
Why is gold valuable? Nature, social power and the value of things

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Abstract

The paper proposes a social history of the value of gold that stresses its connection to the acquisition, use and defense of social power. Gold's natural scarcity has continually been reinforced by an artificial scarcity arising from how powerful groups have used it, but the ruling class monopoly of control has alternated with periods of more widespread social access. In one period, gold is very closely held by a small number of very high-status people, followed by a time, often related to war, when the distribution of gold is significantly expanded socially. Then gold is drawn back in to the center and is closely held once more. This pattern is evident in Antiquity and, surprisingly, the 20th century. The paper explores the way in which the value of things established under one social order may continue to inflect the perception of value in later periods.

Keywords

gold, money, value, social power

Introduction

Gold has been valued extremely highly by nearly all societies over much of human history. The reasons people want it appear self-evident. It is beautiful, its color and sheen suggest the sun (on the whole, among the more reasonable objects of human worship), it is highly malleable and it does not corrode. All of these desirable qualities are anchored and amplified by the fact of its extraordinary scarcity in nature. Copper is present in the earth's crust at 55 parts per million (ppm) and iron at 56,000 ppm. Gold is found at .0038 ppm or just shy of .004 grams per ton of earth.¹

Given its desirable physical qualities and its natural scarcity, it seems hardly surprising that gold has always had a very high social value and that its ownership and use have been restricted. These are not the only factors underpinning its value, however. For much of its social history, the natural scarcity of gold has been significantly amplified by a wholly artificial scarcity produced by the way gold has been used by those who possessed it.

We know that scarcity of natural resources or commodities in general is not absolute or entirely a function of the physical abundance of the substance or the goods.² But gold is such an extreme case of physical scarcity that it hardly seems necessary to consider how it is made scarce or wonder at the fact that it has through much of human history been the monopoly of the ruling groups in

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society. Here I want to show how much work actually goes into making it scarce historically and how this has been true in different ways in different periods.

Gold is especially important to understand because of its close connection in popular and economic theories with money. For economists and political economists alike, gold is a natural money substance due, again, to its physical qualities and its natural scarcity. Its conversion into money enables the expansion of trade and the generalization of market economies. Hence, it is critically important to the rise of capitalism even if its role is eventually eclipsed by non-commodity moneys. What I will show, though, is that the history of money and gold's role in it is different from our conventional accounts and that its value as a money substance hinges in part on its prior history and social value.

In this paper, I want to explore how the social value of gold over the very *longue durée*, from pre-history to the present, is produced and maintained. This covers a range of social orders and undeniably means that any given historical period is very thinly described at best. Experts in any of them will have serious grievances. I do this nonetheless for several reasons. First, my goal is not so much to demonstrate *that* gold has a social history; geographers, at least, have long recognized the sociality of the value of things in nature, although, again, gold is such an extreme case that it seems worthwhile establishing the historicity of its value in some detail.³ In working through this history, though, what I care about showing is, first, how deeply class based it is from the beginning of the social record to the present. The history of the economic and cultural value of gold is a history of social power: how it is gained, how it is maintained, and how it is used. I would stress that gold's role in this is not, as it were, decorative; it is highly instrumental. It seems to me important to describe how the physical character of gold connects with the economic, political and cultural dynamics of different social orders to give gold its enduring social value.

Further, there is a curious rhythm of concentration and deconcentration of ownership of gold. Periods where gold is very closely held by a small number of very high-status people are followed by a time when the distribution of gold is significantly expanded socially. Then gold is drawn back in to the center and is closely held once more. The artificial scarcity is more noticeable during the times of concentration if for no other reason than that a substantial share of the available gold is drained off into hoards and removed from circulation – often by being re-buried in the ground. The periods when gold circulates more widely are often associated with warfare.

Second, I want to explore the idea that the social value of things as determined in one historical period is not more or less erased and then reconstituted under a different social order according to different rules. Rather, how and why things were valued before inflects their value now. At the limit, the social value of gold that emerged during the Paleolithic period casts a shadow, however dim, on the value of gold held in the vaults of the Bank of England or turned into wedding rings today. I acknowledge that there is not necessarily anyone who would say otherwise if pressed. So far as I know, the issue has not arisen. Moreover, with the evidence at hand I cannot demonstrate the validity of the proposition, but I do think the evidence is plausibly interpreted in this way and that it merits some thought.

Third, I think it is important to revisit the question of the history of money in tracing the value of things. Money and gold, as indicated, appear to be natural companions. They are both deeply identified as the measure of the value of everything else that is produced or traded in market economies. We all recognize the sociality of money and its value, but I want to propose here that a somewhat different understanding of why and how the value of a gold-based money emerges may alter our appreciation of where money comes from and why it works.

The paper follows these various threads from Antiquity to the present, but its geographic scope is limited to the Mediterranean and Western Europe. Following the evolution of uses and users of

a specific substance over several thousand years lends an obsessive quality to the paper, as though nothing is happening in this history besides gold. This, of course, is not the case, but in order to show what *is* happening with gold, it has to remain unreasonably foregrounded. Further, the evidence I am able to offer is an eclectic mix drawn from archaeology, literature, myth, historical accounts and statistics. None of this allows me to prove anything; all I can hope to demonstrate is the plausibility of the account and the value of the questions that emerge from it.

A frame

A vital part of the history of gold and its social value is how gold itself is produced. In this paper, I am concerned most directly with how it is used, by whom, and to what effect. The history of its production, however, is extraordinarily violent – both for humans and the environment. To the degree that the people who cause gold to be produced under these circumstances are aware of the social and environmental costs involved, the general social value of gold implicitly includes these costs. One needs to show, however, that the consumers are not only aware of these costs but could plausibly have seen them as meaningful – that concern for the social and/or environmental impacts of gold mining was not a historical impossibility – even though it plainly did not cause them to rethink their priorities.

