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## 'Gold and silver' - Dante and money: food for thought

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It is clear today that money is a central element of a trade-based economy, but how was it seen in Dante's time? And Dante himself, how did he talk about money? Are any of his thoughts still relevant, centuries later? I shall try to draw some inspiration from the *Commedia* (with an amateur's eye, of course; I trust the experts will forgive any mistakes and approximations), and then I shall briefly put on my central banker hat.

### **Iipse dixit**

We must start from the beginning, and in Dante's time, the starting point for any thinking about the world, including economics and politics, was Aristotle, the Philosopher par excellence. The body of scholastic knowledge was largely based on his work, which had been adapted to Christianity and incorporated into the monumental philosophical and theological system of Thomas Aquinas. (Except of course for questions of faith: there was nothing Aristotle could say about those. Dante put him in Limbo, though in an eminent position and with the respect of all the other pagan or unbelieving sages; like them, he had been deprived of the bliss that springs from the divine vision: 'only so far harmed that / without hope we live in desire',<sup>1</sup> explains Virgil, after announcing that he also belongs to that dignified, but melancholy group).

What Aristotle wrote about money more than 2,300 years ago is still surprisingly valid. Today it is taught<sup>2</sup> that money has three fundamental functions as: (i) a unit of account, (ii) a medium of exchange and (iii) a store of value, and Aristotle essentially compiled the same list. In his *Nicomachean Ethics*,<sup>3</sup> the Philosopher explains, in terms that could still be

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\* I would like to thank Ignazio Visco, Massimo Omiccioli and Alfredo Gigliobianco for their observations and comments.

1 *Inferno* IV, 41-42

2 With minor variations.

3 *Nicomachean Ethics*, Book V, 1133a-1133b. The English translation is taken from *Aristotle, The Nicomachean Ethics*, translated by David Ross, revised with an introduction and notes by Lesley Brown, Oxford, Oxford University Press, 2009

used today with minimal changes,<sup>4</sup> that in an economy based on trade there has to be a way to compare the value of a house built by an architect with that of shoes made by a shoemaker, in proportions such that both will voluntarily engage in a trade; that things get even more complicated when there are many goods to be exchanged (food, beds and so on); and that without a common unit, in which everything 'must somehow be equated', it is difficult to establish the 'right' relationships between every possible pair of goods. Money therefore (i) constitutes the unit of account in which all values can be expressed; and (ii) makes trade smoother in practice, thanks to its conventional value, established by laws ('*nomisma*', currency, from '*nomos*', law). Finally, Aristotle continues, (iii) 'and for future trade – that if we do not need a thing now we shall have it if ever we do need it – money is as it were our surety': this is precisely what we call the 'store of value' function of money.

*Ipse dixit*. He makes an important addition, however: 'money itself [...] is not always worth the same; yet it tends to be quite stable'. The *stability* of money is essential for it to be able to fulfil its functions effectively, and this will be one of the key words in our conversation. In the 4<sup>th</sup> century BCE, money had a real or assumed intrinsic value, unlike today, and it would keep it for many centuries. Aristotle said that this condition could make money 'quite stable', but it does not altogether solve the problem, among other things because of the fluctuations in the value of metal.

The Philosopher deals more extensively with this issue in his *Politics*, without completely resolving it. Here are his words: 'For as the assistance of foreigners became greater in importing what they were in need of and exporting what was in surplus, the use of money was necessarily devised. For the things necessary by nature are not in each case easily portable; hence with a view to exchanges they made a compact with one another to give and accept something which was itself one of the useful things and could be used flexibly to suit the needs of life, such as iron and silver and whatever else might be of this sort. At first this was something with its value determined simply by size and weight, but eventually they impressed a mark on it in order to be relieved of having to measure it, the mark being put on as an indication of the amount'.<sup>5</sup>

He goes on to add: 'At other times, however, money seems to be something nonsensical and to exist altogether by convention, [...] because when changed by its users it is worth nothing and is not useful with a view to any of the necessary things'. There is a certain logical tension here (not such a rarity in the Philosopher's immense output) between the tangible utility of the commodity money and the conventional nature of minted money. We can sense, at the heart of this reasoning, the need to ensure *trust* (another key word) in money, either because of its intrinsic value, or through the strength of the convention guaranteed by state minting.

