economic anthropologists were interested not in the bold stuff at all (they left that to economists) but in the slant stuff, and a curious academic division of labor thus emerged. Figure 1 is a pictorial depiction of forms of cowrie usage worldwide. It shows that cowrie shells were used in one way or another in parts of Europe, Africa, the Middle East, South Asia, the Pacific Islands, and even North America. Cowrie shells are ubiquitous natural artifacts

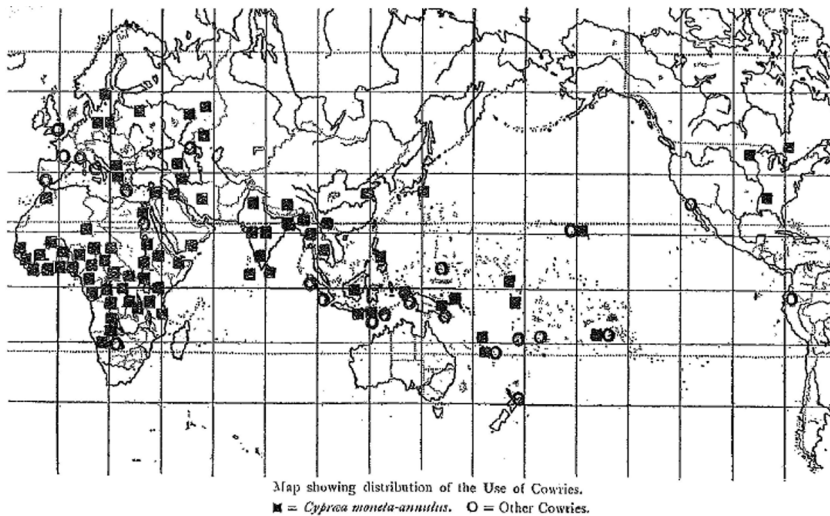


Figure 1. Cowrie usage worldwide. Source: Jackson 1917

made by mollusks, and their use by humans is attested in a variety of places. Jackson (1917) describes a miscellany of “uses”:² cowries are found in ancient graves (Egypt), or used in games like Pachisi (India), or associated with pregnancy and childbirth (Japan), or used as amulets in many places; and, of course, they are used, inter alia, in money-like ways in a variety of locales around the world. And there are numerous other studies of other types of slant stuff and of their usage in different parts of the world in the early anthropological literature.

More recently, things appear to have gone horribly wrong. Here is a remark by a contemporary economic anthropologist, David Graeber (2012, 411–12):

Once the study of “primitive money”—shell currencies, feather currencies, wampum, Fijian whale teeth, Tiv iron bars, and so forth—was the stock and trade of economic anthropology. In recent decades there’s been almost nothing written on the subject. James Carrier’s otherwise comprehensive *Handbook of Economic Anthropology* (2010) not only considers the matter not worth a chapter, it contains not a single mention of wampum, or trade beads, anywhere in the book. We don’t even know what to call such items any more. “Primitive currencies” or “primitive valuables” will obviously no longer do. . . . One reason it’s hard to come up with better terminology is that there’s no consensus on what, if anything, actually makes a string of Indian Ocean beads, or California woodpecker scalps, different from a shekel or a pound. Is it something in the nature of the object? Is it a matter of the kind of transaction in which it is used? Or is it the conceptual apparatus, the cosmological assumptions, the notions of value, surrounding it?

It appears that an earlier enthusiasm has shifted to a form of avoidance behavior. What was once called “primitive money” has now become an unmentionable in the economic anthropology literature: there is “not a single mention of wampum, or trade beads” in the handbook. Yet the reasons for this avoidance are scientifically sound: If you “don’t even know what to call such items any more,” it is obviously extremely wise never to talk about them; and if there is “no consensus” on criteria on attributes or terminology, it is obviously extremely

2. We shall see that such talk of “uses of X” (as in “uses of cowries”) itself obscures the fundamental issues at hand (just as talk of “uses of language” obscures issues central to discursive semiosis in general; Agha 2007a, 6) simply because such talk is typically a shorthand for accounts of conduct that consists never of deployments of “X” alone but on the deployment of multi-channel sign-configurations of which X is merely a fragment, and thus ignores all the reflexive cues through which interactants come to know what some current “use” is, or recognize it as (in)appropriate to some situation at hand.

wise never ever to publish any articles about them; and so these anthropological genres of money talk, which once described its forms across world history, are nowadays manifest as deafening silence.

Money talk faces other problems too, as we shall see. But we have to start somewhere. So let's start with the most obvious question: How did this deafening silence come about?

Primitive Money

Some of the problems that culminated in today's deafening silence were presciently articulated by A. Hingston Quiggin in a mid-twentieth-century monograph. Quiggin was a Cambridge anthropologist, an associate of A. C. Haddon's. Her book, perhaps the most comprehensive catalog of forms of money around the world ever written, appeared in 1949. In those days, they called it "primitive money" (fig. 2).

Quiggin's book begins with a lovely sentence—"EVERYONE, except an economist, knows what 'money' means"—a sentence that a great many writers in the anthropological literature on money love to quote. It's a lovely sentence, because it exhibits some awareness of the voicing structure of forms of money talk; and although what she says about "everybody" is not true, as we have just seen, it does contain an embryo of truth embedded in it, namely, what she says about economists, a point to which I return in later discussion.

A. HINGSTON QUIGGIN
A SURVEY OF
PRIMITIVE MONEY
The Beginnings of Currency

With an introduction by
A. C. HADDON

2 plates in colour and
text illustrations by Daphne Kennett,
32 plates in monochrome and 4 folding maps



METHUEN & CO. LTD., LONDON
36 Essex Street, Strand, W.C.2

Figure 2. Quiggin 1949, title page

Even more interesting is the struggle in which she is engaged in the opening pages, a struggle to get beyond a thing-focal perspective on what the book itself is about:

A gold ring may be worn in the nose, or appear in a collection of Greek coins. Brick tea, weighed and stamped like a coin, may be crumbled and drunk. Salt may be a condiment or a dowry. Strings of shell disks may be merely ornaments in one island, and objects of barter, currency or tokens of value in another. (Quiggin 1949, 2)

Quiggin observes that the kinds of “things” her book is about are used in many different ways by the people whose things they are, which raises many questions: *What* exactly are these things? (Jewelry? Tea? Condiments? Money? *Which* one?) And some “things” are especially troublesome: “It is still more difficult to classify the varied ornaments. . . . Is a string of shell-money no longer currency when you wear it round your neck? Is a sovereign no longer money when dangled on your watch chain?” (3). In other words: *When* is something money? It gets worse: “Shells are merely shells on one island, but are used in trade exchange with another, where they form the currency” (3). In other words: *Where* is something money? But there’s more: “For the two parties in a transaction may themselves stand in different categories. The trader may consider that he is paying current money when he buys a fowl for ten lengths of brass wire; while the seller regards the exchange as ‘mere barter’” (2). In short: *For whom* is something money? All of these questions can be given taxonomy-based answers, and Quiggin does give some, but the taxonomic answers of yesterday lead to the deafening silences of today.

The more basic questions that remain unanswered in this entire literature are: How do you know? What are your observables? What criteria guide your observations? How can you use words like “money” to describe any such cases? And what exactly are you describing? Things? Or activity routines in which things play a part? And how do you distinguish these from all other activities involving them?

But questions like “How does the anthropologist know?” are almost irrelevant unless they are linked to a different question: How do the *users* know? In other words, if people do different things with salt on different days, if folks in neighboring tribes do different things with shells, the question really becomes: How does anyone on any given day in any given social interaction know what is being done with something at that time? And how do they know what response is appropriate to such behavior when it occurs? Whether you’re worrying about

beeswax or woodpecker scalps, or about the stuff that is in your pockets right now, the real question is: For anything that anyone has ever called money, how do its users know what it is? What typifications of objects render (what we call) “salt” or “shell” or “beeswax” appropriate to the range of activities in which they play a part (for them), and where do such typifications come from? What are the indexicals of person, place, and time that differentiate criterial activities from others, specify the participation frameworks in which such activities appropriately occur and, if these activities are symmetrically grasped by parties to such conduct, allow social interactions to unfold among them? Such questions remain unanswerable as long as talk of “things” obscures activities involving them. Since these questions are central to what follows, let us first consider what it means to shift our perspective from *things* to forms of *interpersonal conduct involving things*.

The important point to note regarding figure 3 is that we are looking not at things but at activity routines involving things. Each of these images depicts a small stretch of social history, organized by sociocentric, mutually coordinated and interpersonally recurrent activity routines. That is to say, before it can be used as money, the tobacco in figure 3,A has to be grown each year in seasonal agricultural cycles through a coordination of the activities of many people, and, once grown, always already acquires many other uses long before it becomes a money token anywhere. The cowries that are lying in a neat little pile in figure 3,B have to be brought here and piled first, which means that, for the eighteenth- and nineteenth-century cases we know best, they have to be harvested from the sea in places like the Maldives islands, year after year, buried in the ground to



Figure 3. From “things” to activity routines. Sources: A, Creative Commons license 4.0, © Derek Ramsey, derekr Ramsey.com; D, Creative Commons license 2.5, Classical Numismatic Group, cngcoins.com; E, Wikimedia Commons, US public domain.

kill the mollusks that live inside them, sun-dried on mats and then transported by ship (whether to Bengal or Europe or Africa or elsewhere), where they acquire many uses that have nothing to do with money, and some that do (Hogendorn and Johnson 1986, 82–83, 88–100, *passim*).

As for the ore (fig. 3,C), where did it come from? It has first to be extracted from the ground, which means that people must learn to differentiate it from the rock in which it is embedded, learn to dig mine shafts, and, by acquiring a symmetric grasp of forms of tightly coordinated multiparty routines, learn to extract it from the ground and to melt it into the form that lies before you here. And it has to be available in sufficient supply—which means it must already have acquired other uses—before any type of money-token conduct can become associated with it.

In figure 3,D, we have the first European precious metal coin, manufactured in Lydia, Central Asia, present-day Turkey, around the sixth century BCE. It is associated with a new set of activity routines involving metallic ore, which include making discs like this from it and using them as money tokens. But if these are new activity routines, how do people come to know what they are? How is awareness of this issue symmetrically grasped by sufficiently many people that conduct involving it can effectively count as money-token conduct in some society?

The issue of symmetric grasp is vital, of course, since no mutually calibrated social interaction is possible unless the parties to this interaction can typify the exponents of conduct—the things perceivably deployed as money tokens in conduct—in relatively symmetric ways, or assign them comparable significance. More generally, the question is one of the differentiability of such exponents of conduct from other things, on their identifiability and characterizability as objects of some specific kind, which require criteria that differentiate them from all other entities in the universe, and specify some among them as money tokens, and others as not money tokens. After all, the money token is often just a handshake. How do you learn that what's crucial is not the hand but the thing in someone's hand? And once you know which one it is, how do you know the what-where-when of its deployment in conduct? The way in which the human animal achieves this is through the denotational machinery of discursive semiosis, whereby all such questions can be posed and in principle settled—questions of the characterizability of entity-types through denotation, of the identifiability of specific tokens through selective deixis, of when-to-use and when-not-to-use such stuff through modalized predication, of symmetric interpersonal grasp through talk with others about it (Agha 2007a, 37–55, 84–144,

passim)—which is why humans tend to have artifacts and activity routines of such kinds, while gophers, marmosets, and porcupines apparently do not. But such denotational machinery is merely a fragment of the forms of discursive semiosis involved in knowing the what-where-when of money-token conduct, as we shall soon see.

What do you do when you don't know? Well, you can always ask a question. Since trade often involves travel, Georg Knapp, writing in the 1920s, describes this as the traveler's problem:

Every traveler entering a new country asks the name of this unit—whether accounts are in Marks, Francs, Crowns, or Sterling. When this question is answered, the traveler asks what the usual means of payment look like and what they are worth in the unit of that country. He is then in a position to make payments himself. (Knapp [1905] 1924, 8)

Knapp is of course writing two and a half millennia after coinage has been introduced into Europe, at a time when many forms of money talk and money-token conduct are well known to the common sense of Europeans, so that the early twentieth-century traveler can already presuppose that every country has a distinct coinage. Under these conditions, the traveler can simply ask questions like: “What is *yours* called? What does it *look* like? What's it worth?”

But if we go back two and a half thousand years, to a stretch of social history like figure 3,*E*, the situation is quite different. At this time metal coins are fairly new. The Greeks have adopted the Lydian practice of minting coins. Different city states have different coins. It's also a heteroglossic situation. We know from Homer that many dialects of Greek—including dialects of the Ionic, Aeolic, and Doric groups—are probably spoken in the circuits in which trade occurs, and some degree of multilingualism is needed in order to do trade. Not everyone uses coins. Not everyone knows what they are. Any coin presupposes a metasemiotic framework for its own identifiability and characterizability as a coin of some specific kind as a condition on its usability as a coin. When the presupposition is not satisfied, when someone is not familiar with it, explicit metasemiotic descriptions are needed to identify and characterize it. Suppose you meet someone who has heard of coins but doesn't know where the one in figure 3,*E* is from. He asks you about it. What do you do?

There's no getting around proper name deixis at this point. You might say something like “This ain't just a head, it's *Athena's* head!” using the personal proper name of the goddess; and, flipping it over, “This ain't just an owl, it's *Athena's* Owl,” the owl of wisdom associated with the goddess. And then you

might point out that the goddess has a namesake, in a city name: “It’s from *Athens*, don’t you see?” If your interlocutor knows something about Greek religion (even if he doesn’t know much about coins), he “gets it.” If not, there goes the evening. In such a scenario, speech (or verbal signs) and metal discs (pictorial signs) are deployed together as perceivable exponents of conduct in multichannel semiotic arrays (cf. n. 2). The discursive exponents of conduct (the utterances you’ve just produced) are metasigns that typify their object signs (metallic discs), identifying and characterizing them as coins produced by the mint at Athens, thus giving them a very specific object formulation.