Gold has arguably the longest-running social and environmental critique of any substance on earth. There is no question that the ancients – at least as far back as the Greeks – were well aware of most of the environmental damages associated with mining that we are concerned about today, including deforestation, erosion and even acid drainage. The river at the gold and copper mine at Rio Tinto in Roman Spain was called the *Urium*, or ‘burning.’⁴ Herodotus observed that ‘a whole mountain has been turned upside down’ by gold miners on the island of Thasos.⁵ Pliny, who almost certainly visited the mines in Spain, wrote: ‘the miners gaze as conquerors on the collapse of nature.’⁶

This critique continued into early modern and modern times, gaining in force and in accuracy. Agricola, in the 16th century, although he was in favor of mining, provided an accurate catalogue of the environmental damages associated with mining in general, and more specifically, the dangers to humans connected with the production of mercury which was used to process gold ores.⁷ Brewer, part of the first geological survey of California in the 1860s, was appalled by the deforestation and erosion connected with hydraulic mining in the Sierras and raged about the risks to human health connected with mercury mining.⁸ The use of mercury in gold mining and its associated environmental effects and human health impacts, which were particularly widespread during the 19th century gold rushes, continue to this day in small-scale, so-called artisanal mining with serious implications for human and ecological health.⁹ Otherwise, mercury has been replaced mostly by cyanide which produces its own set of environmental damages.¹⁰ These effects, of course, are well-known and widely-known now, in a period when gold mining continues to expand and the price of gold has hit near-record highs.¹¹

Parallel to this commentary on gold mining’s environmental impacts is an equally detailed and long-running critique of its extraordinary social costs. In Antiquity, Pliny, Agatharchides and Diodorus all commented knowledgeably on the extraordinarily harsh conditions of work and life experienced by the miners, most of whom were slaves. Diodorus, summing up their condition, wrote that ‘no man can look upon the unfortunate wretches without feeling pity for them because of the exceeding hardships they suffer.’¹²

The early modern period also produced a substantial amount of vivid and detailed commentary about the social impacts of the search for gold. The most famous critic was Bartolomeo de las

Casas, whose condemnations of Spanish mistreatment of the indigenous population were delivered personally to King Ferdinand as early as 1515, and more broadly in various print versions thereafter which reached 'a large and powerful audience.'¹³

The Pharaoh, we can assume, did not read Diodorus although he plausibly had a good idea of conditions in the mines. We would not expect him to curb his desire for gold out of pity for the miners. The point, rather, is that gold to him was plainly worth the immense misery and loss of life involved and he had the power to cause this misery to happen. Further, feelings of pity, as Diodorus demonstrates, would not have been anachronistic for the time. Diodorus was not objecting to slavery as such; he was appalled by the conditions of life and work of these particular slaves.

The King of Spain did know about the social costs involved in considerable detail. He was, moreover, a pious Christian, very concerned with the fate of his soul.¹⁴ Gold, to him, was evidently worth the massive loss of life and the risk to his soul for eternity.

In the 20th century, the role of gold mining in supporting the apartheid regime in South Africa was well known and eventually became the focus of political mobilization and boycotts that contributed to the eventual demise of the system. It took most of the century to get there, however. The very late 20th and early 21st centuries have seen growing commentary on the environmental and social impacts of corporate and artisanal gold mining and the start of campaigns to mobilize opposition to 'dirty gold.'¹⁵ Nevertheless, gold mining continues to expand.

In this paper, the whole problem of production cannot be addressed in any greater detail. It is an appropriate frame for what follows, though, as it lends depth and urgency to the issue of explaining how the social value of this strange substance has been established.

Physical and social scarcity in archaic society

One reason to believe that the value that we attribute to gold is not inherent either to the substance or to people is that pre-historic peoples do not seem to have particularly valued it. No gold artifacts have ever been found at Old World Paleolithic or Mesolithic sites, even where other decorative objects are present.¹⁶ It may be that gold was so highly prized that it was never left behind, even as part of a funeral ritual, but its complete absence is curious. In North America, ancient peoples also used native metals – that is, metals found in relatively pure and ready-to-use form – principally copper and iron. Archaeological remains indicate that these were utensils, not decoration. Gold, again, is not among the items these peoples left behind.¹⁷

Fashioning objects from copper and iron with Paleolithic technologies would have required a great deal more skill, time and technical sophistication than working with gold.¹⁸ If people carried away valuable objects rather than burying them, then they should have carried away the copper and iron artifacts along with the gold. On the other hand, if they buried items of value such as copper and iron, then they should have left behind gold objects as well, if they valued gold. Instead, as Paul Craddock, an eminent historian of metallurgy, puts it: 'The lack of interest in gold is very noticeable.'¹⁹

It would appear that gold becomes valuable historically in connection with the emergence of class society. It became an important marker of social standing and power and was also an important means for obtaining and maintaining that power. Like a not-so-secret handshake, gold trappings and gifts were one of the ways that powerful people recognized and acknowledged one another.²⁰

Gold needs to be scarce and socially confined in order to retain its social value; yet it has also to circulate in order to do its social work. For significant stretches of history in the West, it seems clear that although the physical supply of gold was steadily growing, the socially available supply

remained highly restricted. Part of the increase in the physical supply was continually offset by uses which sequestered or immobilized it, often through the rather simple method of burying it in the ground. Of the rest, the social regulation of uses and users helped ensure that gold would remain vanishingly scarce for most people while being comparatively abundant for some, and that the social aura surrounding its use and its users would considerably augment the effect of its physical aura.

Self-cancelling supply

Gold funeral artifacts – the earliest known samples of worked gold – first appear in the archaeological record at the necropolis of Varna (in modern Bulgaria) dating to the 5th millennium BC. Tomb 4, the richest, contained thousands of gold objects and fragments that, taken together, weighed one and a half kilos. Tomb 1 contained roughly a kilo's worth of gold ornamentation while Tomb 36 had about three-fourths of a kilo of gold.²¹ Varna is near a rather rich gold-producing region; we may suppose that this small, agro-pastoral civilization was relatively rich in gold. Even so, they were burying large quantities of their riches in these tombs.

The graves at Varna range from poor to richly endowed, suggesting a rather high degree of social differentiation. Their discovery has led to a re-evaluation of the form of social organization characteristic of the Varna culture and of the onset of social stratification in Neolithic cultures. Where Varna had once been seen as an egalitarian society, it has become clear that a hierarchical order was already in place.²²

What we see is that an increase in the supply of gold in hand is almost immediately offset to a significant degree by sequestering the additional resource in tombs. The pattern set in Varna was widely reiterated historically: warlords, kings and pharaohs and their wives, nobles and priests were buried with gold ornaments, gold utensils and gold-inlaid weaponry.