It may have been noticed that Aristotle makes no mention of gold in this passage. Gold actually played a secondary role in the monetary system of the Greek *poleis*. The money

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4 Actually Aristotle's argumentation appears as always somewhat convoluted and redundant compared with the current forms, but this is the gist of it.

5 *Politics*, Book I, 1257a-1257b. The English translation is taken from *Aristotle, Politics*, translated and with an introduction, notes and glossary by Carnes Lord, Chicago, University of Chicago Press, 2013.

of moneys at that time was the silver Athenian drachma, bearing the owl symbol of the eponymous goddess, which was a universally accepted currency and used as a benchmark, just as the florin of Dante's home town would be many centuries later, although that was in fact a gold coin.

### **Fatto v'avete dio d'oro e d'argento (You have made gold and silver your god)**

Let us now jump forward to Dante's time. In those days in Italy, with the development of trade on a large scale, the need for a stable and reliable currency increased, just as Aristotle had said it would. This function was carried out by what we could call the Italian medieval gold standard, consisting of the Genoese *genoino* or *genovino* (first minted in 1252), the Florentine florin (the same year) and the Venetian ducat (1284); all three were gold coins, of a similar weight and extreme purity. (The Genoese insist on saying that the florin came second, though not by much, chronologically speaking; Florentines like your speaker today counter that it was unquestionably the first in terms of diffusion and importance between the 13<sup>th</sup> and the 14<sup>th</sup> centuries, to the point that it was widely imitated, and that its name has long remained among the currencies of various European states).

The broad acceptance of the coins I have mentioned was based on their intrinsic content of precious metal, coupled with the trust that everyone placed in the veracity of their weight and purity, guaranteed by the seal of the mint of prosperous merchant cities. We shall see shortly how much worth the abovementioned cities gave to the element of trust embodied in minting: the Dantesque expression 'la lega suggellata dal Battista' (the alloy sealed with the Baptist) is significant,<sup>6</sup> as it refers to the fact that the city's patron saint, St John the Baptist, was on the reverse of the florin (people in Florence still say 'San Giovanni non vuole inganni', which roughly means 'Don't try it on with good St John' i.e. 'St John brooks no deceit', harking back to the old coin whether they realise it or not<sup>7</sup>).

Alongside gold, silver continued to be widely used for minor transactions, as did copper. There was also a silver florin in Dante's Florence called a 'popolino', minted for the first time in 1296. 'Gold and silver' were thus an image of and a synecdoche for money. Dante often mentions them in the *Divine Comedy*; eight times as a pair, if we have counted correctly, and separately many other times. What did he think of them?

It is tempting to answer that he thought badly of them, very badly even, seeing them as a symbol of cupidity or of ill-gotten wealth. This is often the case. Yet in reality things are a little more complicated and ambiguous. Let's take a look, starting with greed: specifically, let's start with the canto where the pairing of gold and silver appears most, three times in fact, which is canto XIX of the *Inferno*. This is the canto of the simoniacs, where Dante (as is well-known) invents an ingenious rhetorical expedient to send a pope to Hell, who, at the time of Dante's supposed journey to the afterlife had not yet died and could not therefore have been there: Boniface VIII, his most villainous enemy, who engineered his exile from the

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6 *Inferno* XXX, 74. If we want to be pedantic, there wasn't really any 'alloy'; the florin was made of the purest gold at all times.

7 Wikipedia, however, provides various interpretations, and the same saying exists in other regions of Italy.

'bell'ovile in cui [dormì] agnello' (the lovely sheepfold where [he slept] as a lamb)<sup>8</sup> and who, to the delight and pride of the people of Ravenna, caused the poet's bones to be laid to rest here and not in the shadow of his '*bel San Giovanni*' ('good St John', the name of Florence's baptistery), as the poet calls it in this canto.<sup>9</sup> There is perhaps no other canto in which Dante gives vent to so much rage. The greed for money of the simoniacs, *in primis* of an unspecified number of popes, is the target for his invective right from the start of the canto:

O Simon Magus, O wretched followers  
you who the things of God, that should be brides  
of goodness, rapaciously  
adulterate **for gold and for silver**<sup>10</sup>...