In cases where no script occurs on the money token, deictically anchored spoken utterances—which may contain not only speech event deictics or “shifters” but also speech-chain deictics such as proper names and titles, definite descriptions that combine these with other expressions, and the usual variety of other social indexicals (Agha 2007a)—can clarify the *What-Who-Where-Etc.* attributes of the thing and its uses.

What happens when script does occur? How are these attributes typified in those cases? They tend to be typified by the script artifact itself. Figure 4 shows a Mesopotamian money token and script artifact, a clay tablet inscribed with cuneiform script by hand and stylus. It says that “Amil-mirra will pay 330 measures of barley to the bearer of the tablet at harvest time.” The activity to be

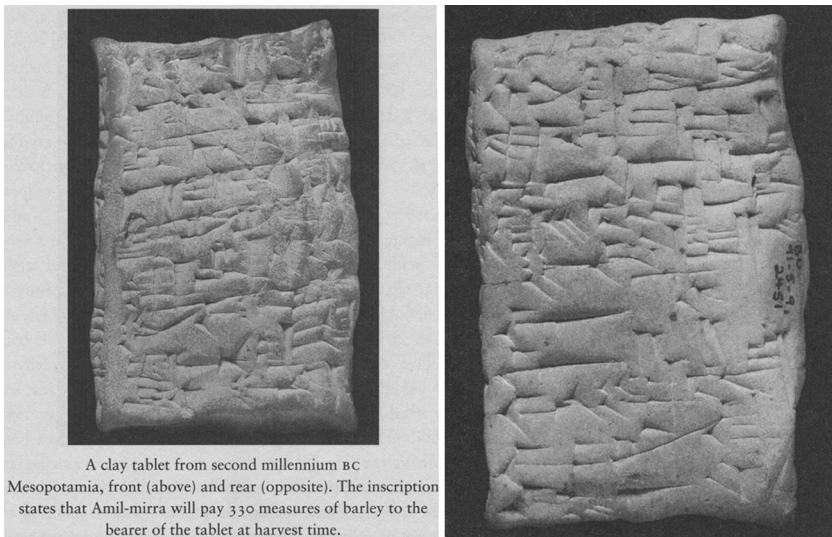


Figure 4. Script artifacts. Source: Creative Commons license 4.0, © The Trustees of the British Museum.

conducted by it is metapragmatically typified by speech that occurs as script on the money token itself. *What* is to be done? Paying 330 measures of barley. *Who* will do this? Amil-Mirra. *When*? At harvest time. *To Whom*? The bearer of the tablet.

So some features of the interactional schematization of money-token conduct—its *What-When-Who-To Whom* aspects—are explicitly denoted by the script written on it. But the *Where*? is not specified through denotational content. So where will this transaction happen? The *Where*? of conduct is typified not by the denotational content of cuneiform script but by the ability to read the script. If you can read the script, then you are a resident of this locale (and not of Europe or of some other place). The readability of the script is implicitly indexical of the “where” of reading and transaction, of a stretch of social history of which this tablet is a fragment.

In a third type of case, an artifact neither is dedicated to an exclusively money-token use nor contains script, but discursive semiosis nonetheless mediates its uses as a money token (fig. 5). Due to the shortage of coin available to the American colonists in the seventeenth century, corn and tobacco were stipulated to be money tokens—corn in the North, tobacco in the South. The Massachusetts law of 1630, in figure 5,A, stipulates that corn is legal tender in that colony. And in the South, as indicated in figure 5,B, Virginia made tobacco legal tender in 1642, as did other southern colonies at various times. So corn is declared legal tender in Massachusetts in 1630, and tobacco is declared legal tender in Virginia in 1642, though each has other uses too.

What are the difference in the forms of social interaction possible through corn and tobacco before and after the law? Let us bear in mind that before the



A A law passed in the Plymouth Colony, Massachusetts, 1630: "It is ordered that corne shall passe for payment of all debts at the vsuall rate it is solde for, except money or beauer be expressly named." (*Massachusetts Colonial Records*, Vol. iv, Pt. I; cited in McLeod 1898, 58)



B "Because of the scarcity of specie, Virginia, Maryland, and North Carolina used tobacco as currency throughout most of the colonial period. In 1619 the Virginia legislature "rated" high-quality tobacco at three shillings and in 1642 made it legal tender. Nearly all business transactions in Maryland, including levies, were conducted in terms of tobacco. North Carolina used tobacco as money until the outbreak of the Revolution." (Lefler 2003, 133)

Figure 5. Comestibles as money tokens. Sources: A, Wikimedia Commons Public Domain, Photo courtesy of USDA NRCS; B, Creative Commons license 4.0, © Derek Ramsey, derekramsey.com.

law is passed, corn and tobacco are not just things, but things that play a part in already established sociocentrically organized activity routines in these places: They are cultivated in recurrent seasonal agricultural cycles each year through the discursive coordination of a carefully organized sequence of agricultural activities involving many people, farm animals, tools and implements, and are harvested each year and used as comestibles, activities that occur both before and after these laws are passed.

The passage of these laws—in 1630 in Massachusetts, in 1642 in Virginia—induces a segmentation of activity routines. It introduces a new use in each locale:

After the law is passed in Massachusetts in 1630, corn is used

(1) *as money token* and (2) as comestible

After the law is passed in Virginia in 1642, tobacco is used

(1) *as money token* and (2) as comestible (whether chewed or inhaled)

The new usage (in italics) is specific to participation frameworks and locales of social interaction. That is, you can't use tobacco as money token in Massachusetts. You can't use corn as a money token in Virginia. In other words, the appropriateness conditions on their money-token usage are different. One is appropriate in the North, the other in the South. We have two different registers of money-token conduct. Two new ones. Each new to a different locale, its social domain.

But the physical objects—bundles of corn or tobacco—themselves contain no instructions on the *What-How-When-Where-With Whom-Etc.* of the new usage. The law is not written on the corn or on the tobacco. Only those who are acquainted with criterial forms of discursive metasemiosis (namely, the new legislation in each locale)—and independently of their familiarity with corn as such, or with tobacco as such—can use their knowledge of the law to segment their own activity routines into money token “types” of usage versus other “types” of usage. And of course in order for such money-token usage to occur, many people in the North must be acquainted with the 1630 law, and many people in the South with the 1642 law. If only one person knows about them, corn and tobacco can't function as money tokens. A criterial population can learn about the new activity routines involving corn or tobacco only by learning about the new law.

We know that literacy is not widespread at this time. So the law can become widely known only through some form of verbal retelling. The legal discourse has to be recycled into vernacular idioms. In order for it effectively to organize

most people's activities, it must—since most people are illiterate—become part of an oral tradition through which the activity segmentations induced by the law become known as common custom. Now, recall Quiggin's discussion of similar segmentations of activity routines elsewhere:

A gold ring may be worn in the nose, or appear in a collection of Greek coins. Brick tea, weighed and stamped like a coin, may be crumbled and drunk. Salt may be a condiment or a dowry. Strings of shell disks may be merely ornaments in one island, and objects of barter, currency or tokens of value in another. (1949, 2)

This is much like Massachusetts corn: before 1630, you could just eat it; after 1630 you could both eat it and use it as currency, at least in Massachusetts. And it is much like Virginia tobacco: before 1642 you could chew or inhale it; after 1642, you could chew or inhale it, and you could use it as legal tender, at least in Virginia.

All differentiations of sociocentric activity routines involving money-tokens rely on forms of discursive semiosis to become intersubjectively ratified social realities, whether these be written statutes or matters of so-called custom or common law. Quiggin's own data (museum collections of money-tokens from around the world) were gathered by various people at various times, mainly by people who paid little or no attention to the forms of discursive semiosis through which such differentiations occurred in places where they gathered them. And she is aware of the difficulty: "Unfortunately it is too late now to discover actual or 'ceremonial' use of many of these objects. All that can be done is to collect what information is still available" (1949, 4–5).

Script Artifacts

Let us turn to the case—all too familiar today—of money tokens that are script artifacts made of paper, and to the locale where their issuance first proliferated in the Western hemisphere, namely early America. Yet some of the early American script artifacts that came to be used as money tokens were originally designed for other uses, like the playing cards in figure 6. These cards are much like cowrie shells, or corn or tobacco in one sense: They have use differentiations, but they do not describe their own uses. The forms of discursive semiosis that specify their use characteristics are "off the page." Sometimes they do have brief stretches of scrawled script, as on the card at bottom left. But even these leave out much of the verbal agreement that enables their (otherwise irregular) money-token use. These cards were given as money tokens to workmen who



Figure 6. Playing cards as money tokens

built a cathedral in St. Louis around 1790 or so. The forms of discursive semiosis that enabled people to use them in this way (including the terms of the verbal contract that allowed them to be treated as money tokens) are highly underspecified by the scrawl itself; the scrawl is merely the persistent (transcribed) fragment of a larger process of (spoken) discursive semiosis that no longer survives.

Since there's a severe shortage of coin in colonial America at this time, laws are passed in various provinces that enable the use of pieces of paper as currency. Here's an early example from Massachusetts:

To facilitate the movement of exchange . . . the General Court ordered in 1692:

“that all Bills of publick credit, issued forth by order of ye General Court of ye late Colony of ye Massachusetts Bay, shall pass current within this Province in all payments equivalent to money and in all publick payments at 5 per cent advance.”

The inducement of a bonus on the bills of the government payable by a discount on the taxes to those who favored the government with patronage and moral support had a goodly effect on the government security at times. When the taxes were due the bills were worth more than hard money. (McLeod 1898, 62).

We can see that this law gives pieces of paper a specific object formulation—that they are “Bills of publick credit,” and that they are “equivalent to money,” that is to say, are to be treated as equivalent to precious metal coinage. The government has explicitly to deal with the novelty of the money token itself, to persuade its citizens that paper money is as good as “stamp silver.” And it gives activities of using paper money a specific interactional organization: the colonial government first issues bills to the public, encourages them to take these seriously as “equivalent to money” in their own private affairs, and then accepts them back from citizens in “all publick payments,” such as taxes. It offers an inducement for usage by offering a 5 percent discount on tax payments made through them. Similar laws are passed in the other colonies.

Dedicated Money Tokens

After such laws are passed, we begin to see a proliferation of varied types of pecuniary media, all of which are initially new and unfamiliar to the relevant population of persons for whom they are designed, and by whom they are to be used. In order to enable such persons to be able to imagine what, in particular, such objects might possibly be for, pieces of paper that have acquired some sort of dedicated use as money tokens must contain explicit descriptions of their own characteristics, of the kinds of activities possible through them, and of the time, place and social-category membership of both users and issuers, and thus of the types of persons and statutory organizations linked to each other through them.

The script artifact in figure 7,A, for instance, begins its narrative by deictically individuating itself as “THIS” (its referent: the thing in your hand at the moment of looking), characterizing itself as an “Indented BILL” for “*One Shilling*,” characterizing the Where of its usage as “the Province of *Pennsylvania*,” and the When of its issuance relative to two distinct indexical *origos* or zero points of time reckoning, namely, the ascension of the king to the throne (the *origo* for: “the 17th Year of the Reign of King George II”) and the birth of Christ (the *origo* for: “Aug. 1, 1744 [Anno Domini]”), thus locating all actors and activities involving itself not merely within a geographic locale, but, given the divine right of kings, within a religious and political cosmic polity. Says Who? The seal and signatures at its bottom attest to and formulate its validity, vouch for its authenticity.

The discourse genre exhibits variation: sometimes the text is more elliptical, sometimes far more detailed. The document in figure 7,B is laconic: A stacked series of noun phrases specify the where (“N Carolina”) and when (“April

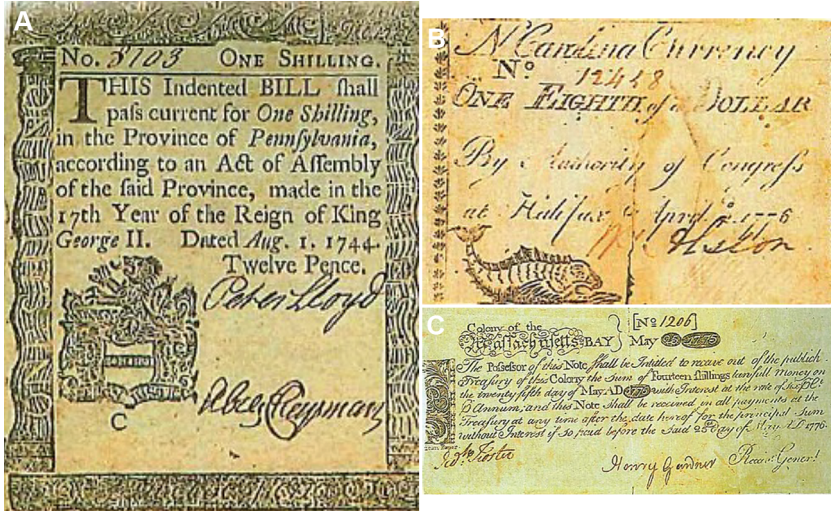


Figure 7. A, Dual indexical *origo* (Pennsylvania, 1744); B, Less detail (North Carolina, 1776); C, More detail (Massachusetts Bay, 1775).

1776”) of its issuance, what it is (“Currency”), its amount (“ONE EIGHTH of a DOLLAR”), while nested prepositional phrases specify who issues it (“By Authority of Congress at Halifax”), and a culminating seal and signature formulate its authenticity. But, whereas the document in figure 7,B contains no complete sentences, the one in figure 7,C has an extended epistolary form and an elaborate contractual content that provides detailed instructions on the socio-centric activity routines to be carried out through it, including who is to carry them out (“The Possessor of this Note”; the note is transferrable), where he can do so (the “Colony of the Massachusetts Bay”), what he is licensed to do (“to receive . . . the sum of Fourteen Shillings” of “lawfull money”; implying thereby that it is not itself “money,” on which more below), from whom (“the publick Treasury of this Colony”), when the note is issued (“May 25, 1775”), and specifying, in addition, two transactional options for its bearer thereafter, namely, first, the ability to receive fourteen shillings plus an increment of 6 percent interest in “lawfull money” exactly one year later (on “the twenty fifth day of May AD 1776”), or, second, the ability to make payments to the treasury, presumably of taxes, at any time during that intervening year (but in an amount lacking interest accrual).