Egypt, for example, was also comparatively rich in gold although it was mined with great hardship in the Eastern Desert. Some of it went into long-distance diplomatic gift-exchanges, some into ornaments for the living at the royal court, and a considerable amount back into the ground in tombs. The central burial chamber of a tomb at Saqqara was inlaid from floor to ceiling with strips of sheet gold. The significance of this is that sheet gold is thicker than gold leaf but its use was elective: Egyptian artisans were able to produce much finer leaf. This gives some idea of the quantities available at any given time and how lavishly it was used by individuals. Trigger et al. also associate the development of gold mining with the hierarchization and administrative centralization of Egyptian society as well as with the growth of towns in the prehistoric period (ca. 3500–2500 BC).²³

The natural scarcity of gold is real enough and makes it an attractive resource for monopolization by a ruling group. But this natural scarcity is augmented considerably by the way it was used by this social class. This created or social scarcity anchors the value of gold in the same way that its physical scarcity does.

As societies gained access to larger supplies of gold, the amount they immobilized in tombs and in temples seems to have grown apace. The Lydians, for example, were particularly well-endowed with gold from the River Pactolus where Midas is supposed to have washed away his curse, and Lydian kings heaped quantities of it on temples at home and abroad. Herodotus follows the careers of a series of these kings and provides an inventory of the gifts and sacrifices they offered to the gods in thanksgiving for their kingship and to ensure their continued favor. Gyges, 'as soon as he had made himself supreme,' sent a vast treasure to Delphi, including six golden mixing bowls that weighed, by Herodotus' calculation, 2500 pounds. Croesus sent 117 golden ingots and a golden lion that weighed some 570 pounds. 'This was by no means all that Croesus sent to Delphi.'²⁴

The interest here is not in the accuracy or otherwise of the magnitudes that Herodotus reports, or even in the efficacy of the gifts – Croesus, after all, ended badly – but rather in the fact that the magnitudes are so important. The temple gifts had to be grandiose to reflect the status of the giver and the importance of the recipient. As with the grave gifts at Varna, this meant that a significant share of the comparatively large quantities of gold being taken from the Pactolus was steadily removed from circulation and frozen in the temple vaults. Vaults and graves can be raided at times of great need or social disruption, liberating considerable quantities of gold rather suddenly, but arguably the usual pattern was to drain off what might otherwise have been excess supply and channel it into unavailable forms. In this context, supply would be, in part, self-cancelling.

Gold in circulation

Gold also needed to circulate in order to do the work connected with gaining, contesting and maintaining power. It needed, however, to circulate within specific channels and according to specific conventions. Further, these authorized flows, like temple endowments, had to be conducted in a lavish and open-handed way in order to have their desired effect.

In archaic society, one of the principal channels of circulation was gift exchange. If we take this in a Maussian sense as being central to the business of running the world rather than a pleasant adjunct to it, then the social ordering involved in the giving and the receiving of gifts, their magnitudes and the setting for their exchange become critical political maneuvers.²⁵ The gift relationship in archaic societies, as Mauss stresses, is a way of marking and acknowledging rights and duties on the part of specific members of the group. It creates, over time, dense and binding networks of reciprocal obligation and recognition. The *publicness* of the gift is critical; the transaction must be seen in order to have its desired effect. Gift exchange relationships can involve a wide range of things, from land, slaves, or daughters in marriage to kula shells; gold objects, however, rank consistently highly.

A comparison of the behavior and fate of two legendary rulers illuminates some aspects of how gold works in a gift-exchange context. In *Beowulf*, Hrothgar, the beleaguered Danish chieftain, is called ‘ring-giver’ and ‘treasure-giver.’²⁶ He orders a great hall to be built:

... meant to be a wonder of the world forever;
It would be his throne-room and there he would dispense
His God-given goods to young and old –

Hrothgar is king by virtue of God’s favor and for the same reason commands great riches. He uses this wealth to build an enormous hall to accommodate the communal life of his war band which he has drawn to him through his many years of successful warfare. In the hall, he provides food and drink and entertainment and from his kingly *giftol* he bestows gifts and honors on his chief retainers – many of the gifts in the form of gold rings and torques. In all of this, the common people have no place. In the hall sleep only ‘a ranked company of kinsmen and warriors.’ When Beowulf triumphs over Grendel, Hrothgar rewards him with armor, sword, horse and trappings and

... a wealth of wrought gold
Graciously bestowed; two arm bangles,
A mail shirt and rings, and the most resplendent
Torque of gold I ever heard tell of
Anywhere on earth or under heaven.

The fact that Hrothgar is overwhelmed by Grendel and must rely on a foreign savior does not detract from his kingly aspect. Beowulf is praised to the skies as the man most fit to rule a kingdom, 'yet, there was no laying of blame on their lord, the noble Hrothgar; he was a good king.' Hrothgar counsels Beowulf on the qualities of a successful ruler: he describes kings of old who became arrogant and abusive, and 'gave no more rings to honor the Danes.' After such a king dies, 'the goods he hoarded are inherited by another who lets them go with a liberal hand.'

Three things stand out in this context. One is that it involves only people of rank: even the monstrous Grendel kills only warriors, bypassing the commoners in their huts.²⁷ The second is that within this privileged circle, gold would not appear to be particularly scarce. Excess is part of the point.

Third is how wealth circulates in this world and how visible that circulation needs to be. All of this society's surplus wealth flows to Hrothgar because he is king by the grace of God, and it flows away from him again because he is a good king. Both the act of giving and the gifts themselves need to be highly visible in order to do their work. Here gold's physical qualities are especially appropriate – small and portable enough to be produced on the spot in front of everyone in recognition of great deeds, and exceptionally visible even, one supposes, in foggy Denmark. This is a good example of how the physical qualities of gold interact with its social uses. Gold is highly visible at a distance as natural substances go. It is the social context, however, that makes visibility so important.²⁸

Midas, king of Phrygia, also owes his kingship to the favor of the gods. Having done a good turn to the foster-father of Bacchus, he is further rewarded with his dearest wish, with well-known consequences. Bacchus, taking pity on him in his distress, directs Midas to wash away his lethal gift in the River Pactolus. Midas does this and then renounces his throne, spending the rest of his life in the countryside in service to the god Pan.

What kind of a king was Midas? His story is normally read as a straightforward parable about greed. But this is not ordinary greed; it is the greed of a king. Midas, like Hrothgar, has the favor of the god and it allows him to amass great wealth. Unlike Hrothgar, however, he does not act the part of the good king by redistributing this wealth to his nobles and warriors. Instead of being open-handed and the source of all good things, he becomes a kind of bottleneck in the necessary circulation of wealth that holds a society together and allows it to sustain itself. As a consequence, he is unable to remain king.