Later on we find:

Neither Peter nor the others took from Matthias  
**gold or silver**, when he was chosen  
for the place lost by the wicked soul,<sup>11</sup>

that is, when Matthias was chosen as the twelfth apostle in place of Judas the betrayer: Dante says that it was definitely not for money that St Peter, the first pope, gave him the job! And finally:

You have made **gold and silver** your god,<sup>12</sup>

in other words, for you, greed is the supreme deity. You are worse than the pagans who only worship one golden idol: you have hundreds of them, in the shape of coins.

It is not much better for the wealth symbolised by gold in canto XX of the *Purgatorio*, which has the famous verse 'A curse be on you, ancient she-wolf'<sup>13</sup> (the beast represents avarice), and where Hugh Capet, the forefather of a dynasty of French kings, whose greed Dante is naturally quick to criticise,<sup>14</sup> rattles off a series of historical, biblical or mythical examples of greed being punished: Midas, Pygmalion, Polymnestor and so on. Gold makes a vivid appearance in Polymnestor's mocking cry to Crassus: 'tell us, for you know: what flavour does **gold** have?'<sup>15</sup> (Marcus Licinius Crassus, triumvir together with Caesar and Pompey in 1<sup>st</sup> century BCE Rome, was defeated by Orodes, King of the Parthians and beheaded; since

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8 *Paradiso*. XXV, 5

9 *Inferno* XIX, 17.

10 *Inferno* XIX 1-4

11 94-96.

12 112.

13 *Purgatorio* XX, 10.

14 Also because one member of that lineage was Charles of Valois, sent by Boniface VIII to Florence, in theory as a peacemaker between the White and the Black Guelphs who vied for power in medieval Florence, but in practice to favour the latter to the detriment of the Whites, Dante's party.

15 *Purgatorio* XX, 117.

he was known for his wanton greed, the king had molten gold poured into the mouth of his severed head, saying, as Cicero has it, 'You thirsted for gold, now drink it!' As for Polymnestor, according to one version of the myth, Priam, king of Troy, had entrusted him with Polydorus, his youngest son, during the Trojan war, but he was bribed by Agamemnon, the king of kings in the Greek army that was besieging Troy, and Polydorus was then put to death. He will come back to our story, though in a rather curious way, as we shall see shortly).

This is not enough: in Hell, the greedy have to push heavy boulders, and

... all the **gold** that is under the moon  
and that ever was, could not give rest  
to even one of these weary souls.<sup>16</sup>

In Paradise, St Benedict laments the corruption of clerics, saying:

Peter began **without gold and without silver**  
I with prayer and fasting  
  
and Francis his convent in humility,  
And if you look at each one's beginning  
and then see where it has run awry  
you will see white has turned black.<sup>17</sup>

He says that out of greed for money, the successors betrayed the moral legacy of the founders of the Church and of religious orders: St Peter, St Francis and St Benedict himself.

And so on. Conversely, noble souls are those who do not care about money, like the Malaspina Marquises:

... your honoured people have not been stripped  
of the worth of **purse** and sword.<sup>18</sup>

Here Dante reassures a member of the family he meets in Purgatory that they are famous for their generosity with money no less than for their worth in battle. Similarly, in Paradise, the poet glorifies Cangrande della Scala, the *signore* (ruler) of the city of Verona, who was still a child at the time of Dante's journey through the afterworld. Cacciaguida, a revered ancestor of Dante, says of Cangrande that very soon:

sparks of his valour will appear  
in his indifference to **money** and to toil.<sup>19</sup>

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16 *Inferno* VII, 64-66.

17 *Paradiso*., XXII, 88-90

18 *Purgatorio* VIII, 128-129.

19 *Paradiso* XVII, 83-84. The original text has silver rather than money.