Since paper-based pecuniary media are relatively new to the majority of potential users, they often describe what they may be transacted for in consider-

able detail, even as they appear to assert (or, more often, elliptically to imply) that they are not themselves “money.” Although England did not permit its early American colonies to mint coins, transactional activities were mediated by a great variety of pecuniary media in eighteenth-century America, including Spanish milled dollars (the term English speakers gave to Spanish 8 *reales*, minted in Spain’s rich colonies in Mexico from Peruvian bullion) as well as various other European precious metal coins. Thus the document in figure 8 appears to assuage the one whose hands are holding it that even though, as paper, it is worthless scrip, it can nonetheless be converted into one or another of the more familiar pecuniary media. Since taxes of varied kinds are a perennial source of anxiety for many then (as they are now), and since taxes are paid in varied pecuniary media in different early American locales, the document in figure 9 reassures its reader that its bearer is entitled to coined money, and additionally, that it belongs to the class of pecuniary media “which will be received for TAXES.” Since the notion that pieces of paper could be used to discharge tax burdens would have seemed improbable to many, the document’s explicit claim to be usable as such appears designed to persuade people to use it, and, of course, not only for taxes. When the Connecticut bill of 1735 (fig. 10,A) reassures its reader

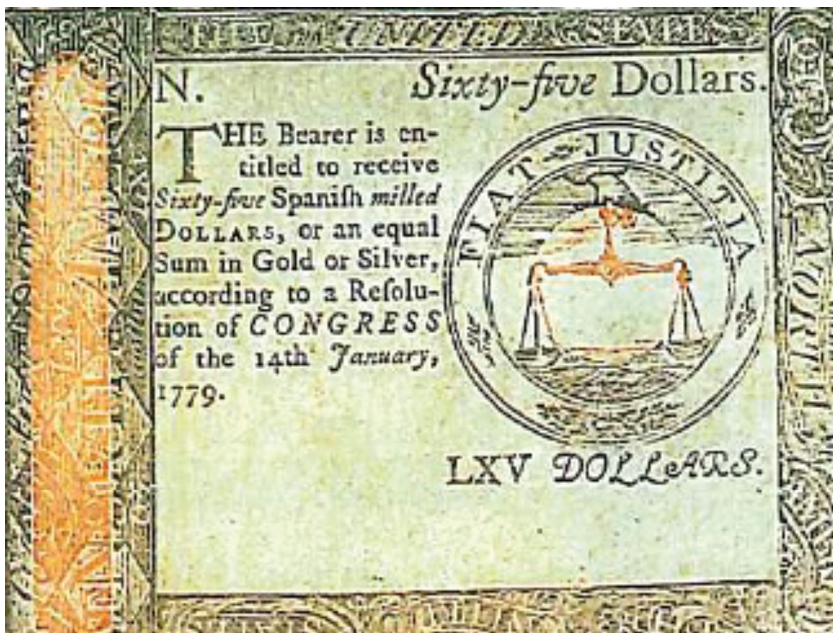


Figure 8. You can get gold or silver for me (Congress issue, 1779)

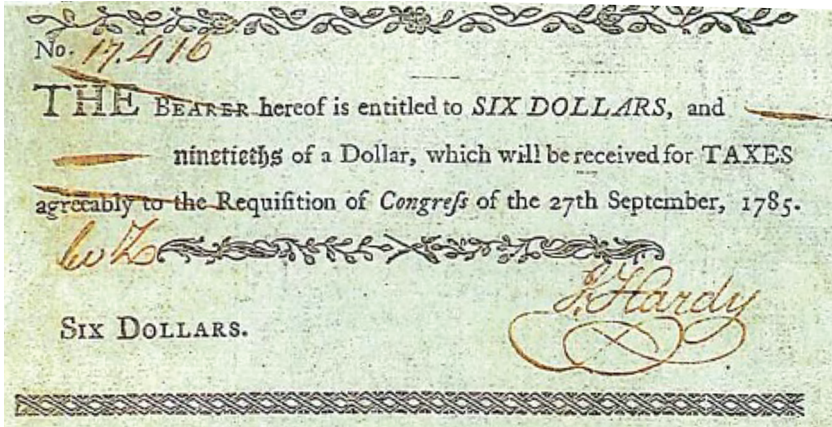


Figure 9. You can pay taxes with me (Congress issue, 1785)

that it has a value of two shillings “equal to MONEY,” it in effect implies that it is not itself “money,” though exchangeable for an equal measure of whatever is called “money” in that locale (as did similar pecuniary media in the other colonies). Not everyone was so persuaded:

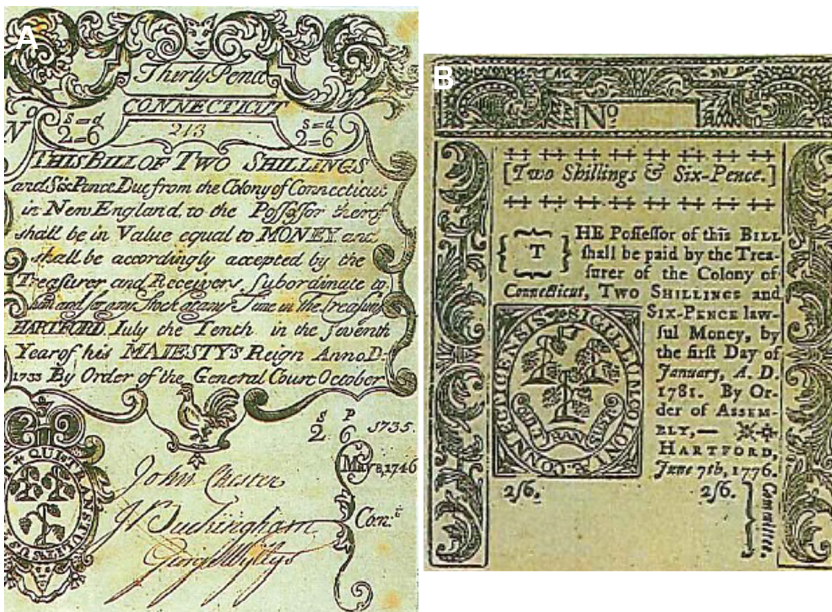


Figure 10. A, I am not money (Connecticut issue, 1735); B, I am not money but you'll get some on January 1, 1781 (Connecticut issue, 1776).

Governor Belcher, of Massachusetts, complains in his messages, 1734, that the bills of the province read “equal to money” yet “16s. worth will not purchase 5s. lawful money.” . . . He seemed to grasp the needs of our degenerate currency system quite as well as his colleague Hutchinson. (McLeod 1898, 71)

The document in figure 10,*B* which is also from Connecticut (but from 1776 not 1735) is both like and unlike its precursor: It describes itself as a “BILL” worth two shillings and sixpence of “lawful Money,” thus clarifying that it is not itself lawful money, but transactable for such, as does the bill of 1735. But the dual-*origo* indexical anchoring of the 1735 bill and the politico-religious cosmic polity it sustained are gone; time reference is now anchored solely to the Gregorian calendar, as is the promise that the bill’s bearer will acquire lawful money by “the first Day of January, A[nn]o D[omi]ni 1781”; and the promise is guaranteed not by “his MAJESTY” and his “General Court” (as in the 1735 bill), but “By order of ASSEMBLY,” thus bringing its issuer, its user and its warrant together in 1776 into a cosmic polity of an altogether new and distinct kind.

As the Revolutionary War unfolded around such acts of issuance, acceptance, transaction and belonging, many types of pecuniary media directly sought forms of political or military allegiance among members of a divided nation, continuing to maintain a distinction between themselves (and what they stood for) and all the other already legally sanctioned and more familiar pecuniary media with which they contrasted themselves, promising nonetheless their own redeemability in some among these, whether in “EIGHT DOLLARS in CONTINENTAL Currency” (fig. 11,*A*) or in “one thousand pounds of nett inspected tobacco” (fig. 11,*B*), or in some other.

Although the forms of pecuniary variation across locales were considerably more complex, the few examples I have chosen here do clarify some general issues: that activity routines involving pecuniary media were vastly differentiated across geosocial locales in eighteenth-century America; that such differences were demarcated and mediated by specific forms of discursive semiosis; that the activities such artifacts enabled included the ones they described; that such descriptions located their users in a variety of social category memberships, communities, political formations, and allegiances as preconditions on their capacity to engage in such activities at all; and that, when the noun *money* does occur in them (e.g., figs. 7,*C* and 10), their self-descriptions reflect facts of then current usage whereby the noun *money* properly describes a class of pe-

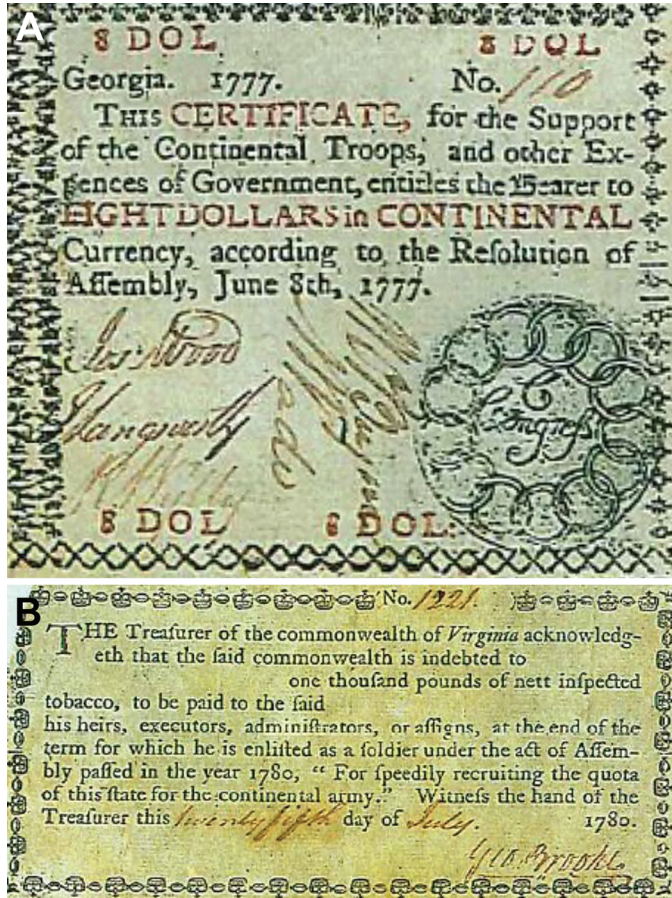


Figure 11. A, I am no dollar but I support the troops (Georgia, 1777); B, You can get tobacco legal tender for me (Virginia, 1780).

cuniary media much narrower than the class to which such documents belong. It is not merely the case today, as I noted earlier, that the noun *money* denotes a small subset of the pecuniary media in use, it was the case in early America as well, as I show in the next section, and, indeed, is the case in every period of every known society, as I show later on.

Money Talk and Its Folk Taxonomies

It will come as no surprise that the forms of variably anchored and taxonomically diverse money talk that were produced and circulated through such documents would yield varieties of confusion in forms of money talk in everyday

life too, as well as in varied published documents, a process that continued well into the next century. For instance,

The organizing of debt into currency is the prevailing error of this commercial age . . . To whatever extent this system is in use in any country, the precious metals are expelled . . . for money and debt are natural antagonists, like fire and water. . . . We cannot eat our cake and have it too. . . . We must accept money or debt for currency; we cannot have them both for the same sum at the same time.³

In pronouncements such as these, the noun *money* may be glossed roughly as ‘precious metal coin,’ the noun *debt* as ‘paper bills.’ The self-descriptions and self-and-other positioning formulated by then extant pecuniary media are recycled here into the opinion that the denotata of such nouns are “natural antagonists,” a doctrine that episodically finds its way into varied descriptions of, and varied proposals for overcoming, the Manichean conflict between such forms of “fire and water,” and, in the light of such pronouncements, into proposals for how to underwrite colonial skirmishes and wars, including some against “primitive” peoples, as well as dreams of empire or revolutionary upheaval. By the late nineteenth century, it had become fashionable to use an entire cluster of nouns—*barter*, *money*, *currency*, and the like—to produce classifications of human conduct across stages of an imaginary “evolutionary” timescale, even though such taxonomies were based entirely on observations of then extant people (when they were based on any observations at all); and talk about those who were called “primitives” was deployed chiefly in efforts to identify what was distinctive about those who called them that. A painlessly brief sample looks like this:

For our present purpose, barter is the exchange of one article for another; currency implies exchange through a medium; money that the medium is a token. (Temple 1899, 100; emphasis added)

This particular sample of this vintage of money talk is of interest here chiefly because Colonel Temple is using it to classify and characterize nonbullion currencies among “savages,” and Quiggin’s book on “primitive money” (fig. 2) begins with a discussion of Temple’s taxonomy and struggles against it, dismissing and refuting it in passages like the ones cited earlier, and producing, in turn,

3. *Banker’s Magazine and Statistical Register* 8, no. 2 (1858): 141–42.

a far more elaborate (380 pages long) evolutionist taxonomy of her own. But let us return to the case at hand.

We have already seen that many of the script artifacts that function as pecuniary media in early America cite the statute or legislation that issues them. They contain inscriptions such as these: “according to an Act of Assembly of the State of Maryland, made the 8th Day of May, 1781” (fig. 12,A); “pursuant to a Law of the State [of New Jersey] . . . passed in the Year 1786” (fig. 12,B); “pursuant to an ordinance of the General Assembly [of South Carolina] passed the 8th day of July, 1779” (fig. 12,C); “According to a resolution of Congress passed at Philadelphia, February 17, 1776” (fig. 12,D). Similar citations occur in most of the preceding examples and in many that follow. This particular feature of the discourse genre is worth noting at this point, but will acquire a par-



Figure 12. A, Assembly of Maryland, May 1781; B, Law of New Jersey, 1786; C, Assembly of South Carolina, July 1779; D, Resolution of Congress, February 1776. Source: Wikimedia Commons, US public domain.

ticular significance later on, especially when we have seen sufficiently many samples of the genre so as to be able to identify variation within it, and thus to discern how variably distributed forms of indexical anchoring to forms of legitimacy produce surprisingly distinct fates and fortunes among those anchored by them.