Since gold does not corrode, the supply of it can only grow. Since it is so scarce in nature, the prospect of an oversupply of gold at any time seems remote. Yet a remarkably stringent artificial scarcity is superimposed on natural scarcity from the start of organized class society. A substantial part of the gold brought out of the ground is re-interred, subtracting it from the available supply. The rest circulates in socially restricted channels that have the paradoxical effect of creating something like abundance within those authorized circuits and genuine dearth outside them.

This self-cancelling supply effect would be perhaps of only passing historical interest – an odd feature of archaic society – but for the fact that it has continued to be periodically evident right through to modern times. In the West at least, it is a consistent feature of our relationship to gold.

Money I: the politics of coinage

Money comes in many forms, from large stones on the South Pacific island of Yap to cigarettes in POW camps to precious-metal coinage, paper, and, more lately, credit cards and electronic signals. It has several important functions, of which the most visible and concrete are serving as an efficient medium of exchange and as a store of value.

Most histories of money follow a common trajectory: the complexities and insufficiencies of barter relationships lead to the development of a universal equivalent that can be exchanged for all

other things. Money appears first as a commodity – some particular thing – that has no official status but that everyone accepts in payment because of its intrinsic value. The state at some point enters in and provides official money that retains the intrinsic value of the underlying commodity, but that is now marked and assigned a specific value: precious metal coinage. Eventually paper money with no intrinsic value may circulate, although its value and acceptability may be tied to the value of the former commodity money as with the gold standard.²⁹

The most useful commodity moneys – whether cigarettes or precious metals – share certain qualities. One is that they should be valued in their own right, as a commodity, not just as money. They should, if possible, be universally valued – American cigarettes from Red Cross packages were equally useful for buying extra rations from a fellow prisoner or bribing a German guard at Stalag 17. There should be enough of the commodity to supply the need for money in circulation, but not too much or the money will lose its value. This value should be stable – unlikely, for example, to be upset by a sudden surge in the supply of the commodity.

Gold, due to its natural qualities, is exceptionally well-suited to the role of commodity money and coined money. It is easily divided and recombined. It never wears out so can be held indefinitely as a store of wealth. It is portable and universally accepted as payment.

Importantly, gold is something that can be done without. The money substance should ideally be set apart from all other commodities and confined to certain channels and this is easier to do if it is comparatively useless. Shells and rocks also work well for this reason. But gold has some additional advantages. Its splendid uselessness is allied with its ability to incarnate the very idea of absolute superfluity and riches. Further, if the amount of gold circulating as money is surplus to need, some of it can be drawn back into a hoard or converted to jewelry and the like. It can as easily be released back into circulation if demand increases. Finally, the amount of ‘old’ gold held in various forms is normally very large compared to the amount of newly mined gold coming into circulation. This helps stabilize its value.

That precious metals – silver and, especially, gold – are the ideal money substance seems incontrovertible. Marx puts it this way:

... the money form become[s] transferred to commodities which are by nature fitted to perform the social function of a universal equivalent. Those commodities are the precious metals. The truth of the statement that ‘although gold and silver are not by nature money, money is by nature gold and silver’ is shown by the appropriateness of their natural properties for the functions of money.³⁰

This narrative is a logical history of money and an old one, first proposed by Aristotle. Money’s actual history was, however, quite different and this is important to understanding how the value of gold was established.

Ingham shows that in the beginning, money was neither a medium of circulation nor a store of value but a money of account. In 3000 BC, Babylonians calculated taxes and payments for goods and services in shekels, but these had no physical incarnation. The kings and priests controlled essentially the whole of the social product, so they needed an accounting tool to manage production and distribution, but they did not need coins to facilitate market transactions. Rents and taxes were paid in goods and labor, but they entered the books as shekels. The shekel’s value was equivalent to the standard monthly barley ration of one *gur* or 1.2 hectoliters. Apart from anything else, it was too big to be used in ordinary consumer transactions even if it had existed.³¹

Gold coins were first minted in Lydia – on the eastern coast of Asia Minor – in the 7th century BC. The first gold coins to appear in Greece date roughly to the second quarter of the 6th century, before the emergence of city-states.³²

In Greece, at the time, politics mostly concerned wealthy families vying for power. They did so in the same idiom as Hrothgar – fighting and lavish gift exchange to bind leaders and their allies and followers more closely together. These gifts could take many forms, but some of them were of gold – cups, tripods, jewelry and, as it turns out, discs of gold stamped with the personal seal of the gift giver. These were the first Greek coins. They were very much about exchange, but not at all about commodity exchange. They were more likely to be buried in the ground or passed on in further rounds of gift giving than used for the purchase of goods. The history of gold coinage in Antiquity is rooted in the contest for political power: it runs not from barter to coin but from personal seal to coin.³³

For the emerging city-states to consolidate their positions, they had to break the power of the landed aristocracy and draw the practice of politics from the countryside to the city. This was a richly complex process, of course, but the issuance of gold coinage to demonstrate the political superiority of the *polis* was one of its important strands. The gold coins of Athens made a very public statement about where political decisions, security and justice were now to be found. The character of the political struggle had changed, but some of the weapons remained the same.³⁴

Greek society did not become monetized to any great degree until sometime in the 5th century. In Athens, this was connected with the institution of democracy. The city issued stipends for the work of citizenship – serving as magistrates or on juries or in the army – so that men who lacked sufficient wealth could participate. These stipends could be used to purchase the goods citizens otherwise would have to provide themselves. Pericles described Athens as a ‘salary-drawing’ city and Aristotle connected democracy directly to public pay.³⁵ In this context, the *agora* as a site of political discourse and practice helped create the *agora* as marketplace and vice versa.

Athens’ imperial ambitions furthered the process of monetization and commodity exchange. Building and maintaining its enormous standing navy – some 200 triremes manned by 40,000 rowers – could not be done in the traditional way, which involved private citizens outfitting themselves for seasonal campaigns. The coins that were issued originally as political statements were increasingly converted to commercial uses, but uses that were still driven by political concerns.³⁶

In sum, precious metal coins in Greece start out as a medium of political exchange and a store of political value. They are involved in a variety of contests to gain and to demonstrate political power over a considerable amount of time. As with any social artifacts, once they existed these political tokens could be used in many ways including, no doubt, in exchange for other goods. But they only took on a more generalized and normalized economic function over time: they had to *become* money. And they became money specifically in a context of state development and imperial contestation.³⁷

Converting gold political tokens into genuine money implies the expansion of the social strata among which they circulate – an expansion which is, not coincidentally, consistent with the democratic ideal. As with Athenian democracy, one didn’t wish to go too far and gold coins, in particular, must have remained fairly hard to come by. Moreover, in the end, wealth in the form of money was not enough: Athens lost the war that resulted from its imperial ambitions.