It is hard to avoid the observation that both the Malaspina family and Cangrande gave ample proof of their generosity towards Dante, who repays them in coin, as it were, in the *Commedia*.

### Auri sacra fames

An economist, however, is also inclined to wonder how these generous princes had earned the gold and silver with which they were so open-handed. One assumes that it was often by birth and for dynastic reasons, and although this might save them from accusations of greed, questions ought to have been asked about the fairness and efficiency of this kind of distribution. Economic inequalities linked to birth and status are ideologically less acceptable today than in Dante's time; on the contrary, economists see a non-negligible driver of collective well-being in the pursuit of fair profit by companies – naturally in compliance with the law, ethics and custom, and spurred by competition. We would actually say that the growth in manufacturing, trade and finance then under way in Florence laid the foundations for extraordinary growth in economic prosperity and, indirectly, in culture and the arts as well. I have touched on another occasion on the question of Dante's vision of profit,<sup>20</sup> in light of what we know or think we know now, and I do not want to repeat myself today. That said, it is interesting to look at one case in which desire for money is *not* shown in a negative light in the *Commedia*.

We are in Purgatory, and as they make their way up its mountain, terrace by terrace, Dante and Virgil have just met the soul of the Latin poet Statius, who, having expiated his sins for centuries, is now ready to ascend to Heaven.<sup>21</sup> Because he sees him rising up from the terrace of avarice, Virgil thinks that his sin was one of greed, but he can't understand it, as it doesn't tally with what he knows about his fellow poet's life.<sup>22</sup> Statius starts laughing, and tells him that he spent 'five hundred years and more' lying on the ground on the fifth terrace, not because of avarice, like Hugh Capet, of whom we have just spoken, but because of 'the opposite', namely excessive prodigality, which is punished in the same way. So how did he manage to repent in time and not end up in Hell? Precisely by reading that passage of Virgil that reads:

Quid non mortalia pectora cogis,  
auri sacra fames!  
(Cursed thirst for **gold**  
What crimes do you not prompt in mortal breasts!)<sup>23</sup>

These are words that Dante, by putting them in the mouth of Statius who quotes them, translates as follow:

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20 'Conversing about Dante. Civil passion, public life, economic reasoning', 6 December 2021; Florence, 3 December 2021.

21 *Purgatorio*, XXII.

22 In fact, Dante appears to mix up Publius Papinius Statius, a poet from the 1<sup>st</sup> century B.C.E. who was from Naples, and Lucius Statius Ursulus, a lesser-known rhetorician of the same period from Toulouse. It seems that this was a common mistake at the time (*Enciclopedia dantesca*).

23 *Aeneid.*, III, 56-57.

Per che non reggi tu, o sacra fame  
de l'oro, l'appetito de' mortali?  
(Why do you, O holy hunger for *gold*  
not govern the appetite of mortals?)<sup>24</sup>

Aspiring to make a profit is portrayed here as being virtuous, and unusually for him, Dante sounds just like Adam Smith. It is not only odd because of this, but also because the translation is inaccurate. Virgil says '*sacra*' (normally, 'sacred') in the sense of 'execrable',<sup>25</sup> a perfectly plausible meaning in classical Latin: 'the execrable hunger for gold'. This is the complete opposite of what Dante has him say, keeping the more common meaning of the word in both languages, i.e. 'holy'. Yet there is more: the exclamation refers to the same Polymnestor whom Dante had mentioned only two cantos previously. There can therefore be no doubt that here Virgil condemns cupidity (so powerful that it leads Polymnestor to commit a horrendous crime) and not its opposite, i.e. prodigality.