Printers and Issuers

Meanwhile, almost anyone can print money at this time. The power to manufacture and mass produce paper currency is not yet centralized as the prerogative of a government or state agency. Many different types of pecuniary media are manufactured by private printers, whose personal names appear on these documents, such as “John Holt” (in fig. 13,A) or “Hall and Sellers” (in fig. 13,B) or “B. Franklin and D. Hall” (in fig. 13,C). The public use-user characteristics of these pecuniary media are specified in various ways, whether by specifying the domicile of issuance-use-and-user as “New York Currency” (fig. 13,A) or simply as “Philadelphia” (fig. 13,B), or by specifying the legitimacy of issuance by naming a legislative authority, whose warrant is itself grounded by dual calendric *origo* in an appropriate cosmographic scheme (fig. 13,C), or both, much as in previous cases. And yet these are merely the simplest and perhaps the least interesting cases.

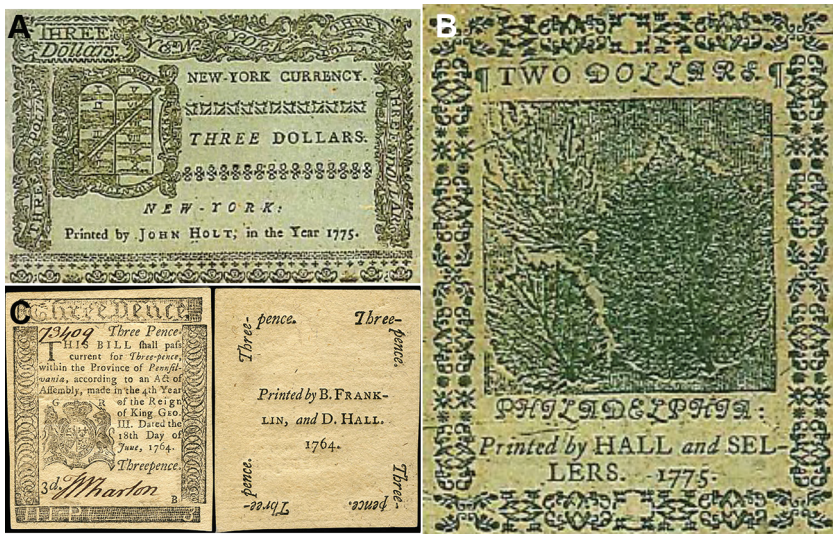


Figure 13. A, Printer: John Holt; B, Printers: Hall & Sellers; C, Printers: Franklin & Hall.

Many issuers and printers formulate themselves in figurements of (in)corporation. Businesses of every description and size are printing their own currency bills at this time. Many of these bills are used mainly in transactions with the businesses that issue them, while some acquire other uses too. Each such bill formulates a specific type of indexical selectivity for a prospective clientele of currency users. Thus if issuers like the “The New Hope Delaware Bridge Comp[an]y” (fig. 14,A) employ images of Lady Liberty and cherubim that suggest grandiose “hopes,” currency issuers like “The original Fringe and worsted yarn warehouse” (fig. 14,B) depict representative moments of manufacture itself—such as the harvesting of cotton and wool, and their weaving on looms—thus appearing to address the working class clientele for which the bill is designed, and to whom it proposes to pay 50 cents “in Goods” or in “Philad^a Bank notes.”

Some pecuniary media were minted and issued by banks, though the noun *bank* denotes several disparate things in early America:

In the 18th century America “banks” were known in three different senses. First, the word was used of corporate institutions—the Bank of England, for example—of which, however, there was none in America till 1782. Sec-



Figure 14. A, The New Hope Delaware Bridge Company (one dollar, Lambertville, NJ, 1840s). Source: Wikimedia Commons, US public domain. B, The original Fringe & worsted yarn warehouse (fifty cents, Philadelphia, 1814).

ond, it was used of an issue of bills of credit by a colonial government: Rhode Island, for example, might emit “a bank of £40,000.” This use became obsolete before the century ended. Third, it was used of an association of private persons who issued their own bills of credit. (Hammond 1957, 10).

By the early nineteenth century, “the monetary funds that [private] banks provided were commonly in the form of their own circulating notes, handed over the counter to the borrower” (viii–ix), and a growing number of private banks, which were sometimes simply households or families, were “organized without corporate charter” (11), often only for specific business needs, community clientele, and periods of time. In states like New York and Michigan, where “*laissez faire*” doctrines of “free banking” linked banking to the view “that all are freely permitted to embark in it,” free banking “meant, in effect, an indefinite and unlimited number of banks” (573). Around the country, banks were “organized under at least as many distinct laws as there were states” and many banks “were little more than legal counterfeiting shops” (Unger 1964, 17).

Although the number of banks did remain “indefinite,” in the sense of being largely unknown, it was not in practice “unlimited,” of course. As one estimator observes, “In this country the measure of value is committed to some two thousand banks,”⁴ a figure most useful perhaps only in giving a rough idea of the scale and locale-specific diversity of what counted as “banks” by midcentury, at a time when their continued lack of effective regulation (in several senses) had become a topic of national debate.

The currency bills produced by such private “banks,” as in figure 15, are organized by principles of addressivity that are much the same for the businesses discussed earlier: they are indexically selective for specific social categories of clientele and associated participation frameworks of commercial interaction. The Mechanics Bank of Georgia (fig. 15,A) emblazoned *inter alia* with trains, steamships, and arm and hammer, reaches out to an emerging industrial working class. The Somerset and Worcester Savings Bank of Maryland (fig. 15,B), with images of a man petting his dog, a woman milking her cows, a little girl cuddling her puppies, presents a tableau of savings-based idyllic moments of prosperity for an agrarian household. The Piscataqua Exchange Bank of Portsmouth, New Hampshire (fig. 15,C), depicts an array of milkmaids, cows, and pails in an anonymous tranquil glen (while a galleon approaches the port, on the right hand

4. *Banker's Magazine, and Statistical Register* 8, no. 1 (1858): 4.



Figure 15. Private banks: A, Mechanics Bank (fifty dollars, Augusta, CA 1854); B, Somerset & Worcester Savings Bank (two dollars, Maryland, 1862); C, Piscataqua Exchange Bank (twenty dollars, Portsmouth, NH, 1800s, updated).

side), while images of agrarian & mercantile endeavor are flanked by images of William Penn, Benjamin Franklin and George Washington.

As the statutes that define “banks” vary across locales and periods of the nineteenth century, so do the banks themselves. For instance, the National Bank-

ing act of 1863 “provided that any group of five persons possessing a specified amount of capital could organize themselves into a banking corporation” (Unger 1964, 18). The range, variety and sources of currency issue is also very large. At least “6,178 different types” of bank note are attested as issued by various private banks in New England alone, but it is likely that more than “12,000 different varieties had been issued,” and “that even this estimate is conservative” (Bowers 1979, 46).

And yet issuers of notes are even more varied than “banks” (under any definition), and those that use print technology and bill design reminiscent of paper currency in use today are merely one type of case. The scarcity of specie in the early nineteenth century had the result that many banks suspended specie payments for paper bills, which, in turn, “stripped the country of small change; not a sixpence, not a shilling, not a pistareen, was anywhere to be seen,” so that “cities, in their corporate capacity, printed thousands of dollars’ worth of cents, two-cent, and six-cent notes” (McMaster 1927, 297). Around 1810–15 many diverse social categories of private persons followed suit:

Merchants, tradesmen, manufacturers, stage owners, tavern-keepers, ferry-men, and uncharted banks followed, and before spring came the whole seaboard south of New England was flooded with paper money of the worst description. (McMaster 1927, 297–98)

The practice of producing locale-business-and-community-specific script artifacts continued through much of the nineteenth century (see figs. 16 and 17), and whether the issuers of these bills used print or woodblock or handwriting, the script artifacts they issued faced challenges similar to those evident in the machine-printed bills (cf. figs. 14 and 15), namely, the problem of how to create social regularities of transactional and other social interaction with just some among the totality of persons who might encounter them as readers.

Quite apart from sketching the social categories of persons that are selectively addressed within, and potentially recruited to, participation frameworks of issuer-user interactions, as discussed above, many pecuniary media specify sortal kinds of objects that appropriately belong to, or have a place within, such interactions, thereby differentiating these from all other entities in the universe, and often do so by linking specific pecuniary media to specific objects of transaction, and, indeed, to transactional equivalence classes that organize activities involving such objects, thus differentiating such activities from all others. In the case of a scrip issued in 1814 (fig. 16), the issuer, Mr. John Thompson, the proprietor of a store

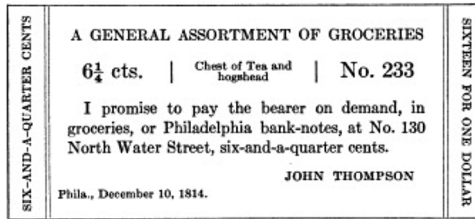


Figure 16. Transactional equivalence classes, John Thompson, 1814

called the “Chest of Tea and Hogshead” at 130 North Water Street, Philadelphia, reassures its reader that it is worth “six-and-a-quarter cents,” an amount in which it is redeemable for two sortal kinds of entities in the universe, the “groceries” at his store, and “Philadelphia bank-notes.”

A similar interactional schematization of its own use characteristics is formulated by the scrip in figure 17 nearly half a century later. The issuer, a Mr. S. P. Cocke, declares that the thing in the bearer’s hands is worth five cents, that it can be transacted for two sortal kinds of entities, either for things like “flour, baled hay, oats, wood, &c.” at the store (where the et cetera clause covers whatever else Mr. Cocke may happen to have in his store at the time of transaction) or, alternatively, “for bankable funds” if the bearer comes to “my office” (and has one hundred such scrips).

Such script artifacts preserve, in conveniently inscribed form, those meta-semiotic formulations of transactables and transactors on which their usage relies. But the presence of script is neither necessary nor sufficient. The most omnipresent form of discursive semiosis that enables the effective use of such pecuniary media is the audible speech that accompanies and informs the social interactions in which they play a part. The following case from Massachusetts, 1693, is recounted by a lady traveler, one Madame Knight, who describes four sortal kinds of pecuniary media then current in this locale—namely: (i) *pay*, (ii) *money*, (iii) *pay as money*, (iv) *trusting*—and the transactional equivalence

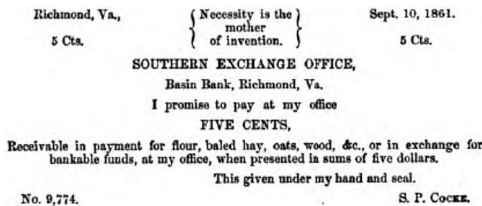


Figure 17. Transactional equivalence classes, S. P. Cocke, 1861

relations customary among them, as well as the role of conversation in enabling transactions to occur at all:

They give the title of merchant to every trader, who rates his goods according to the time and specie, they pay in; viz. *pay*, *money*, *pay as money* and *trusting*. *Pay* is grain, pork and beef, &c., at the prices set by the General Court. *Money* is pieces-of-eight, ryals, Boston or Bay shillings, or good hard money, as sometimes silver coin is called; also, wampum, viz. Indian beads, which serves as change. *Pay as money*, is provision aforesaid, one third cheaper than the Assembly set it, and *trust*, as they agree for the time. When the buyer comes to ask for a commodity, sometimes before the merchant answers that he has it, he says, 'is your pay ready?' Perhaps the chap replies, 'yes.' 'What do you pay in,' says the merchant. The buyer having answered, then the price is set; as suppose he wants a 6^d knife, in *pay* it is 12^d; in *pay as money*, 8^d, and hard *money*, its own value, 6^d. (Felt 1839, 54, emphasis added)

Several issues are worth noting. First, "grain, pork and beef, &c." can be eaten—separately and severally—or can be grouped together as a unitary sortal kind of pecuniary media termed *pay*. Second, these edibles can also serve as *pay as money*, a class of pecuniary media that are "one third cheaper." Items of a third sortal kind, "pieces-of-eight, ryals, Boston or Bay shillings . . . silver coin . . . also wampum," are grouped together as *money*. The fourth sortal kind consists of utterances—not any and all utterances, of course, just the ones that yield an "agree[ment] for the time"—which are said to facilitate transactions as *trust* or *trusting*. In her last three sentences, Madame Knight describes the typical form of the conversation that specifies which sortal kinds are relevant to any current interaction, and, once it takes place, enables transactions to occur.

Analogous equivalence classes have been reported in many societies that lack script. Paul Bohannan (1955, 1959) identifies three classes into which transactables were sorted (allegedly more elaborately so in the nineteenth century) among the Tiv of Northern Nigeria, a population of about 800,000 people at the time of his research (the mid-twentieth century): items of class I—which includes chickens, goats, yams, corn, pepper, other local foodstuffs, household utensils, some tools, raw materials for tools—can appropriately be transacted most readily for each other; items of class II—which includes cattle, slaves, ritual offices, *tugudu* cloth, magic, medicine, metal bars—are also transacted for each other; and class III, special because it has only one member, women as spouses, is treated in rather distinct ways. Apart from other difficulties with Bohannan's

work (see Guyer 2004), the limitations of his thing-focal and exchange-centric approach (Agha 2011) and inadequate attention to discursive data create insuperable difficulties: Bohannan reifies discursively mediated sortal kinds as inscrutable mental models (“ideas” about “things”), transforms contextually appropriate registers of transactional conduct into something called “spheres of exchange,” and, lacking any concept of the social domain segmentation of enregisterment, essentializes “The Tiv” by implying that all of them (all 800,000 of them?) shared the same mental models (“ideas”) of “exchange.” And although his account is often read as differentiating pre-colonial Nigeria from something called “the West,” such appraisals are not sufficiently well informed about what was happening in America around the same time, as noted above, nor what happens there today, as I show later on.