A similar story transpired in Rome as it moved from a society of farmer/warriors in which landed wealth and self-sufficiency were the ideal to a more monetized and commercialized social order. This shift resulted from the need to support a large standing army to expand and maintain the Empire. Where gold had circulated largely in the traditional channels of aristocratic gift exchange and plunder, it was now increasingly converted into money. In-kind tax payments became money tax-payments. Roughly three-fourths of the Imperial budget went to the support of the legions.³⁸ As late as the 5th century AD, these numbered some 600,000 soldiers. Gold coinage in particular was needed for payments to the troops of their annual salary (five *solidi*) and, increasingly, a stipend of

an additional five *solidi* to purchase the wherewithal for living on the frontiers rather than being expensively maintained by the laborious transport of material overland.³⁹ This would have had the somewhat odd effect of creating centers of commercialization based on gold coinage in Rome and on the frontiers, with a less monetized world in between.

The standard economic account proposes a logical history of money given its function: money is a natural outcome of increasing social complexity and our natural propensity to truck and barter, as Smith put it. Gold, in turn, is a natural money. There are no particular political or social overtones to this outcome. Gold is suitable because of its intrinsic *physical* properties and its intrinsic value.

The actual history of money, which is about the struggle for political power and for territory, makes the choice of precious metals for it less innocent and less apparently 'natural:' precious-metal money is not an emergent economic fact, but a political strategy. Gold was suitable for use in coinage partly because of its *social* properties. Whereas in the past gold was fashioned into artifacts that, when displayed and exchanged, demonstrated visually – but very locally – who had power and who didn't, gold coins were a means of making claims to political power and displaying that power more widely. Converted into money, gold coins could be used to finance the expansion of this power militarily. Gold coins and, eventually, money, *pace* Clausewitz, were a continuation of politics by other means.

Money comes in many forms and it means many things. Vivian Zelizer has shown us how ordinary paper money – each bill identical to the next – can be marked socially according to its uses and its users.⁴⁰ Precious metal coins embody a very specific message from those who issue it, but this message and its meaning is only partly revealed in the forms stamped on them. The reason that gold coins in particular seemed an ideal money substance is partly because they had been developed and their value made manifest in a different context altogether. Their value – the social judgment on them – emerged in and through social conflict and the contest for power. Behind this, the reason that *gold* is the substance in which this struggle is in part worked out is plausibly because of its already long history as the material substance of social power.

The middle years

By the 7th century, gold had essentially disappeared from circulation in Latin Europe. It was drained off to the East in payment for luxury goods; apart from slaves, the Europeans had few goods to trade for silks and spices. It was pillaged by the Norsemen and ended up in hoards and tombs in Scandinavia. Beowulf's dragon, guarding his underground cache of gold, is typical of his time. The gold that remained in Western Europe was mostly, as Spufford describes it, 'fossilized in great royal hoards.' In the absence of a well-functioning state, there was no need for coinage to pay an army or a bureaucracy or to finance infrastructure. Gold circulated in part through pillage as rivals tried to claim each other's treasure. For the rest, again in Spufford's words, 'The kings used their treasure-hoards, if at all, for prestigious gifts to their subjects, or for political payments to one another ... The subjects who received gifts of gold were frequently royal relations, great noblemen, bishops or favored monasteries. All of these hoarded rather than spent the gold.'⁴¹ As Christianity took hold and pagan burial rites were abandoned, the gold that would have gone into tombs went to the Church instead, ending up in treasure vaults and lavish decoration.⁴²

From being spread out to the frontiers and among the ranks, we have returned to a world in which available supplies of gold have been drawn back into a very few hands and largely immobilized in hoards. By the late 9th century, even silver began to disappear in the West, sent eastwards to purchase the luxury goods to which the great lords had become accustomed, and due to what Spufford describes as a 'quite extraordinary diversion of silver into church treasuries and the Scandinavian invasions.'⁴³

Again, though, a long period in which gold was largely hoarded and in any case held exclusively by the upper reaches of society, was succeeded by a new movement toward dispersal and this was most closely associated with wars and crusades from the 12th through the 14th centuries. Intra-European long distance trade was increasing, to be sure, and this might suggest the need for high value coinage, but in fact the traders had already developed rather sophisticated methods of settling accounts over great distance including bills of exchange. Carrying bullion around in those unsettled times was, in any case, risky.⁴⁴

Traders might be satisfied with paper; soldiers were not, especially mercenaries who were increasingly called upon in wars all across the continent, financed by kings, emperors and popes. Even men of arms in feudal service often had to be supported with direct stipends when their stipulated term of service – usually only 40 days per year – elapsed. Besides mercenaries, precious metal was required for the payment of ransoms and subsidies to political allies. This period saw the innovation of the *fief-rente*, a feudal endowment of money – much easier to grant and to withdraw – rather than land. The endless warfare and related political maneuvers caused a vast ‘dethesaurisation’ of precious metals in Europe, in Duby’s characterization.⁴⁵

By the 14th century, these outlays reached staggering levels. Edward III of England and Philip VI of France were both in the market for allies as they confronted one another in the 1330s, and this market dealt in gold. Edward borrowed 1.5 million florins from Florentine bankers for delivery in Valenciennes in Northern France. Some 360,000 of these went to the Duke of Brabant. The Emperor Lewis IV of Bavaria negotiated 300,000 florins for the use of 2000 men for two months. Unfortunately for the Florentines, Edward lost the war and defaulted on his debt. Meanwhile, though, gold was now sufficiently available in Northern Europe to support the resurrection of gold coinage in place of silver ingots in commerce.⁴⁶

Gold and power in the early modern period

The conquest of the Americas began to seriously pay off for the Spanish in the mid-16th century. From 1503 to 1530, gold shipments amounted to 19 thousand kilos. In the next 30 years, this sum shot up to 82 thousand kilos. Over the next 40 years to the end of the century, production reached only 53 thousand kilos and continued declining from there.⁴⁷ Most of this gold was consecrated to political maneuvers and wars although this did not necessarily mean that all the gold left Spain. Because of the resistance of his Spanish subjects to outflows of precious metals, Charles V was forced into borrowing against the country’s treasure, often giving up rights to valuable mining revenues in return and entering into a relationship with merchants and bankers that would have been unthinkable in previous centuries.

