

METAL, MYSTIFICATION AND THE ORIGINS OF MONEY

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People first released metal from the seams of the earth 11,000 years ago. Copper was cold-hammered into beads, and strung into necklaces that adorned the bodies of people living in the high plateau of Neolithic Turkey. Metal was pounded into form much like stone had been pounded into form for millions of years. The liquid property of metal was not yet understood; the infinite potential of metal was waiting to be realized.

Like so many 'origins' finds in archaeology, the earliest evidence for the smelting of metal is diminutive—a broken object that might have been easily overlooked by a less discerning excavator. The British archaeologist James Mellaart observed traces of copper and burning on the interior surface of a pottery sherd in his excavations of the late Neolithic site Hacilar in southern Turkey (ca. 6000 BC). He had discovered the fragment of a crucible—the oldest crucible in the archaeological record. A history of finance might begin at this moment, when the world's first metallurgists caused metal to flow: from solids to liquids, and liquids to solids.

It is worth pondering the marvels that were unleashed in these first metallurgical experiments. Rude and undifferentiated matter (metal ore) was transformed with an application of fire into a glowing and chaotic liquid, to be transformed again into a shiny thing of sense and meaning and actuality. It is little surprise that metallurgy is used as a metaphor for cosmological creation in many ancient and contemporary belief systems; metallurgists can function as priests or shamans and initiators, precisely because they own this esoteric knowledge to manipulate the dazzling forces at play in a kind of pyrotechnic liturgy.

Manufacture of the first metal daggers, axes, knives and spear points defies an evolutionary explanation. Copper is mechanically inferior to stone for most tasks of striking, stabbing or slicing. War parties armed with copper did not cause the extinction of stone as an implement of violence. Metal-users did not wipe out stone-users, as they did in Jim Crace's tragic novella *The Gift of Stones*; but war parties armed with copper did diminish the value of a stone weapon as things to be owned and displayed.

What was the value of a metal object in these prehistoric contexts? It was certainly partly aesthetic—the human eye is always attracted to shiny, luminous and reflective surfaces. But this effect was also achieved with the glassy surfaces of stone like obsidian. Prismatic blocks of obsidian were shaped into razor-sharp weapons and tools for thousands of years before metal was first moulded into a weapon form.

A Marxist reading of this problem might highlight the physical expenditure and resources invested in metal's manufacture. Metal ores were extracted from the earth with punishing labour, normally in barren and inhospitable tectonic landscapes. The stuff was transported in a long chain of production and exchange, from remote seams in the earth to distant consumers. Trees were felled at every stage of production to fuel the crucible and the forge. The most skilled stage of manufacture was also an extreme form of expenditure. The human cost to the ancient metallurgist can be read in the grotesque visage of Hephaistos, the Greek god of metal-working, deformed by daily exposure to poisonous alloys (arsenic), molten metal, and the violence of his trade.

Marx's labour theory of value is a start, but ignores a salient feature of a metal spear-point that does not exist in its stone counterpart. Once metal has been extracted from the earth, it has the potential to be transformed and recycled *ad infinitum*, until it is either intentionally deposited, lost, or destroyed through erosive processes. A part of the metal in my wedding band may have been worn around the neck of a woman 4000 years ago. On the other hand the physical transformation of a stone object requires that it be reduced, diminishing the object and the potential utility of it. A stone object cannot be transformed *ad infinitum* while continuing to be useful.

The relationship between liquidity, transformation and value underpins the origins of finance in the ancient world. Two thousand years before the Lydians in western Turkey invented coinage by stamping ingots of gold and electrum with royal iconography (ca. 600 BC), temple priests in southern Iraq (ancient Sumer, ca. 2600 BC) decided to base a sophisticated financial system on the value of metal—in particular silver. It was a ‘decision’, in so far as there is no evidence that metal was used like this before. Modern financial systems have inherited aspects of this 4600 year old innovation, and this begs the question: why metal?

The world’s first cities in Sumer were governed from temples. A priestly ruling class was invested with a religious authority to siphon economic productivity from the city’s residents. Temple priests developed increasingly sophisticated administrative technologies to monitor the flow of things into the temple, and out. The technology of writing, as a form of record keeping, was invented out of this administrative need; metals-based finance was a closely related innovation. Priests abstracted information from the things that circulated into and out of the temple; the most important bit of information was the value of the thing; the value of the thing could be measured with a weight of metal. The modern Hebrew *shekel* is a 4300 year old Semitic (Akkadian) term for a weight of metal. A sacrificial bull is worth so many *shekels* to temple administrators, or so much weight of metal.

The substitutability between the bull and the weight of metal is the essence of commodification and underpins all subsequent developments in finance. It represents the first attempt to standardize value, much like the gold standard of recent history or the Euro project today: all implemented to smooth out potentially disruptive differences between transactors to facilitate the flow of things. But in these transactions in the temples of Sumer metal is not a thing at all; it is not ‘money’ to make a purchase. The weight of metal is simply information used to measure value—a unit of account.