When Not to Do It

Competence in any register of conduct depends on knowing when its use is effective and appropriate, and when it is not. In the case of speech registers, elites frequently downshift when addressing nonelites (e.g., from pure Received Pronunciation to Cockney blends in Britain, Agha 2007a, 224–27); and nonelites, such as users of youth slang, link effective competence to knowing “when not to use it,” which they assess through co-textual construals of who they are interacting with and in what type of setting (Agha 2015b: 311). Much the same is true of registers of money-token conduct everywhere. Not to know *when* to engage in money-token conduct, and *with whom*, is to be a misfit. For instance,

the Malay fishermen of Langkawi are quite willing to engage in commercial exchanges, though they can only legitimately do so with comparative strangers, for such relations are seen as incompatible with the moral bonds of kinship. (Bloch and Parry 1989, 23)

For Malay fishermen, transactional conduct is appropriate only in male-male/nonkin participation frameworks of social interaction. And such do’s and don’ts of money-token conduct differ across societies, differentiating locale-specific registers.

In print cultures, etiquette guides describe such do’s and don’ts for those unfamiliar with them. The following example, from *Miss Leslie’s Behavior Book*, shows that nineteenth-century Philadelphia ladies face cotextual constraints much like Malay fishermen from Langkawi (and people elsewhere), and like them, the ones they face are distinctive to their own social milieu:

All this we have seen, and the mothers have never checked it. To permit children to ask visitors for pennies or sixpences is mean and contemptible. And if money *is* given them by a guest, they should be made to return it immediately. (Leslie 1859, 28)

Miss Leslie is describing the rules of etiquette for a “lady” in mid-nineteenth-century Philadelphia, where, in a changing milieu of class relations, young women (particularly those not born in the genteel urban locales where they come to live) must learn appropriate emblems of ladylike behavior. The etiquette guide tells its reader how to dress, travel and take a cruise, how to borrow things or accept a gift, how to raise children, how to behave in “society” and on “the street,” and much else besides. In the passage just cited, it describes how to raise children into adult norms of money-token conduct in order not to shame one’s own household.

Any register of “money-token conduct” (of whatever kind) invariably models criterial activities as phase-segments of a social interaction, and current interactants are either familiar with how to engage in (the otherwise unrelated) activities that must precede and follow it (like the ability to construe an interlocutor’s social role, or to perform appropriate roles in response) or are incompetent in it. In short, money-token conduct, wherever it occurs, whatever its forms, effectively occurs only as a phase segment of forms of conduct that have little to do with money.

The Voicing Structure of “Money” Talk

Many people produced money tokens at home in early America. For instance,

At this date [1701], there was a scarcity of change. . . . Regardless of their irregular example and bent on their own convenience and gain, not a few individuals stamped pieces of brass and tin, and palmed them on [the] community at a penny each. (Felt 1839, 55)

Although such practices were outlawed by legislatures, they remained commonplace in many communities all over colonial America. Here are examples from Virginia:

Virginia furnishes two further examples of tokens of home manufacture. The first were issued in 1714 by Richard Dawson, of Gloucester (county?), Virginia. They were of one shilling value, and probably of little importance. In 1773 and 1774 many halfpennies, and probably a few pennies,

were issued in the same colony. It is presumed that they were not authorized coins, because in 1782, Thomas Jefferson wrote: “In Virginia, coppers have never been in use.” (Barnard 1917, 606 [citing Crosby 1875, 339, on which more below])

The direct contradiction between facts of Virginia coinage and Jefferson’s assertion in no way impugns his veracity. Rather, it reveals something far more interesting: All answers to the question “Are these coins?” have a voicing structure: “Yes,” according to those who issue or use them as coins, and “No,” according to a state that does not license their issuance. It is only when state-*origo* voicing has become a naturalized feature of common sense, as it has for many today, that appeals to voicing structure appear odd or remarkable.

The Virginia coins of 1773 and 1774, both struck in copper, are shown in figure 18,A. They pass muster as coins to visual inspection: They bear a bust of the king with the legend “Georgivs . III . Rex” on the obverse, and the legend “Virginia 1773” divided by a shield & crown on the reverse. The shield is emblazoned into four quarters, showing the conventional emblems of “1, England impaling Scotland; 2. France; 3, Ireland; 4, the Electoral dominions” (Crosby 1875, 339). A user, mindful of such text-internal metasemiotic formulations of its own characteristics, sees coins; the state, mindful of the absence of an entirely distinct type of metasemiotic framing, that no license to mint them has been issued, sees non-coins. Since the practice of minting coins at home remains common, and the use of such coins remains widespread and routine in many communities, items of this kind remain both coins and non-coins for much of the eighteenth and nineteenth centuries, though from different points of view.

The varieties of both internal and external forms of metasemiotic framing differ vastly across the corpus of early American coins. A single example, the variation in coinage struck by a single person (allegedly a Mr. John Higley of Granby, Connecticut) between 1737 and 1739 may prove illustrative. Sketches of two of his coins are shown in figure 18,B. The first one, on the left, has three hammers, each with a crown, and the legend “I AM [A] GOOD COPPER. 1737” on one side, and, on the other, the image of a deer and the legend “VALUE ME AS YOU PLEASE” and a Roman numeral “III” within scroll work below the deer, which suggests three cents as its value. The one on the right has a single broad axe and the legend “I CUT MY WAY THROUGH” on one side, and the deer and legend, “VALUE ME AS YOU PLEASE” with the scroll containing “III” below it, on the obverse. A story about Mr. Higley has it that he mined the copper for these coins from a mine near his residence in Granby, and paid for his liquor at the public house with



Figure 18. Are these coins? Yes, and No: A, Virginia coppers, 1773 and 1774; B, Connecticut coppers, 1737–39.

the coins he minted. This practice, which continued for a while, possibly with coins he had minted earlier that explicitly described themselves as worth “three cents” (not shown in fig. 18), eventually became subject to complaint, at which time “he presented coppers bearing the words, ‘Value me as you please’ ‘I am a good copper’” instead (Crosby 1875, 326–27). It is unclear if this story is true, but it is clearly part of the money talk or lore of the period.

In postcolonial times, trends of local currency manufacture continued unabated, and even grew. By the middle third of the nineteenth century, a profusion of locale-specific mints, coins, and coin inscriptions had emerged. Gold coins were being “minted by Templeton Reid, in Georgia, in 1830,” and, “In 1831, only one year after Reid began coining, a better known and more prolific mint was set up at Rutherfordton, North Carolina, by Christopher Bechtler . . . [who was noted for] . . . honesty in making his coins the same value as the coins of the United States.” And yet, soon afterward, “In California . . . private mints sprang up as much to supply the people with what they demanded as to fatten the coffers of their owners. . . . The various establishments rendered this service with varying degrees of honesty” (Barnard 1917, 617–20). Meanwhile, impeccably honest, the Mormon Church was minting its own coins: on a twenty dollar piece of 1849, one side bears the legend “HOLINESS TO THE LORD,” and on the other appear the letters “G. S. L. C. P. G.,” which stand for “Great Salt Lake City Pure Gold” (Barnard 1917, 624).

As we consider the range and variety of such coinage we can begin to see that along with their commercial functions, such metallic script artifacts also con-

situate a type of folk literature that has a complex internal voicing structure that partakes of genres like the political cartoon, the broadside and the pamphlet, albeit in miniaturized form. The following examples involve pecuniary media issued by common people in the 1830s, a time when President Andrew Jackson's fiscal policies had created currency shortages:

The legends and designs on the general tokens furnish a good commentary on the political and social conditions of the period. They refer to the Second United States Bank, the suspension of specie payments, Benton's "mint drops," slavery, etc. . . . One coin dated 1834 is particularly striking. On the obverse it has the gaunt figure of President Jackson with a sword in one hand and money bag in the other. The legend reads, A PLAIN SYSTEM, VOID OF POMP. The reverse bears the emblem of a stubborn jackass, branded on the haunches with the letters LL.D., an allusion to the degree conferred upon Jackson by Harvard University. The emblem bears over it ROMAN FIRMNESS, and around the edges are Jackson's well-known words, THE CONSTITUTION AS I UNDERSTAND IT. Another token bears on the obverse, MY SUBSTITUTE FOR THE UNITED STATES BANK. On a bust of Jackson is, MY and below, the words, EXPERIMENT / MY / CURRENCY / MY / GLORY. On the reverse appears, PERISH CREDIT. PERISH COMMERCE, and a boar, running, with MY / THIRD HEAT written on his side; above, MY / VICTORY, below, DOWN WITH THE / BANK. Date, 1834. An interesting type, because it indicates the sentiment already forming at the time against slavery, bears on the obverse a slave woman in chains, kneeling, and the legend AM I NOT A WOMAN AND A SISTER. On the reverse the inscription is, UNITED STATES OF AMERICA, and with an olive wreath, LIBERTY / 1838. (Barnard 1917, 612)

These pecuniary media therefore function not only as "coins" in commercial transactions, and hence not only as "pecuniary" media, but also as devices that communicate the opinions of their issuers on the policies of the state and the politics of the day. Just as the pecuniary media in figure 14 are not just "bills" but also advertisements for businesses (and the ones in figure 15 advertisements for businesses that call themselves "banks"), the items now at issue are not just "coins" but also political pamphlets, which, although much smaller than conventional ones, have a much larger circulation.

An even more politically charged example (and a sharper contrast) may be seen in figure 19, which shows plates engraved by the Boston silversmith Paul Revere. The item in figure 19,A depicts "The Boston Massacre" of March 5, 1770, an incident in which British soldiers killed civilians who faced them as



Figure 19. Plates engraved by Paul Revere: A, Is this money? No; B, Is this money? Yes, and No. Source: A, Wikimedia Commons, US public domain.

a mob, an event publicized by Paul Revere in the plate shown in figure 19,A to encourage rebellion against Britain. The plate carries the inscription “Engrav’d Printed & sold by Paul Revere Boston,” which formulates it as a commodity manufactured for sale, and not, in any sense, a money token. By contrast, in 1775 Paul Revere engraved and printed the “Bill” shown in figure 19,B, whose self-description (recto) formulates it as a canonical sample of the money-token genre discussed above. But the bill also depicts (verso) a man with a sword in one hand, the “MAGNA CARTA” in the other, with the legend “Issued in defense of American Liberty” and the Latin inscription “Ense petit placidam, sub Libertate, Quietem” (By arms he seeks quiet peace under liberty), adopted as revolutionary motto by the Provincial Congress in 1775, all of which appear beneath its denominated value, two shillings. Since Britain’s Currency Acts of 1751 and 1764 prohibited colonists from issuing paper money (Allen 2009, 96–98), it is plain that the item in figure 19,B is not money in 1775 from the standpoint of the Crown. At the same time, and from the standpoint of the colonists, it is both legal tender (recto) and a call to arms (verso).

As we pay attention to the role of discursive semiosis in enabling the existence and use of money and its relatives, it becomes evident that most taxonomies of “money” (including the ones in the numismatic literature that I cite here) and all efforts to give histories of “money” that rely on such taxonomies, tend unproblematically to assume a state-*origo* voicing structure in the very labels they assign to pecuniary media (thus extending the state’s present-day sortal categories back into the past), tend also to overlook non-state-issued pecuniary media (or their hybrid voicing and non-pecuniary genre characteristics), and so tend, overall, to produce accounts that are predictably skewed through the “erasure” (Irvine and Gal 2000) of features of the very past they seek to analyze. But where do the intuitions that enable such erasure come from?

Legal Struggles

In eighteenth- and nineteenth-century America, various legislatures and governments attempted to regulate the production of—and the use of *money* as a term for describing—pecuniary media of the kind just described, and attempted also to regulate the rights of various social actors (individuals, communities, provinces, colonies, and other subsidiaries) in activities of issuance or use. We have seen that many bills in the preceding examples specify the statute or law that issues them, and hence the geopolitical boundaries of their legitimate use. These specifications indexically locate their issuers in legal and political struggles

whose details these bills do not describe. Although the kinds of legal struggles are quite varied, two types of cases are fairly ubiquitous.

In one type of case, a state legislature imposes legal sanctions on its citizens. But such efforts often produced mixed results, at least in the short run. For instance,

In 1862 the New York legislature attempted to solve the problem [of private money issue] by passing a law prohibiting the issue of tokens . . . Sec. 2. *And be it further enacted:* That from and after the first day of August, eighteen hundred and sixty-two, no private corporation, banking association, firm, or individual shall make, issue, circulate, or pay any note, check, memorandum, token, or other obligation, for a less sum than one dollar, intended to circulate as money or to be received or used in lieu of lawful money of the United States. (*U.S. Stats. at Large*, 12:592, cited in Barnard 1917, 632)

However,

the issue of tokens did not cease with the passage of the law making their coinage illegal. The law was passed July, 1862, and the greatest issue of tokens came in 1863 . . . The Philadelphia merchant previously referred to said that he was threatened with prosecution if he continued to issue tokens, but there appear to be no records of any prosecution actually instituted. (633)

Although such legislative efforts were variably effective in regulating the forms that money-token conduct took in specific times and places, it is perfectly clear that by the late nineteenth or early twentieth century, the federal government had, through a sustained series of legal actions, managed effectively to regulate forms of currency issuance across the United States, and to establish itself as the sole issuer of a legitimate national currency.

A second type of case involves battles not between a government and its citizens but between a central government and its subsidiary governments. I offer two examples here, the first from the eighteenth-century colonial period:

1748. On the 14th of July in this year, Sir Alexander Cuming, bart. presented a memorial to the Right Hon. Henry Pehlham, esq. etc.; in which he proposed, that, in order to preserve the dependency of the British plantations in North America on Great Britain, the current species of Great Britain should be made the current lawful money of the said plantations,

as the proper measure of property in all countries depending on the British crown and nation; and that 200,000 *l.* sterling should be coined at the Tower for that purpose; which sum was to be made the foundation of a provincial bank for all the British plantations in America, in order to abolish the paper money in New England and Carolina, and to set aside the currency of clipped Spanish money in Jamaica and elsewhere. Cuming was an enthusiast, and his proposal was considered as visionary by administration. (Ruding 1840, 2:79)

Although the ensuing policies were sometimes quite effective, the issue of paper currency never ceased in colonial America, as we have seen. The second example is from the nineteenth century, from the concluding period of the American Civil War, circa 1865:

As part of the northern effort to fund the war, the Union created a new national banking system. . . . Banks that joined the new system were allowed to issue “national bank notes” that were in effect a national currency . . . these notes circulated alongside currency issued by the hundreds of state-chartered banks. . . . In order to eliminate the notes issued by these latter institutions and thus centralize authority over the currency in the national government, a prohibitively high tax, 10 per cent, was imposed on the circulation of state-chartered bank notes . . . the tax effectively drove these notes out of the money supply and strongly encouraged the absorption of state-chartered banks into the national banking system. Both results strengthened the Union government’s authority over the national financial system at the expense of the individual states. (Bensel 1990, 124)

These measures (and others) led to the elimination of the great diversity of the locale-and-issuer-specific American currencies discussed above, and eventually to the federally regulated single national standard currency (and to the *state-origo* criteria on what counts as “money”) that we take so much for granted today. And yet the production and use of other kinds of pecuniary media has never ceased, as we shall presently see.