Money II: state power and money power

When King Charles of Spain ran for election as Holy Roman Emperor against Francis of France in 1519, he spent 850,000 florins buying votes. Francis also offered bribes, but on credit. He could not produce cash *in* Germany, but Charles could – through massive borrowing – and the Electors in Germany preferred cash. Charles won the election, but he started his reign as Emperor Charles V already in debt.⁴⁸

His election ushered in an era of continental wars. By the 16th century, warfare had become more industrial and vastly more expensive. It also involved more soldiers who had to be paid and provisioned in the field and moved around by land and sea. As Ehrenberg points out, in the whole of the 16th century there were only 25 years in which there were no significant wars taking place. The Spanish spent two to three million gold crowns a year just putting down rebellion in the

Netherlands. As noted, Charles' Spanish subjects were unwilling to allow large outflows of precious metals beyond the king's own share, which amounted to a little over a fourth of the total, in order to finance his foreign wars, and so the Emperor was forced to continue borrowing. By the time he abdicated in 1556, he owed almost seven million ducats.⁴⁹ In effect, the gold of the Americas was already committed before it ever came out of the ground.

Most of this debt was owed to the Fugger family of Augsburg, whose fortunes had long been intertwined with the Habsburgs and with whom they existed in a curious and contested balance of power. Jakob Fugger II wrote an admonitory letter to Charles in 1523 in which he reminded him bluntly, 'It is well known that Your Imperial Majesty could not have gained the Roman crown save with mine aid ...'.⁵⁰ On the other hand, Charles and his heirs became that classic monster of finance – the borrower who is too big to be allowed to fail. The Fuggers, along with the other creditors to the emperor and his successors, were hard hit by a series of Spanish financial crises running from the mid-1550s to the mid-1570s and were very nearly driven to the wall.

To keep the loans coming, Charles mortgaged more and more of his own mineral assets, real and imaginary. The Fuggers at different times controlled the income from the imperial silver mines in the Tyrol, the immensely valuable mercury mines of Almaden, and the silver mines of Guadalcanal. In his most spectacular capitulation, Charles turned over the revenues of the Maestrazgo which normally came to him from the income of the three great ecclesiastical orders of knights.⁵¹ The Fugger's weren't the only financiers who held debt from Charles and his heirs. The Welsers received the mineral rights to the whole of Venezuela and brought German miners over to prospect for gold, but with no success.⁵²

The story of Emperor Charles illustrates certain important transitions in the relationship between money power and state power, and the role of gold in this relationship. First, kings have to promote a much wider social distribution of precious metals in order to pursue their ambitions. From hoarding and gift-exchange, it again becomes imperative to convert precious metals to money in order to pay men in the field and fund more expensive armaments production in far-flung locations. Second, they have increasingly to share power with the people from whom they are borrowing. The Fuggers could pointedly reprimand the Holy Roman Emperor and get away with it. Accordingly, rather ordinary people – bankers, merchants and so on – have a greatly enhanced standing and influence. Significantly, the corporate towns also gained great advantage over the crown through credit transactions. Their credit ratings were much better than the king's and they had for some time found it profitable to carry on something approaching a regular banking business where they borrowed at low interest on their own account and loaned at higher rates.⁵³

Regulating gold

Sumptuary laws have a long history, dating back to Antiquity. They tend to arise where displays of wealth and largesse risk altering the political landscape. And although they cover a wide variety of materials and modes of display, gold always features centrally in them. The Athenians and the Romans both found it necessary to issue regulations concerning the permitted lavishness of funerals, banquets, and gift exchange.⁵⁴

A flurry of finely calibrated sumptuary laws began to be issued starting in the late 16th century. They were aimed at the newly rich merchants and artificers who had made their fortunes supplying and financing all those wars and in catering to the outlandish tastes of the aristocracy whose own incomes, in many cases, were tied to stagnating land rents. The problem, in a complex society operating over a large territory, is how to tell those who are powerful by right of birth apart from those who are merely rich. Sumptuary laws were intended to make social status immediately visible.⁵⁵

The maniacal detail of sumptuary laws reflects two problems faced by the kings and their nobles and priests.⁵⁶ One is that the near absolute control over supplies of gold has slipped out of their hands and cannot be clawed back. Second, they cannot ignore or erase the growing power of merchant and financial capital. All they can reasonably hope to do, via the sumptuary laws, is constrain how these lower orders are able to use the gold that had increasingly come into their possession.

A striking feature of these regulations is that they concern display, not ownership of the restricted materials. In fact they assume that ownership of precious metals and other luxury goods has irretrievably spread beyond the boundaries of the ruling class.⁵⁷ This implies further that gold was not absolutely scarce. It had to be made scarce – or at least exclusive – through controlling how it could be used in public.

Paradoxically, the mercantile class amassed wealth in the form of gold coinage, but it was prohibited from adorning itself publicly with gold finery. This wealth was a direct challenge to the power of the landed nobility who might not have much ready cash but could bedeck themselves with precious metals, rich clothing and jewels. We see here two forms of power – economic versus inherited political – in competition. Each uses gold as a weapon but in a different form – money on the one hand, and display on the other.

Money III: the value of gold and the value of money

In the standard economic account, the value of gold used as money arises from the intrinsic value of the physical substance itself and it lends this value to money. In the history recounted here, the value of gold as money is, in part, transferred from the value it has acquired because of the kinds of social and political relationships it mediates. Georg Simmel, in his great work *The Philosophy of Money*, argued that the value of gold as money is connected to what we have to give up in order to make of gold an effective money.⁵⁸

Simmel thinks that we value the things that we desire and that take effort to acquire. A certain notion of distance acts as a kind of index to value: how far from our grasp is the thing we desire? Scarcity, in Simmel's schema, is one factor that is likely to lead to a high valuation and he singles this out in the case of gold, particularly in explaining why gold is so useful as the material of money. He adds, however, that this scarcity cannot be absolute. If gold were really almost impossible to come by, there would not be enough of it to circulate as money. In fact, as he observes, you actually need quite a lot of it in order for it to be useful as money. It is the balance between scarcity and non-scarcity that is the condition of value.