It is less clear to what extent these same temple priests liquidated metal to make transactions. This depends on the reading of a single Sumerian term: *ḫar* (Akkadian *šewirum*), which is translated as ‘coil’ or ‘ring’. A *ḫar* or *šewirum* is a measure of value worth 5 *shekels*. It is a unit of account,

and not necessarily a thing that existed in the deep pockets of temple priests. On the other hand archaeology can support the existence of such a thing. During this period (ca. 2600-2200 BC) small gold and silver spiral rings were deposited in the ground as votives in temple and palace precincts. They were often notched and intentionally broken. Functionally similar metal ingots were also invented during this period, as well as a form of metrology used to weigh small volumes of metal. Careful consideration of the material culture and the texts reveals that precious metal was liquidated in transactions, and fulfilled the three basic functions of 'money': as a unit of account, as a store of value, and as a medium of exchange.

But why was metal prioritized over other materials to perform such a role? There are two opposing approaches to the problem. Typically, aspects of both approaches are useful, but the dogmatic application of one over the other distorts potential truths into ideological polemic. In one corner is the 'metallist theorist' (bearing a close resemblance to Ronald Reagan's economic advisor Milton Friedman). In the other corner is the 'state theorist' (bearing a close resemblance to the British economist John Maynard Keynes). The metallist theorist argues that the physical properties of metal make it an ideal material with which to measure value. From this corner, metal was intrinsically desirable to the temple priests, and much of the value of metal was derived from their demand for it. The metallist theorist believes that the earliest form of metallic money was a commodity. In the other corner, the state theorist asserts that the value of metal resided purely in the ideology of the temple priests. They could have used marshmallows to measure value, if they had been invented. From this corner, the earliest form of metallic money was fiat. Its value was not derived from the metallic-ness of metal, but rather in temple decree that declared metal to be valuable.

The two opposing approaches to this ancient problem mirror the dominant economic debates and financial policies of the 20th and early 21st century: To what extent should the value of money be determined by markets, or by states? I think the marvel of metal in the Sumerian temple context has been lost in this great ideological loggerhead of recent world history.

Temples and other sacred precincts in palaces were filled with huge

volumes of metal things. Cult statues of gods were thickly adorned with silver and gold jewelry. Precious metal objects were invested in the ground as votive offerings, and also heavily, in the graves of elites. Metal's propensity to enter into the ground is revealed in archaeology, but also in a Sumerian 'disputation text'. The dispute is between personified Copper and Silver. Copper challenges Silver:

Silver, only in the palace do you find a station, that is the place to which you are assigned. If there were no palace, you would have no station, gone would be your dwelling place...In the [ordinary] home you are buried away in its darkest spots, its graves, its 'places of escape' [from this world]...

When planting time comes you don't supply man with the plough-fashioning copper adze, that is why nobody pays attention to you. When winter time comes you don't supply man with the firewood-cutting copper axe...

Like a god you don't put your hand to any useful work. How dare you then assail me like a wolf? Get to your dark shrines! Lie down in your graves! Thus ends copper's speech.

As a form of cult sacrifice in 'dark spots' and 'dark shrines', precious metal objects were transformed into tokens of hidden power—accruing what the anthropologist David Graeber has called an 'invisible form of value'. This seems to be the opposite of the commodity value of metal when it was liquidated in transactions, or used to measure the value of other things; but it was the same metal. The invisible form of value only becomes meaningful (or valuable!) when metal is made visible. Sacral contexts in which to dedicate metal were not eternal contexts; rather most metal circulated into the temple as sacral objects, to be circulated out again. The outflow of metal objects was normally recorded as a gift (e.g. of exquisite jewelry or weapons); but precious metal spiral forms and ingots were also released by temples, to be weighed as a form of money in commodity transactions.

This circulatory flow through sacred environments upheld the value of metal in the world's earliest recorded financial system. Value was ritually sanctioned, but intrinsic properties of metal made the material desirable to temple priests in the first place. They admired the blues and

yellows and reds and greens that glinted from the metal objects that adorned their bodies, and the bodies of their peers and their gods. They went to great social and economic cost to procure this material from distant tectonic landscapes in Iran and Turkey; but the liquid properties of metal are the most salient for this discussion. Metal has the infinite potential to be transformed, which equates with the infinite potential to be circulated in and out of different contexts. Precious metal forms can easily slip into their opposites: the metal in a pure commodity ingot form was invested in a sacral object of exquisite beauty, and was callously liquidated once more into an ingot.

There is a power in metal that transcends its infinitely fluctuating form and value. The power is accrued in its invisibility (and inaccessability)-- in the dark shrines of ancient Mesopotamia, or in the gargantuan gold vaults of the Federal Reserve beneath Manhattan. The power is also accrued in its visibility, when precious metals are lifted into the light and displayed as gleaming objects of actuality. Lucy Skaer is revealing this power by transforming a gold ingot in some dark bank vault into art. She may well be working with parts of gold that were similarly transformed in the temples of Sumer 4600 years ago.

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