Performative Locutions

We have been considering a variety of forms of deixis and indexicality in the preceding examples, the manner in which the values of indexical variables are discursively specified in these cases, and the ways in which distinct specifica-

tions are laminated together to yield composite effects. In the case of contemporary currencies, to which we now turn, the specific type of indexical array that Austin termed a “performative” acquires a distinctive genred form. I have argued elsewhere (Agha 2007a, 55–64) that an Austinian performative is a very specific type of indexically composite sign, in which a number of distinct kinds of semiotic partials—including specific values of speech-event deictics, *verba dicendi*, proper names and titles, and forms of enregisterment—come together to yield composite indexical effects, and that such effects are defeasible in as many ways as there are categorial dimensions that comprise them. (I return to these issues in subsequent sections.) Here is Austin’s description of the basic issues:

We said that the idea of a performative utterance was that it was to be (or to be included as a part of) the performance of an action. . . . There is something which is *at the moment of uttering being done by the person uttering*. Where there is *not* in the verbal formula of the utterance, a reference to the person doing the uttering, and so the acting, by means of the pronoun “I” (or by his personal name), then in fact he will be “referred to” in one of two ways: (a) In verbal utterances, *by his being the person who does the uttering*. . . . (b) In written utterances (or “inscriptions”), by his *appending his signature*. (1962, 60–61)

Contrasting the written and spoken alternatives, Austin adds, by way of example, that the spoken form, “I, John Jones, warn you that the bull is dangerous” is performatively equivalent to the written form, “This bull is dangerous. (Signed) John Jones” (62).

It is readily seen (fig. 20) that the British pound sterling employs the “utterable” version of the performative locution, and that the United States dollar relies on the inscriptional form. In the case of the British five pound note, we see at the top left (below “Bank of England”) the performative formula “I promise to pay the bearer on demand the sum of five pounds,” an utterable version personalized below by the picture of the queen, who is now understood as the referent of “I.” On the US twenty dollar bill, the statement at the bottom left carries the inscriptional form of the performative formula “This note is legal tender for all debts, public and private. (Signed) Treasurer of the United States.” If all “felicity conditions” are met (e.g., the bill is authentic, the signatory is indeed the treasurer, and so on), the performative formula appears to constitute the social fact that it denotes, namely that it indeed “is legal tender for all debts, public or private” (but see below). Additional signatures occur on both bills, which have com-

plementary or additional legislative functions, but are visually separated from the performative locutions that occur on them.

We have already seen that American currency did not always take its present-day form, the form taken by the Federal Reserve note in figure 20. Earlier forms of American currency contained performative locutions too, but these were more deictically selective than present-day ones, and correspondingly restricted the activities to be carried out through them. A comparison with currency notes from the more recent past will make the distinction clear.

Whereas the dollar note in figure 20 is deictically nonselective to a maximal degree in describing its uses as “legal tender” through a universal quantifier, “for *all* debts, public and private” and thereby underspecifies the limits of its own uses to a high degree, the first United States federal note (1862), in figure 21,A—with a picture of Salmon P. Chase, then treasurer of the United States—has a more restrictive self-description because it cites limitations on



Figure 20. Performative locutions, British pound and United States dollar. Source: B, Wikimedia Commons, US public domain.

its own use (verso) : “This note is legal tender for all debts public and private *except duties on imports and interest on the public debt*” (emphasis added). It tells its bearer that it can’t be used for customs duties, nor for interest payments on the national debt. However, the US Silver Dollar Certificate (1886), depicted in figure 21,*B*—which bears a picture of Martha Washington—fills in these gaps, and describes itself as receivable for “customs, taxes, and all public debts.” So each kind of dollar bill is restricted, by criteria of transactional equivalence class (and others), to a distinctive kind of use, thereby segmenting the kinds of sociocentrally coordinated, interpersonally recurrent and cotextually appropriate activity routines performable by bearers through each.

This genre of self-formulation is nowadays found on many (but not all) national currency bills, and, even when it occurs, exhibits some variation. For instance, all three bills in figure 22 use some version of the inscriptional form of the performative formula, whether by using the full sentence locution, as in figure 22,*A* and *C*; or just the nominal predicate phrases, as in figure 22,*B*; and in all three cases, the performative locution is followed by the signature of a requisite official, whether a governor (New Zealand), or a treasury secretary and a governor (Australia, Papua New Guinea). The serial numbers in these (and other) bills specify the batch in which they are issued, and are thus indexical of time of issuance (though this is opaque to the general public). Some explicitly specify locale of use: The item in figure 22,*B* describes itself as “legal tender throughout *Papua New Guinea*,” the item in figure 22,*C* as “legal tender throughout *Australia* and its territories,” both using proper name deixis to delimit locales—whether formulated as country locales, or as country locales plus dominions—as geopolitical boundaries of appropriate use. Thus, although these documents share common genre characteristics of national currencies, they differ among themselves in deictic selectivity across one or more dimension of use-user-place formulation, thus contrastively delimiting the appropriateness conditions under which transactional conduct can occur through them.

Describing Your Own Felicity Conditions

I noted earlier that any performative locution is defeasible in as many ways as there are categorial dimensions that formulate its own effectiveness. It will be obvious that any attempt to use the Kina note, figure 22,*B*—which formulates itself as “legal tender throughout Papua New Guinea”—to try to buy chewing gum in France or Switzerland, say, is an infelicitous use of it, or fails to meet the felicity conditions it specifies for its own use, and is unlikely to succeed. Such cases of ineffective infelicity can be multiplied without limit.



Figure 21. Transactional equivalence classes, late nineteenth-century United States: A, federal note, 1862; B, silver dollar certificate, 1886. Source: Creative Commons license 4.0, National Numismatic Collection, National Museum of American History.



Figure 22. Deictic selectivity, geopolitical locale of use: A, New Zealand dollar; B, Papua New Guinea kina; C, Australian dollar.

The most pervasive kind of potentially effective defeasibility that any paper currency faces is usually expressed in worries about counterfeit bills. Early American notes call attention to this particular felicity condition through genre characteristics that present-day notes lack.

The examples in figure 23 are all authentic notes, issued by various communities and printers as described on the notes themselves. They also carry inscriptions that flag worries about authenticity: The example in figure 23,A says “DEATH to Counterfeit” both at the top and the bottom of the bill. The example in figure 23,B says “Tis death to counterfeit” at the bottom. The example in figure 23,C, “To counterfeit is DEATH” at the top.

The genre of flagging the felicity condition of a bill’s authenticity is so well known at this time that even counterfeit bills use it, as in figure 24. The first example (fig. 24,A) is counterfeit, but says that it is issued by “a resolution of CONGRESS passed at PHILADELPHIA, *February 17, 1776*”. The second one (fig. 24,B) is also counterfeit, but says that it is issued by the “Colony of NEW-YORK,” and includes all the genre-specific features of phraseology, seal and signature that we have seen in authentic bills above, and, even though it is counterfeit, it adds “Tis Death to Counterfeit” below the seal. When counterfeit bills deploy such features, they are canceling, or rendering defeasible, the state’s own performative efforts, while appearing to uphold them.

Emergence of a Standard Register of Money-Token Conduct

We have considered a number of kinds of pecuniary media in the above discussion and have noted a number of dimensions of variation across them. In every case, items function as specific types of pecuniary media only for those acquainted with discursively mediated metasemiotic formulations of their characteristics as objects or entities of some specific kind, of the kinds of activities possible through them, of the time, place and social category membership of their users, and of the communities, allegiances, or political formations to which they belong.

For those that contain no inscriptions, a variety of artifact-external discursively mediated metasemiotic formulations of their thing-use-user characteristics (whether formulated by law, by custom, or by appeal to such in conversation; see the discussion of fig. 3) serve as preconditions on the symmetric grasp by current interactants of their usability as money tokens. Even for the peculiar case of script artifacts, where some features of these formulations are contained on the artifact itself, additional metasemiotic formulations of their thing-use-user characteristics always play a part too, as we have seen, so that forms of



Figure 23. Describing your own felicity conditions: genuine bills



Figure 24. Describing your own felicity conditions: counterfeit bills

discursive semiosis that are “off the page” readily supervene upon ones that are on it. Although the range and variety of issues discussed above is quite complex, and so cannot be summarized here without distortion, it will be useful now to consider a few selected features of these artifacts in order to see how changing object formulations of their thing-use-user characteristics have altered conceptions of what the folk term *money* supposedly describes, and what such views obscure about the role of pecuniary media in social life.

Table 2 highlights selected features of a few of the currencies used in America over the last three centuries, separating out some of the dimensions specified within them—here listed in separate rows—through which pecuniary media are given distinct types of object formulations. Row *a* indicates differing formulations of what these objects are. When comestibles are decreed to be pecuniary media, we find various terms for characterizing what they are, so that corn or tobacco are *legal tender* (in different use locales) but are not paper money, “pig, grain, beef, etc.” are grouped together as *pay* or as *pay as money* in some locales, but none are *money*, a term then reserved for coinage. When *coins* are minted at home they are noncoins for the State. A similar voicing structure influences the self-descriptions of the earliest State-issued paper media, which call themselves *notes* or *bills* (figs. 7,A, 7,C, 10,A, etc.), because they are issues of a colony (and thus of subsidiaries of a larger empire), and England has issued the colonies no right to issue *money* at this time, retaining the right to do so for itself. And when they are issued by private businesses or individuals (figs. 14–18), they often avoid all such labels, but are called *tokens* by those who look back at them with fully naturalized nation-state-*origo* intuitions, or are entirely overlooked. And finally, today, we use the term *money* for “State Issued Money Tokens” (figs. 20, 22), or SIMTs, but not for all pecuniary media that organize contemporary lives (hedge funds, derivatives, etc.; and see following sections).

Row *b* indicates *Where* items are used. Some of the privately issued notes (figs. 16–17) are used only at stores that issue them, and only by a small subset of the population, and so registers of conduct that treat them as money tokens have a small social domain, and locales of use are indexically differentiated as one store vs. other stores. Others explicitly state that they are designed for use all over a specific colony or province or State of the Union (figs. 7, 10,A, 12,B, 12,C) and are thus in principle usable in any of the stores or businesses within such political boundaries, though not necessarily outside them. In later versions of the genre (figs. 20, 22), a sovereign nation-state becomes the relevant political boundary for acts of everyday purchase by its citizens, although such pecuniary media serve other uses across such boundaries too, as when currencies of another

Table 2. American currencies: Decreasing deictic selectivity of object formulations

a. What:	pigs, corn, etc. as <i>pay</i> or <i>legal tender</i> (vs. money)	→	discs as <i>coin</i> (vs. non-coin)	→	paper as <i>note</i> or as <i>bill</i> (vs. "lawful" money)	→	notes/coins as <i>tokens</i> (vs. money)	→	Notes/coins as <i>money</i> (vs. other instruments)
b. Where:	A store or business (vs. others)	→	A colony or province (vs. others)	→		→	A state of the Union (vs. others)	→	A sovereign nation-state (vs. other nation-states)
c. Who:	A customer of a store (vs. others . . .)	→	A resident of a locale/city/colony/ . . . (vs. others . . .)				→	A citizen of a country (vs. citizens of other countries)	
d. By Whom:	various "folks" (vs. others)	→	A "firm" (vs. others)	→	A "bank" (vs. others)	→	A province (vs. others)	→	A federal government (vs. others)
e. When:	Term of use specified in calendar-time							→	Not specified
f. Whence:	Legislative warrant or authority specified by statute & assembly							→	Not specified
g. What for:	Sortal class specified (e.g., stuff in my store, taxes, customs duties)							→	Not specified

country are used as media of investment or trade by businesses or nation-states, most typically as aggregated ledger entries than as individual paper bills.

The issue of *Who* the one using it happens to be, row *c*, amounts to issues of role inhabitation and of persona manifest at the moment of use, as is the case for all performed arrays of signs that function as emblems (Agha 2007a, chap. 5). Someone who uses the item in figure 16, for instance, is thereby formulated as a customer of the “Chest of Tea and Hogshead” at the moment of transaction, an indexical positioning that differentiates its user from other customers at other stores, such as those who frequent “the original Fringe and worsted yarn warehouse” (fig. 14,A) in the same year and city. Formulations of role inhabitation may be more generic or inclusive. The act of using the 1735 bill in figure 10,A formulates its user as a resident of Connecticut (and hence also a subject of “his majesty” in England). Since the text-internal self-descriptions of these bills are readily superseded by forms of discursive semiosis that are “off the page,” such as regional trade alliances or royal decrees, the emblematic positioning of their users readily gets incorporated into more inclusive forms of belonging, or, in responses to attempts at imposing these, readily fractionates into more fiercely locale-specific forms of loyalty:

In Pennsylvania, New Jersey and Delaware the paper money of each colony circulated generally in the other two because of their close economic ties. In the four colonies in New England a similar situation existed, but from time to time restrictions would be adopted by one colony to prevent the circulation of paper money of another. In 1705, however, a proclamation of Queen Anne required the Colony of New York (which then had no paper money) to circulate Massachusetts emissions, an order with the New York citizenry refused to obey. (Newman 1997, 10)

For present-day national currencies, sociocentrically recurrent usage formulates their users as “citizens of a country,” as a text-default of construal (Agha 2007a, 39–64), though nondefault construals are readily formulated through forms of co-textual semiosis in specific interactions.