Does this mean that the value of gold – a value that derives from its desirableness and its relative scarcity – is what creates the value of money based on gold? This was possibly true in the beginning, according to Simmel, but no longer. That is to say, before the social institutions of generalized monetary exchange are in place – those institutions that allow us to trust that money issued by the state will be generally acceptable – the intrinsic value of the money substance may have been necessary as a kind of guarantee. But eventually, money becomes valuable *because* it exercises those functions. It has value not because of its substance, but because of its performance: it facilitates exchange, acts as a store of value and so on. At this point, the commodity value that it may have becomes less and less important until we arrive at purely token money that functions perfectly well.

Finally, Simmel proposes that value in the case of money is related to sacrifice. The money commodity, whether gold, shells or cigarettes, stands apart from the other commodities in circulation. So long as it is being used *as money* it is not available for other uses. What do you have to give up in the case of gold in order to make it work well as money? Simmel thinks you have to

sacrifice its use as jewelry. Further, he thinks that its value in this alternative use indexes its value as money.

This doesn't seem quite right, however. Even when gold money was widely circulated, there was plainly plenty of gold available for jewelry and other decorative uses. This does not seem to be the key arena of sacrifice that can establish the social value of gold as money. Arguably, the more important thing that is renounced in order to use gold generally as money is the absolute royal/priestly/aristocratic monopoly over it. In short, using gold as money requires the sacrifice or the loss of a certain degree and a certain kind of power.

With Charles V, we saw contests for political and territorial power mediated through the value of gold money. In sumptuary laws, the value of gold – who it is valuable to and what it is valuable for – is mediated through contests for social power. These are just two arenas in which contests over the social order are played out, but they are among the most visible and consequential.

Modern times

The modern era in terms of the value of gold begins with the great mid-19th century discoveries in the US and Australia. These increased output by an order of magnitude. Global gold production in the first half of the 19th century was about 1200 metric tons (m.t.); in the second half, it rose to 10,400 m.t. Gold coinage during this period proliferated widely, replacing the silver that had earlier predominated and putting gold into the pockets of millions of people worldwide.⁵⁹ From 1900–1949, with the advent of South African gold, output leapt again, to 35,545 m.t.⁶⁰ But by the latter date, gold coinage was no longer in circulation.

Money IV: the gold standard

England accidentally and unofficially went on to a gold standard in 1717 when Isaac Newton, the Master of the Mint, set the silver price of the gold guinea at 21 shillings. This ratio of exchange overvalued gold. The newly minted silver coinage, undervalued at home, flowed abroad where it was worth more in a perfect example of Gresham's Law at work, leaving the country on a de facto gold standard. This was made the legal standard in 1816 and, given the economic and military dominance of Great Britain, influenced most other major nations to follow suit. Even so, an international gold standard emerged only in the 1870s after the immense flows of 'new' gold from America and Australia had accumulated sufficiently to support the generalization of gold-backed currencies. The US did not embrace the gold standard until 1900, due in part to the resistance of the silver lobby.⁶¹ Following an interregnum during World War I and into the mid-1920s, a restored international gold standard with full convertibility lasted only until 1931. The value of the US dollar was thereafter tied to a fixed price of gold until 1971, but the currency was no longer convertible into gold.

There is a rich literature about the possible costs and benefits of the gold standard.⁶² Nevertheless, for our purposes in exploring how the value of gold is determined, the key issues concern how much is needed to make a gold standard functional and what happens to this stockpile when the gold standard is abandoned.

What a gold standard promises is that paper money can be converted to gold on demand; what it assumes is that this mostly will not happen and that people will be content to use paper money because the guarantee of convertibility exists. Accordingly, the amount of gold actually held by central banks, treasury departments and commercial banks need only amount to some fraction of the total money in circulation. Under these conditions, some amount of gold is needed for the coinage in circulation, and some amount needs to be held as reserves against possible claims on convertible paper currency.

Note that even in a gold standard economy, the creation of money and credit is largely a private affair: writing a check or issuing a bill of exchange or, more recently, using a credit card, does not involve legal tender of any sort. Prudent bankers would ensure that their credit creation or, what amounts to the same thing, the creation of money, did not exceed a certain multiple of their own gold assets, but the amount of gold held in reserve could be rather small. The size of the reserve, then, was only indirectly related to the level of economic activity it underwrote.

'Monetary gold' is defined as the stocks held by central banks and treasuries plus the coinage in circulation or held as reserves by commercial banks. Worldwide, this amounted to an estimated 1384 m.t. in 1845. This rose to 7265 m.t. in 1900. In 1930, the year before the gold standard was finally abandoned by England, the global amount of monetary gold reached 17,453 m.t. and in 1935, when gold coinage had effectively ceased to circulate, it was 20,214 m.t. By 1950 it had risen to 34,992 m.t.⁶³

Table 1 shows the total monetary gold from 1845 to 1950, and the share of this total held as stocks by central banks compared to the share in coinage, either in circulation or held in reserve by commercial banks. As noted, the total of monetary gold did nothing but grow throughout this period but the distribution between central bank reserves and coinage gradually reversed itself. In 1845, 94 percent of monetary gold was in circulation or held by commercial banks. In 1910, when the amount of monetary gold in circulation hit its peak of 4699 metric tons, the amount in banks and coins came to only 44 percent of the total. By 1930, 94 percent of monetary gold was held by central banks and treasury departments.

Just in terms of monetary gold, then, we see a gradual concentration of holdings in the vaults of central banks and treasury departments until, eventually, gold coinage ceases to circulate. Moreover, the gold held by central banks/treasuries was also increasingly concentrated in fewer and fewer hands. By the late 1920s, nearly 70 percent of all gold reserves were held in Britain, France and the US – principally the US which by then held 45 percent of global monetary gold.⁶⁴ For the space of two or three generations, gold circulated widely as coin before the direct power of the state – and the most powerful states at that – was re-exerted over a large share of the global gold supply, a share that was, consequently, withdrawn from circulation.

The amount of gold produced in the first half of the 20th century shot up by a factor of three compared to the previous half-century, primarily due to the productivity of the South African mines. The total global gold output from 1900–1950 was 35,545 m.t. The total amount of monetary gold in 1950 – now held entirely by central banks and treasury departments – was 34,992 m.t.⁶⁵ It is as though the entire output of the first half of the century was painfully wrested from the ground and then re-interred in underground vaults – mostly in New York, London and Paris. The World Gold Council reports that in 2006, the entire stock of mined gold – what they refer to as 'above ground stocks' – amounted to 158,000 tons, of which 66 percent had been mined since 1950.⁶⁶ This would leave the entire above-ground stock in 1950 at 53,720 tons. The 34,992 tons in central bank reserves, then, amounted to about 65 percent of all the gold known to exist above ground. Once again we see that even huge increases in supply may be sequestered to a startling extent.