What we are to make of this odd passage is unclear. It has been discussed by critics from the start, and many believe that, since it is unthinkable that Dante made such a glaring error, it must be a deliberate rhetorical device. And yet, how can a character like Statius purposely turn the meaning of a phrase by the beloved master Virgil on its head? A man for whom Latin must have been the native language, used with such erudition in his work? And on a matter so crucial as to make the difference between damning and saving his very soul, for which he himself says he is in debt to the master? We don't know what to say.<sup>26</sup>

Whichever way we want to look at it, the temptation to find Dante making a small concession to a positive social function in the search for profit is probably unjustified, or at the very least an overstatement. Here he simply wants to affirm the Aristotelian moral of the *μεσότης*,<sup>27</sup> of the virtuous mean, as interpreted by Thomas Aquinas in his *Summa Theologica*.<sup>28</sup> He does it in various other places. For example, a significant part of canto XVII of the *Purgatorio*, where he describes the arrangement of the 'second kingdom', is dedicated to showing that human desire

can err with an evil object  
or with too much or too little vigour,<sup>29</sup>

i.e. because there is an excess or a deficiency. The greedy and prodigal are punished together in Hell too, because 'no measure governed their spending',<sup>30</sup> that is, they couldn't find a happy medium in their spending.

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24 *Purgatorio*, XXII, 40-41.

25 Moreover, to be precise, he uses '*quid*' as the interrogative pronoun and not as an interrogative adverb, which is how Dante reads it.

26 A few solutions have been suggested; we must leave this point to the specialists.

27 *Nicomachean Ethics*, Book II, 2, 1103b-1104a.

28 *Summa Theologica*, first part of the second part, Q. 64.

29 *Purgatorio*, XVII, 95-96.

30 *Inferno* VII, 42.



## Gold and fine silver, cochineal and white lead

In order to give substance to the idea that Dante's feelings with regard to precious metals are somewhat ambiguous, I would like instead to point out that, in the other cases where the *Commedia* names gold and silver together, the two metals are a symbol of something beautiful and noble, not of base cupidity. In the *Inferno*, Dante tells the story of the Old Man of Crete, an image of biblical origin, albeit mixed with classical traditions, which depicts (according to most) the gradual decadence of mankind:

His head is formed of fine *gold*,  
and pure *silver* are his arms and breast;  
then he is of brass as far as the fork;  
from there downward he is all refined iron,  
except that his right foot is baked clay;  
and on that one, more than on the other, he stands erect.<sup>31</sup>

In the ante-purgatory, to describe the indescribable colours of the valley where the princes who were slow to repent wait to be allowed to go to the 'martiri' (torments), it is said that:

*Gold* and fine *silver*, cochineal and white lead,  
Indian amber bright and clear,  
fresh emerald at the instant it is split,  
each would be surpassed in colour by the grass  
and flowers placed within that fold...<sup>32</sup>

A little further on, the angel who opens the door of Purgatory to the poets uses two sacred keys, of which

one was *of gold* and the other *of silver*.<sup>33</sup>

We don't have time here to go into the associated symbolism. Finally, in Paradise, the righteous souls in Jupiter's sphere arrange themselves to spell out 'DILIGITE IUSTIAM QUI IUDICATIS TERRAM',<sup>34</sup> 'Love justice, ye that judge the earth' which appears against the background of the planet as if it were worked in gold thread; so the planet

appeared there *silver* adorned with *gold*.<sup>35</sup>

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31 *Inferno*, XIV, 106-111. For a discussion of the various possible interpretations, see the *Enciclopedia dantesca*.

32 *Purgatorio*, VII, 73-77.

33 *Purgatorio*, IX 118.

34 *Sapienza*, 1.1.

35 *Paradiso*, XVIII, 96



## The cursed flower

Let's go back to real money now, specifically to the florin, the coin par excellence and the boast of Florence. Dante curses it in a famous passage in the *Purgatorio*, just by way of a change: Folchetto, the troubadour from Marseilles, says to him: 'your city

brings forth and spreads the cursed flower  
that leads the sheep and lambs astray<sup>36</sup>

because it created, we economists would say, perverse incentives, whereby the shepherds of the church are keen to pursue monetary advantage instead of keeping their flocks on the straight and narrow. So far, there's just the usual invective against greed; but if we look more carefully, we find that Dante actually gives considerable importance to the integrity of minted money.