As for issuance *By Whom*, row *d*, we have seen that many pecuniary media are issued by a miscellany of “regular folks” (whether by merchants, stage owners, tavern keepers or ferrymen, or by Mr. S. P. Cocke, Mr. Thompson, Mr. Higley, or by countless others) or by businesses such as the The New Hope Delaware Bridge Company, which we would call “a firm” today, or by a miscellany of organizations that once called themselves “banks,” or by various cit-

ies, colonies or provinces, where each issuer defines itself against other social categories of issuer in attempting to anchor its recurrent user in specific participation frameworks of community belonging, customer loyalty, political allegiance, and others. Only after a prolonged series of struggles spread out over historical time—of store against store, firm against firm, colony against colony, the state against its citizens, central governments against subsidiary ones, and so on—do we find the emergence of the historically peculiar (but now dominant) case that is so familiar today, that of a federal government having secured the right to be the sole issuer of a particular kind of SIMT, a national currency, even though any such government continues to struggle against other governments in matters of international trade, or against the effects of pecuniary media that are produced by its citizens but are outside its own control (such as derivatives and hedge funds), which yield periodic crises of national governance and international trade.

Finally, considering the variables in rows *e*, *f*, and *g*, we find that earlier pecuniary media specify their own term of use, or the legislation or statute that issues them, or the specific uses to which they can be put, but contemporary national currency bills—such as the US dollar (fig. 20)—no longer do so. Each of these features of modern SIMTs readily yield specific construals, or default uptake formulations, on the part of users: The absence of any calendric specification of term of use readily implies that the bill is sempiternal, always and forever able to be pressed into use with the value denominated. The absence of any specific statute or warrant suggests its timeless and placeless authority or autonomy. And the absence of specification of what, in particular, it may be transactable-for supports the ubiquitous but absurd folk-theory that nowadays “money buys everything.”

Such forms of money talk—which we might caption as always-autonomous-everything views of money—readily emerge as nomic construals of the deictically nonselective texts (Agha 2007a, 42–45) that constitute paper SIMTs today and are readily recycled into countless genres of print publication and everyday talk in which users come together as participants. Yet the seemingly settled form that the genre now takes is a relatively recent achievement. It is as much a signature of the victory of the State against its subsidiaries and citizens as it is a promise of a State-centric “always-autonomous-everything” future to come. And insofar as it is a genre of metapragmatic discourse—one which appears to model forms of conduct—the increasing nonselectivity of the genre appears to calibrate activities of an *apparently* unbounded sort, and of actors of an *apparently*

undifferentiated sort, increasingly to each other. And so a widely enregistered genre of money talk and conduct becomes a gaze-narrowing device.

Much as in a standard language community, where the elevation of one speech register to the status of a national standard, creates a baseline of meta-pragmatic evaluation, whereby all other speech registers appear somehow abnormal, defective, parochial, and so on (Agha 2015b), the emergence of nationally centralized registers of money talk and conduct, where a nation-state becomes at once its animator-author-issuer and arbiter-judge-enforcer, has the consequence that many users of SIMTs readily become axiologically grounded in—and treat as their *origo* of reckoning—a scheme of evaluation that conflate SIMTs with *money* itself, not only because they call it that, but also because, insofar as they come equipped with “always-autonomous-everything” outlooks and metrics, other pecuniary media appear not to be “real” money at all, since they appear not to satisfy such metrics; and since the metasemiotic bases of such outlooks and metrics are highly non-transparent to discussion or debate, this fashion of speaking readily persists through time as a gaze-narrowing device, often surviving each business cycle and periodic crash, each period of inflation and of the incapacity to self-provision, sometimes making us moderns at home in a regime of *modern money*, a phrase which does not, of course, denote what money is today, but, instead, denotes what we moderns have come to call *money*.

Right around the corner of what is visible at all lie pecuniary media of other kinds, which are not SIMTs at all, but have entirely different issuer-issuance and use-user characteristics. But most people who have a firm axiological grounding in evaluative frameworks like the one just described are already equipped with naturalized diagrams of sortal kinds, so that when they are presented with samples of such pecuniary media, they are likely to produce evaluations of the kind that forms the subject header of the next section.

It's Not Real Money

The first case I'd like to consider is the now ubiquitous case of digital game tokens. There are so many varieties of these, and there is so much to be said about each, that my discussion here is, of necessity, very brief.

Figure 25 depicts images of digital game money,⁵ or *digital game tokens* as they are properly called in *modern money* genres of money talk and in associated

5. My thanks to Hei-Won Byun for bringing the examples in figs. 25 and 26 to my attention and for providing helpful information about them.

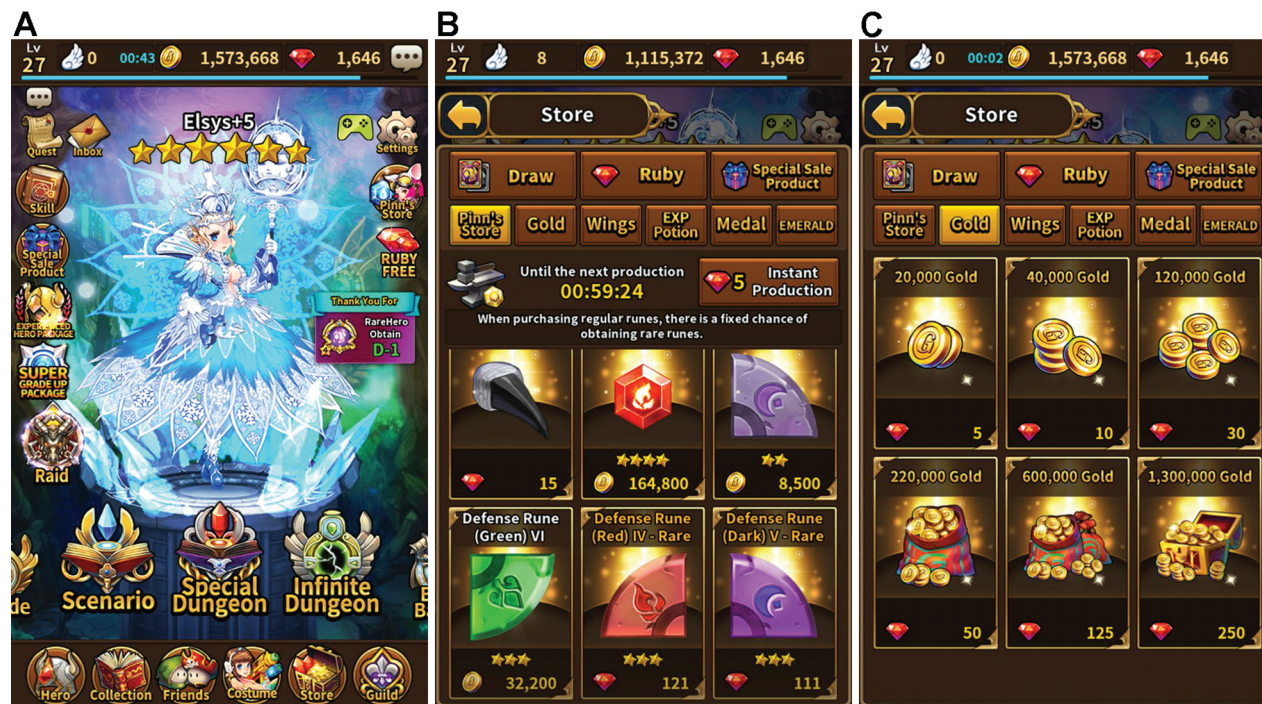


Figure 25. Digital game money: *Dragon Heroes*

taxonomies of sortal kinds. This Korean game, *Dragon Heroes*, has six pecuniary media, *wings*, *gold*, *rubies*, *keys*, *medals* and *emeralds*, such terms comprising a game-internal lexical register for denoting criterial pixellations (and not such entities in the universe as their ordinary English homonyms denote). Among them, *keys*, *medals*, and *emeralds* are somewhat subsidiary and have limited uses. *Wings* are used for the chance to play the game (one per game) and are automatically issued by the server every ten minutes. *Gold* is earned in-game by completing quests or missions. *Rubies* may be earned in-game, but since doing so is difficult, they can also be purchased through national currencies or SIMTs, and thus episodically become part of transactions that are indexically anchored to the world of “real money” and to the fates and fortunes of its users.

In the case of MMORPGs, we see more complex forms of money-token conduct because these games have “societies” embedded within them. In contrast to *Dragon Heroes*, which has relatively simple transactional roles (the game company is “seller/provider,” the players are “buyers/gamers”), these MMORPGs have more differentiated role categories of users, including players, intermediaries, brokers, and even part-timers, who are hired to play games and to participate in both in-game and out-of-game transactions. For example, the Korean MMORPG game *Lineage* (fig. 26), whose users are often middle-aged men, is notorious because of lawsuits regarding SIMT transactions involving game items—for example, when rare game items, worth millions of dollars, are traded with “real money.” It is sometimes said that even Korean gangsters intervene in these deals, though whether or how often they do so is largely unknown.

I describe these two cases here not to offer any deep or illuminating insights about them but to call attention to several issues of far more general interest. First, the number and variety of non-SIMT pecuniary media that pervade forms of social life today are very large, a fact readily obscured by idioms of modern “money”-talk and attendant gaze-narrowing devices. Although online game tokens are a rapidly growing (hence handy) example, countless offline cases can also be found in communities around the world. Second, money-tokens are never merely tokens of money: we have already seen that the “types” of which money-tokens are “tokens” extend far beyond “money,” that such artifacts are also emblematic of the place, time, social kinds and communities to which users and issuers belong, of the participation frameworks in which they come together as interactants, and of variably complex social relations, whether among themselves, or between them and others. Third, for every kind of pecuniary media we have considered in the preceding pages—that is, whatever the artifactual characteristics of such pecuniary media may be (whether made by



Figure 26. Lineage

mollusks or people, whether made of resin or metal or paper or sound or pixels), and whatever label they may be given from specific positional points of view (whether called “(not) money” or “(not) coins” or “trusting” or “pay as money” or “real” or “counterfeit” or something else)—all cases comprise discursively mediated systems of social indexicals, where metasemiotic frameworks of diverse kinds (whether their fragments be inscribed on them, or not) formulate their object signs as having specific characteristics as things appropriate to specific activities involving specific social categories of users. Lest anyone suppose that all this was once true but no longer is, my final example concerns cryptocurrencies, of which there are many varieties today, and I consider just one.

Bitcoin

Bitcoin formulates itself as a fiscal or monetary alternative to SIMTs. It is not issued by any government. It is not grounded in any central authority. In order to describe bitcoin, even in the minimal way that I propose to do here, it is necessary to describe a lexical register and an algorithmic protocol. Let us take a small step in that direction (table 3).

What is a *digital money ecosystem*? It’s an infrastructure created by algorithms and technologies which enables people to store and transmit bitcoin

Table 3. Bitcoin: Fragments of a Lexical Register

Digital money ecosystem	Node	Network
Bitcoin Owner	Key	Wallet
Bitcoin protocol Stack	Processor	Mining
Trust	Double Spend	Blockchain
Proof-of-work	Transaction	
1efkl3SHAnnprsvdoQmQwwGnpXGTTrbG3m5DY		Address
Cryptography	Prime Number	Elliptic Curve
	Exponentiation	Multiplication

information-partials from *node* to *node* in a digital *network*. Bitcoins are a virtual currency. There are no physical coins or even digital coins as such. The coins are, in effect, implied by messages that effectuate transactions, which are then verified in a ledger. A bitcoin lacks the identity conditions of pieces of metal and script: a bitcoin only exists as a money token when criterial forms of digital semiosis occur, after which, it exists as a transaction record.

What’s a *Bitcoin owner*? Bitcoin users own *keys*, which allow owners to unlock bitcoin-information and transfer it to others. These keys are stored in a digital *wallet* on the owner’s computer. The *wallet* doesn’t store bitcoins. It stores *keys*. You can start mining bitcoin by downloading a *bitcoin protocol stack* (open source). *Mining* is a term used to describe the activity of finding solutions to certain mathematical problems by using your computer *processor’s* computational power. You don’t need to know math. Your stack and processor solve the problems. Using these devices, someone on the network is able, on average, to solve the problem every ten minutes; this is called “mining a bitcoin” on the network. The network is a peer-to-peer system. There’s no central bank and no other central authority that issues or regulates currency. The algorithm does all this in a transparent and effective way.

The bitcoin protocol reduces the question of money-token transactional conduct to two problems: (1) Is the money authentic and not counterfeit? (The *trust* problem); (2) Can no-one else claim that the money belongs to them and not me (The *double spend* problem). The bitcoin protocol solves these problems through a secure public transaction ledger, called a *blockchain* and a distributed computational system called a *proof-of-work* algorithm, which arrives at a mathematical consensus about the state of transactions over the entire network every ten minutes. The mathematical principles underlying it are entirely transparent, though opaque to nonmathematicians.

Today Bitcoin is used for almost every type of commercial transaction imaginable, from everyday retail transactions at coffee shops, to high-end retail tran-

sactions in the art world, to charitable donations, international import/export, and so on. And yet although the system is used for many things, it is not used by the majority of people who use money tokens in the world today. It's new. It's unfamiliar. It's confusing. And it may fail one day. Or it may not. Many people have never heard of it. Many use it quite a lot. Some use it for illegal activities.

What does a bitcoin *transaction* look like? A user, let's call her Jill, downloads software, and gets an address, which looks like this: *1efkl3SHAnnprsvdoQm-QwwGnpXGTrbG3m5DY*. It's a unique identifier, the equivalent of a personal proper name, her bitcoin name; and when used in transactions, works like a signature. It's her only identifier on the network, or her *address* on the network. The address is stored in her digital wallet. When she gets an address, Jill doesn't have any bitcoin yet. But her friend Adam does. So she gives him fifty dollars and her bitcoin address. He checks the exchange rate with US dollars. Let's say it's 100 dollars per bitcoin at the time. So he uses her address to transfers 0.5 bitcoin to her wallet from his own. This transaction is recorded on the network so that everyone can see it. At first it's "unconfirmed." Once a bitcoin miner includes it in a block of transactions—which happens every ten minutes or so—it is recorded on the blockchain as "confirmed." The bitcoin, along with her ownership of it, exists as a social fact. She can spend it now.