In 1971, when the dollar was floated, global gold reserves were 36,575 m.t. for all countries plus the international institutions, and from there declined very gradually and very slightly – roughly 9 percent – to 33,441 m.t. in 1998.⁶⁷ In that year, there was no gold money, no gold standard, and no currencies that were convertible into gold, yet the amount held by central banks and treasuries had scarcely changed. In 1971, the 'institutions' plus the US, France and Germany held 55 percent of gold reserves; the US alone had 25 percent. In 1998, these shares were virtually the same.

Table 1. Monetary gold: 1845–1950

	Total monetary gold	Central banks/ Treasuries stocks	Gold coin in circulation or with commercial banks	Gold coin as percentage of total reserves
1845	1384	84	1300	94%
1850	1459	109	1350	93%
1855	1913	188	1725	90%
1860	2485	185	2300	93%
1865	2997	347	2650	88%
1870	3548	713	2835	80%
1875	4065	1089	2976	73%
1880	4565	1151	3414	75%
1885	4975	1536	3439	69%
1890	5337	1969	3368	63%
1895	6100	2750	3350	55%
1900	7265	3175	4090	56%
1905	8626	4710	3916	45%
1910	10608	5909	4699	44%
1913	11481	8098	3383	29%
1915	12654	9356	3298	26%
1920	14100	11295	2805	20%
1925	15457	13892	1565	10%
1930	17453	16469	984	6%
1935	20124	20124	–	
*1940	28189	28189	–	
*1945	28330	28330	–	
1950	34992	34992	–	

All amounts in metric tons, fine gold

* Statistics are incomplete during World War II and understate total

Source: T. Green, *Central Bank Gold Reserves* (London: World Gold Council, 1999), Table 3.

It makes sense to draw down gold reserves very gradually so as not to have a big impact on the market price, especially if the reserves represent a large share of total global supply. Nevertheless, a 9 percent decline over twenty-seven years is very gradual indeed. Starting in 1999, however, the central banks/treasuries and institutions agreed on a coordinated and paced sell-off of reserves known as the Central Bank Agreement on Gold. The first agreement ran from 1999–2004 and resulted in the sale of 2000 tons over the period as a whole. The second agreement, for five years from 2004, is set to dispose of a maximum of 500 tons per year.⁶⁸ By 2006, central bank/treasury reserves were down to an 18 percent share of above-ground stocks.⁶⁹

The first two decades of the 20th century may well have been one of history's high points in terms of what we might think of as the democratization of gold. As legal tender, it circulated far more amongst 'ordinary' people than had ever been the case up to that time. In those years, a large proportion of all the gold in the world was tied up in the financial system, and a large share of that gold was actually in circulation. Then this circulating gold was drawn back into the hands of state authorities and most of it was held in vaults through much of the rest of the century. There are many reasons why central banks and treasury departments may have thought it wise to retain this gold in reserve. What is at issue here, however, is the effect of their policies on the

supply of gold on the world market. The effect was to significantly constrain the amount of gold that was freely available, thus helping to sustain both its price and its social aura of exclusiveness and powerfulness.

Conclusion

From the graves of Varna to the underground vaults of the Federal Reserve Bank of New York, the history of the social value of gold is in part a history of different ways of creating artificial scarcity. This is connected to gold's natural scarcity and natural attractiveness, but it seems possible to say that gold's natural features underwrite only a portion of its social value. And while it seems, perhaps, unexceptional that this was the case in archaic or pre-capitalist societies, the fact that it remained true right through the 20th century is remarkable and, plausibly, in part a product of this prior history despite all that had changed. Even gold's role as money, that great economic lubricant, was, as we have seen, rooted in a history of the contest for power. Gold's value as a money substance was in part predicated on its political value and instantiated in its political uses.

Second, value, in this account, is a function of a range of conditions and relationships. For gold, it is connected to its physical qualities and natural scarcity, but it is also connected to its social qualities and artificial scarcity. It takes real work to produce gold physically and it takes real and continuing work to maintain its social value as this latter is underwritten by socially produced scarcity. At times, this scarcity has necessarily been relaxed in pursuit of other goals, but it has often been reimposed with surprising stringency.

What is the nature of this value that drives people to cause more and more to be produced even as they are burying more and more of it back in the ground? The history indicates that this value was worked out in the context of the emergence of social class and has always been implicated in relations of social power. In the premodern era, a lot of the work of gaining and maintaining this power had to be done in public – it had to be seen to be effective. Gold's physical characteristics are salient here, but only within the context of this oft-repeated social drama.

This particular social history plausibly conditions its value over the long run, even when the initial conditions no longer apply. Gold's social value, in this sense, is partly a function of its physical aura – beauty, shine, etc. – and partly a function of its social aura – the carryover of its extraordinary social significance from earlier eras. Gold became the material substance of social power and its enduring value and peculiar uses are connected to this fact.

This also implies that social value is not separate from *who* values and how they are able to make good their valuation. Part of what we mean by 'social power' is being able to cause things to be done at a price that is acceptable to oneself. The costs involved in producing gold have always been borne by people and environments distant from its consumers but this does not mean that the consumers were unaware of them. The users of gold, for most of history a relatively tiny group of powerful people and institutions, have evidently been willing to accept the magnitude and the distribution of these costs. Even when, as with King Ferdinand, they knew this was wrong, it was not wrong enough to cause them to stop what they were doing.

Commodity fetishism, in Marx's analysis, is precisely about concealing the social relations underlying the value of the thing. This implies that if the true conditions of production were known, we would respond appropriately. What the case of gold illustrates particularly starkly is that the social relations of production are intimately bound up in the social relations of consumption – both are always at issue in creating and concealing the origins of value. If we are ever to learn to respond appropriately, we need to examine the conditions of production and of use together, in the same frame.

The present period is one in which gold is available to anyone, although at a high price. The information about the social and environmental damages connected with contemporary mining is increasingly available. The question of whether this information is enough to break through the veil of the commodity fetish, or whether seeing past the commodity fetish is enough to motivate people to behave differently, remains open.⁷⁰

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