First of all, this is apparent in how in the *Paradiso*, Dante uses the word 'conio' (minting) (in connection with 'money', 'alloy' and so on) in a metaphorical sense. In a heavenly context, 'minting' is synonymous with authenticity and reliability. He talks to St Peter, no less, who gives him a kind of theology exam, and after correctly answering the first question on faith, Dante is told:

... We have gone over the alloy and  
the weight of this *coin* well,  
but tell me if you have it in your purse,

as if to say 'well done, brilliant, full marks, but this faith that you describe with such impeccable scholastic reasoning, in the end, do you possess it or not?' And he replies:

... Indeed I do, so shining and so round that  
none puts me in doubt of its *minting*.<sup>37</sup>

As authentic as a florin fresh from the mint of the Florentine Republic.

On the other hand, in yet another invective against corrupt clergymen, Dante has his Beatrice say that those who sell indulgences '[pay] in coin with no *imprint*',<sup>38</sup> or money that is worth nothing.

## Three carats of dross

It becomes even more interesting when Dante talks about real florins or monetary instruments in general, and not in metaphors but almost in technical terms. Here too, needless to say, the tone is the one he prefers, one of complaint and accusation.

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36 *Paradiso*, IX, 130-131.

37 *Paradiso*, XXIV, 82-87.

38 *Paradiso*, XXIX, 126. Again, the original word here is 'conio'.

However, the goods undermined by those with whom he is angry are the *stability* of the currency and the *trust* in it. I shall use a final three quotes from the Comedy to illustrate this point.

The first comes from the *Purgatorio*, and is really just one word contained in the famous tirade 'Ah, slavish Italy, dwelling of grief!' You may recall that, having complained loudly about the wars that torment the country, the arrogance of citizens from all social backgrounds wanting to be in politics but not being up to it, cities rebelling against submission to imperial power and the inertia of the emperor himself, Dante then comes to Florence and his tone suddenly changes. Here he switches from invective to using ironic and bitter language, tired or disappointed in a way, to stigmatise its strident and inconclusive discussions, the misguided political ambitions and the constantly changing laws, and, just before the canto ends (*Purgatorio* VI), he addresses his city, saying:

'How many times, in the period  
that you remember, have you changed  
laws, *coins*, offices and customs...!<sup>39</sup>

'To change the coins' was therefore a grievous act, like the murderous cycle of strife between factions to which he refers somewhat elliptically soon afterwards ('...and renewed your members'). I am unable to identify the specific monetary measures to which Dante meant to refer. The fact remains that for Dante, the certainty of money and the inalterability of its worth were clearly public assets to be protected at all costs.

The second quote (actually a couple of quotes) takes us back down to Hell. Here an entire *bolgia* or ditch, the last of the *Malebolge* ('evil ditches'), is for counterfeiters. It is not only currency counterfeiters that are punished here, but also other kinds of forgers, although forgers of metals and coins make up, I would say, the lion's share. We meet Capocchio, 'who falsified metals with alchemy',<sup>40</sup> in canto XXIX, and in canto XXX, we meet Master Adam, a forger in the service of the Counts Guidi in Casentino, whose words we have already mentioned:

There is Romena, where I falsified  
the alloy **sealed with the Baptist**,  
for which I left my body burned up there.<sup>41</sup>

St John the Baptist, who as we said appeared on the reverse of the florin, stands for the mint. Master Adam blames his old masters for his misfortunes and his eternal damnation:

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39 *Purgatorio*, VI, 145-147.

40 *Inferno*, XXIX, 137.

41 *Inferno*, XXX, 73-75.

Because of them I am among such a household:  
they induced me to mint the florins  
that had three carats of dross.<sup>42</sup>

Now, 'three carats of dross', i.e. of base metal, out of twenty-four, correspond to a fine gold content of 875‰, which is really not such a poor amount. The most recent coins have rarely been minted using pure gold; the gold sovereign, which is still minted, is a 22-carat alloy (917‰) and the *marengo* (Napoléon) and the gold coins linked to it, like the Italian 20-lira coin from the age of gold currency, had a fineness of 900‰. The florin, though, was made of pure 24-carat gold. The central role it played for a long time in trade was based on absolute trust in its gold content; there could be no deviation from this, otherwise it would have lost that role.