The blockchain has multiple copies on multiple servers, so you can't fake it. It's also computationally secure. It uses public key cryptographic methods. This type of cryptography relies on certain mathematical functions, like *prime number exponentiation* and *elliptic curve multiplication* (bitcoin uses the latter), which are mathematically irreversible in the sense that it is easy to calculate from inputs to outputs, but not the other way. You cannot calculate the inputs by starting from the outputs.

I've just given a very brief sketch of the discursive architecture of bitcoin. Most of us don't fully understand what it's all about. Bitcoin is therefore a good example of the larger point discussed earlier: people who engage in money-token conduct—in whatever society—tend to be unfamiliar with most registers of money-token conduct in their own societies. You and I are actually like the folks I quoted from the *Banker's Magazine* of 1858. Most of us don't really understand it, and don't call it *money*.

Yet conjectures about "most of us" and what they do are distractions. Table 4 describes the ways in which bitcoin usage has expanded in recent years: Mining revenue per day became three and a half thousand times larger during 2010–14, transaction volume per day over thirteen thousand times larger, and market

Table 4. Bitcoin’s expansion, 2010–14

	2010	2011	2012	2013	2014
Market capitalization (\$)	287,933	79,868,400	149,657,200	1,138,079,589	5,670,834,348
Estimated transaction volume/day (\$)	3,712	712,430	3,341,881	10,907,886	50,836,294
Total Bitcoins in circulation	3,774,250	7,068,000	9,718,000	11,567,025	12,768,100
Mining revenue/day (\$)	503.65	72,964	110,572	462,826	1,782,107

capitalization over nineteen thousand times larger, even if the number of bitcoin in circulation has increased less than fourfold.

These trends permit a glimpse of the growth of Bitcoin-mediated money-token conduct during this period, of an increase in the sheer number of users and transactions, and thus of expansion in the social domain of enregisterment of competent use (though these figures convey nothing about the social-demographic attributes of new users). To those outside this social domain, bitcoin is not “real money,” perhaps because they are unfamiliar with the meta-semiotic frameworks that enable its use, or wary that no nation-state backs denominational values, features that make it seem like a sample of “slant stuff” to them (table 1), something that doesn’t quite belong to the class of “normal” pecuniary media they know best. A colleague of mine notes that her father uses bitcoin, but she herself doesn’t because she doesn’t “trust” it, she says. In this respect, she is much like the mid-nineteenth-century Americans discussed earlier, who used similar mental state predicates to describe paper currencies in an age when precious metal coin was called *money*; and *verba sentiendi* like “trust” may well be the most common kinds of metapragmatic verbs through which money-token users look anxiously across the boundaries of the register range that happens to be theirs.

There are other reasons too. Newspaper coverage of recent events involving bitcoin suggest that bitcoin is known by many today as associated with ups and downs in reputation and in the types of metasemiotic evaluations it receives by authoritative institutions around the world. Table 5 lists a series of recent events involving bitcoin that were widely reported in the public press. Using the informal terms introduced in table 1 earlier on in this article, namely, the contrast between **bold stuff** versus *slant stuff*—which are typographic eponyms for judg-

Table 5. The struggle between *the slant stuff* and the bold stuff never stops!

Bitcoin Timeline, December 2013 to May 2014

December 5: *People's Bank of China states bitcoin is not "legal tender"*

December 5: **Bank of America report finds Bitcoin viable in money transfer market**

January 16: **Sacramento Kings (NBA) starts accepting Bitcoin for tickets & merchandise**

January 24: **Las Vegas Casinos start accepting Bitcoin for hotel rooms and purchases**

January 28: *Charlie Shrem, Bitcoin board member, arrested for Silk Road money laundering*

February 25: *Mt. Gox goes offline; 850,000 Bitcoins have apparently been "stolen"*

March 6: **Tyler and Cameron Winklevoss buy Virgin Galactic tickets with bitcoin**

March 6: *Bitcoin exchange, First Meta, founder commits suicide in Singapore*

March 14: **Golman Sachs report notes Bitcoin's lower transaction costs and cyber security**

March 26: *The IRS announces it will treat Bitcoin as "property" not "currency"*

May 9: **Federal Election Commission allows non-anonymous Bitcoin donations**

Source.—Wolfson 2015, 209

ments about pecuniary media that are viewed as normal for some “us” versus those that are not—I suggest that many of these news stories tilt the public reputation of bitcoin more in the direction of slant stuff (e.g., *People's Bank of China states bitcoin is not "legal tender"*), while others tilt its public reputation the other way (e.g., **Bank of America report finds Bitcoin viable in money transfer market**). I wish to suggest, in other words, that the battle between the bold stuff and the slant stuff is often a battle between publicly widespread metasemiotic discourses about pecuniary media—which organize default forms of identifiability, characterizability, and symmetric grasp that people may have of them and which, through differences in participation frameworks and semiotic chain networks of discursive encounter, produce sociologically asymmetric denotational stereotypes of the very nouns that denote them (Agha 2007a, 103–32)—and that the battle is potentially always going on whether or not these media happen to be SIMTs (but not always for all types of pecuniary media, nor for every public), even if it is the case that, for some among them, forms of trust and confidence prevail sufficiently well in some locales and appropriate axiological frameworks are sufficiently well in place that, for persons who live in these locales, their favorite bold stuff may indeed appear to have something like the “always-autonomous-everything” formulations discussed earlier, at least for a while.

Conclusion

I have been arguing that all money-token conduct is a form of social interaction. To use a folk term like *money* is to speak not of a thing but of a class of social indexicals whose values are variably specified in different times and places.

Money has no “essence” because this class is best viewed not as a denumerable set (in the sense of set theory) but as a class of “cultural shifters,” which are variably anchored within any given society, and which differentiate limitlessly varied forms of social interaction within it. And it will be obvious that what I have described here is only the tip of an iceberg.

All money-token conduct relies on linking discursive and non-discursive exponents of semiosis to each other. In the case of cowries, the discursive exponents of conduct are entirely absent from the money token itself. In the case of bitcoin, discursive exponents fully constitute the money token; there’s very little else.

The case of script artifacts is an intermediate case. I have focused on this case mainly because, since it is the dominant form for us today, many varieties of it are available for inspection and examination in the archival record. Unfortunately, not all money tokens are archived. The archival record consists mainly of script artifacts that have been used as state-issued money tokens, or SIMTs. But even this fragment is quite useful. Looking at historical changes in the forms of discourse they embody as script, and in the forms of legislation that enable their state-stipulated money-token use, clarifies the ways in which such meta-semiotic frameworks create and periodically transform what we take social reality to be. These script artifacts are also important because much of what they made denotationally explicit back then, we tend to encounter more implicitly today, as ritual or routine conduct, where next-turn uptake formulations of conduct rarely *describe* what they typify, merely ratify them as normal to specific interactional settings. And they are no longer news; we don’t even read them anymore. As each of the semiotic partials of money-token conduct were created, however, they had to be explicitly described on the script artifact itself to those unfamiliar with them, to those for whom they were “news.” Once these become tacitly assumed, as is the case in our most routinized uses of them today, or become naturalized in our most readily reportable folk-intuitions about them, we readily mistake them for “social reality.” They are not. People interact with others through forms of discursive semiosis far more varied than they readily suppose (of which quotidian forms of money-talk highlight only the species some see as specie). Our everyday assumptions and intuitions tend to reproduce merely the most widely enregistered and naturalized object formulations that pervade present-day locales, obscuring everything else.

Finally, they say that “money talks.” This is really not true. People talk to each other through it. I have tried simply to urge that we listen.

References

- Agha, Asif. 2005. "Voice, Footing, Enregisterment." *Journal of Linguistic Anthropology* 15 (1): 38–59.
- . 2007a. *Language and Social Relations*. New York: Cambridge University Press.
- . 2007b. "The Object Called 'Language' and the Subject of Linguistics." *Journal of English Linguistics* 35 (3): 217–35.
- . 2011. "Commodity Registers." *Journal of Linguistic Anthropology* 21 (1): 22–53.
- . 2015a. "Enregisterment and Communication in Social History." In *Registers of Communication*, ed. A. Agha and Frog, 27–53. *Studia Fennica Linguistica* 18. Helsinki: Finnish Literature Society.
- . 2015b. "Tropes of Slang." *Signs and Society* 3 (2): 306–30.
- Allen, Larry. 2009. *The Encyclopedia of Money*. Santa Barbara, CA: ABC-CLIO.
- Antonopoulos, Andreas. 2014. *Mastering Bitcoin: Unlocking Digital Cryptocurrencies*. Sebastopol, CA: O'Reilly Media.
- Austin, J. L. 1962. *How To Do Things with Words*. Oxford: Clarendon.
- Barnard, B. W. 1917. "The Use of Private Tokens for Money in the United States." *Quarterly Journal of Economics* 31 (4): 600–634.
- Bensel, Richard F. 1990. *Yankee Leviathan: The Origins of Central State Authority in America, 1859–1877*. Cambridge: Cambridge University Press.
- Bohannan, Paul. 1955. "Some Principles of Exchange and Investment among the Tiv." *American Anthropologist* 57:60–70.
- . 1959. "The Impact of Money on an African Subsistence Economy." *Journal of Economic History* 19 (4): 491–503.
- Bowers, Q. David. 1979. *Adventures with Rare Coins*. Los Angeles: Bowers & Ruddy Galleries.
- Crosby, Sylvester S. 1875. *The Early Coins of America; and the Laws Governing their Issue. Comprising also Descriptions of The Washington Pieces, The Anglo-American Tokens, Many Pieces of Unknown Origin, Of the Seventeenth and Eighteenth Centuries, and the First Patterns of the United States Mint*. Boston: Marvin & Son.
- Felt, Joseph B. 1839. *An Historical Account of Massachusetts Currency*. Boston: Perkins & Marvin.
- Ferguson, Niall. 2008. *The Ascent of Money: A Financial History of the World*. New York: Penguin.
- Graeber, David. 2012. "On Social Currencies and Human Economics: Some Notes on the Violence of Equivalence." *Social Anthropology* 20 (4): 411–28.
- Guyer, Jane J. 2004. *Marginal Gains: Monetary Transactions in Atlantic Africa*. Chicago: University of Chicago Press.
- Hammond, Bray. 1957. *Banks and Politics in Early America from the Revolution to the Civil War*. Princeton, NJ: Princeton University Press.
- Herskovits, Melville J. 1952. *Economic Anthropology*. New York: Knopf.
- Hogendorn, Jan, and Marion Johnson. 1986. *The Shell Money of the Slave Trade*. Cambridge: Cambridge University Press.
- Irvine, Judith T., and Susan Gal. 2000. "Language Ideology and Linguistic Differentiation." In *Regimes of Language: Ideologies, Politics, and Identities*, ed. P. V. Krokryty, 35–83. Santa Fe, NM: School of American Research.

- Jackson, J. Wilfrid. 1917. *Shells as Evidence of the Migrations of Early Culture*. Manchester: University Press; London: Longmans, Green.
- Knapp, Georg F. (1905) 1924. *The State Theory of Money*. London: Macmillan & Co. Originally published as *Staatliche Theorie des Geldes*. Leipzig: Verlag von Dunder & Humblot.
- Lefler, Hugh T. 2003. "Tobacco as Money." In *Dictionary of American History*, 3rd ed., ed. Stanley I. Kutler, vol. 8. New York: Charles Scribner's Sons.
- Leslie, Eliza. 1859. *Miss Leslie's Behavior Book: A Guide and Manual for Ladies, as Regards Their Conversation; Manners; Dress; Introductions; Entrée to Society; Shopping; Conduct in the Street; at Places of Amusement; in Traveling; at the Table, either at Home, in Company, or at Hotels; Department in Gentlemen's Society; Lips; Complexion; Teeth; Hands; The Hair; etc. etc. With full Instructions and Advice in Letter Writing; Receiving Presents; Incorrect Words; Borrowing; Obligations to Gentlemen; Offences; Children; Decorum in Church; at Evening Parties; and full suggestions in Bad Practices and Habits easily contracted which No Young Lady should be Guilty of, etc. etc.* Philadelphia: Peterson & Brothers.
- McLeod, Frank Fenwick. 1898. "The History of Fiat Money and Currency Inflation in New England from 1620 to 1789." *The Annals of the American Academy of Political and Social Science* 1898 (12): 57–77.
- McMaster, John Bach. 1927. *A History of the People of the United States from the Revolution to the Civil War*. New York: Appleton.
- Newman, Eric P. 1997. *The Early Paper Money of America*, 4th ed. Iola, WI: Krause.
- Parry, J., and M. Bloch, eds., 1989. *Money and the Morality of Exchange*. Cambridge: Cambridge University Press.
- Polanyi, Karl. 1966. *Dahomey and the Slave Trade*. Seattle: University of Washington Press.
- . 1968. "The Semantics of Money-Uses." In *Primitive, Archaic and Modern Economies: Essays of Karl Polanyi*, ed. Gorge Dalton. Garden City, NJ: Doubleday.
- Ruding, Rogers. 1840. *Annals of the Coinage of Great Britain and Its Dependencies; from the Earliest Period of Authentic History to the Reign of Victoria*, 3rd ed., 2 vols .. London: John Hearne.
- Temple, Colonel R. C. 1899. Beginnings of Currency. *Journal of the Anthropological Institute of Great Britain and Ireland* 29 (1/2): 99–122.
- Unger, Irwin. 1964. *The Greenback Era: A Social and Political History of American Finance, 1865–1879*. Princeton, NJ: Princeton University Press
- Quiggin, A. Hingston. 1949. *A Survey of Primitive Money: The Beginnings of Currency*. With an Introduction by A. C. Haddon. London: Methuen.
- Wolfson, Shael N. 2015. Bitcoin: The Early Market, *Journal of Business & Economic Research* 13 (4): 201–14.