This didn't only involve the florin. Dante also accuses – though he doesn't name him – Philip the Fair of France, his contemporary (and here is the last quote),

There will be seen the grief caused along the Seine  
by falsifying the coin, by him who will die  
from the blow of the boar's hide.<sup>43</sup>

The question was surely and above all a moral one for Dante, rather than an economic or political one. Nevertheless, on reading the *Commedia*, if we consider the importance that he attaches to the integrity of minting and the severity with which he judges those who undermine it, it is difficult not to hear in the background an echo of the thoughts on the *stability* of money and on the *trust* in its value that Aristotle, the 'master of those who know',<sup>44</sup> had expressed so long before.

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For about twenty or more of the 23 or 24 centuries that separate us from Aristotle, money<sup>45</sup> was physically made of precious metal, or was in any case defined in relation to it. The last theoretical link between circulating currency and gold was in fact only broken around fifty years ago in 1971, with President Nixon's famous declaration of the inconvertibility of the US dollar.

In many historical circumstances, metal money (provided it was genuine) was in fact 'quite stable'; but I don't think the role that the intrinsic content of precious metal has played in ensuring this should be overstated. After all, gold and silver are goods like any others and, if we put aside their monetary function, which was fixed by convention, their

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42 *Inferno*, XXX, 88-90

43 *Paradiso*, XIX, 118-120.

44 *Inferno* IV, 131.

45 The '*moneta grossa*' (precious metal coins) at least (see below). I have talked about some of the issues covered here more widely elsewhere (*Dal sesterzio al Bitcoin. Vecchie e nuove dimensioni del denaro*, Milan, 17 February 2020). *Moneta e civiltà mediterranea* by C.M. Cipolla is an insightful and easy guide to many of them (Bologna, Il Mulino, 2020; a re-issue of a 1957 booklet, with an introduction by I. Visco).

value compared with that of all other goods would of course fluctuate, even significantly so.<sup>46</sup> Money, including metallic coins, has always been a social construct, at least to some extent, as Aristotle observed insightfully more than two thousand years ago.<sup>47</sup>

With regard to how precious metal coins function, there is another observation to make, more subtle but even more important, namely that the real amount of money that a trade-based economy requires depends on the needs of trade and how it is conducted: an essentially rigid supply of metal cannot easily adapt to a rapidly developing economy, for example.<sup>48</sup>

All this without factoring in that the sovereign entities, who theoretically guaranteed the weight and fineness of the coin by imprinting their seal onto it, often yielded to the temptation to cheat on one and/or the other in order to try and profit from the implied difference in value, often with damaging consequences in terms of *stability* and *trust* (our two key words). It was not just the sporadic initiatives of some unruly local feudal lords such as the Counts Guidi of Romena, nor was Philip the Fair an isolated case; before Dante, the debasement of money (gradual and large-scale) had distinguished nothing less than the centuries-long monetary history of the Roman Empire; after Dante, there was no shortage of similar episodes.<sup>49</sup>

The twentieth century, which was marked not only by the vast monetary upheavals caused by the two world wars, but also by the rapid growth of the economy and the tumultuous progress in trade after the Second World War, saw the end of currency being anchored to a precious metal, as it had become an anachronism by then. Today money is pure *fiat*: '*nomisma*', currency, from '*nomos*', law, and that's that.

Nevertheless, the process has been neither rapid, nor linear, nor (for the most part) was it knowingly pre-ordained; it has developed in a contradictory way over many decades, studded at first with repeated and ultimately futile attempts to return to gold parity. It has seen dramatic episodes of extreme currency debasement at times, and there have been cases, more frequent but less dramatic, in which high, variable and protracted inflation has required complex adjustment mechanisms, confounded the basic allocative function of the price system, and generated hard-to-govern redistribution processes.

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46 Historically speaking, there is no shortage of concrete examples of changes in the relative prices of metals, and therefore of lower stability in the value of metal coins. One famous question is that of the 'price revolution', a long-lasting inflationary process that took place in the 16<sup>th</sup> century (or rather, between the end of the 15<sup>th</sup> and the beginning of the 17<sup>th</sup> centuries), mainly in conjunction with the arrival of large quantities of precious metal (gold and silver) from the Spanish and Portuguese colonies in the Americas. It seems difficult not to attribute at least a part of this phenomenon, i.e. a change in the prices of precious metals in relation to other goods, to the growing abundance of the former. It has to be said, however, that many factors played a part in the price revolution, and the issue is widely debated. – Let us add that, in bimetallic monetary systems, the relative price of gold compared with silver is also a problem conceptually speaking, and from time to time it has been a problem in practice too.

47 This is without taking account of the fact that for a long time, the money actually used in most transactions consisted of '*moneta piccola*', (literally small change) or base metal coins, whose precious metal content was scarce at best, and whose relationship with '*moneta grossa*' was often anything but stable.

48 Cipolla (cit., pp. 71s) even argues that the debasement of base metal coins played a key role in the growth in trade in the late Middle Ages.

49 The treatise on money by the Jesuit Juan de Mariana (1609) is an illuminating read on the subject.

The world has had to reckon (in every sense) with purely conventional money since the 1970s. How can its stability be guaranteed, and how can people's trust in it be ensured? These are things that we now tend to take for granted in the euro area, but we would do well to remember and to repeat to ourselves now and again that we really shouldn't.

In legal terms, money is legal tender, i.e. it must be accepted in redemption of a debt. This, however, is at most a prerequisite. The German mark of 1923, whose purchasing power would eventually fall visibly from morning to evening on the same day, and the Zimbabwe dollar, which, after being redenominated three times in as many years from 2006 to 2009, lost 25 zeros in total (if we did the maths right, the initial face value fell *ten million billion billion* times), were also legal tender,<sup>50</sup> but they couldn't function at all, either as a unit of account or as a store of value. They barely functioned as a means of payment, and only to a limited extent, as long as they were spent instantly.

Let's forget about Capocchio, and about Master Adam too. If money is always a social construct, then *fiat* money is a particularly delicate construct. It only survives because the public trusts it. The tool needed to make it really robust, a tool further honed in theory and in practice after the conventional gold parity of the dollar was abandoned and following the inflationary episodes of the 1970s, is the credibility and consistency of the monetary policy of central banks, which have the sole legal right to issue legal tender. The independence of these institutions and their statutory mandate to pursue price stability are by far the most important element of the '*nomos*' from which '*nomisma*' or currency takes its name.

This is a weighty and hugely important responsibility for central banks. While the examples of hyperinflation that I have just mentioned are extreme ones, my generation cannot have forgotten the less extreme experience of persistently high and variable inflation, harmful to the orderly functioning of the economy, potentially a danger for the very resilience of the social fabric, and difficult to eradicate once it had begun.

Let me conclude this conversation by underlining the importance of having this basic framework in mind when discussing monetary policy. At the current juncture, public perception is perhaps still influenced by that fairly long period in which monetary policy was exceptionally accommodative in response to exceptional events: there had never been such low interest rates in the entire history of the euro, and liquidity had never been so abundant. Events have moved on and that period is over. 'In the face of a very strong energy crisis, the impact on prices and the inability to consider them as a one-off, the recovery in incomes and margins is such that there is a risk that [inflation] will get out of hand,' explained Governor Visco in a recent speech. 'Interest rates were very low; we raised them to a warning level, I wouldn't say to an extraordinarily high level, but one calling for our attention'.

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<sup>50</sup> We admit that we're really not completely sure about the legal regime of the old Zimbabwe dollar in every moment of its tormented life. – The national currency was abandoned in 2009 and a new Zimbabwe dollar was reintroduced ten years later. The objective of monetary stability has not been achieved so far.

'Attention' is the watchword: there can be and there are legitimate discussions on the steps to be taken as necessary. This is also because monetary policy is far from being an exact science. It has many real and financial ramifications, and while it may rely on consolidated experience, advanced theories and scientifically sophisticated models, it must always take account of a reality in which payment technology, the preferences of financial asset holders, market sentiment, and a thousand other variables are continuously evolving. It must be ready to act and, if necessary, to correct itself in a timely manner.

That said, the debate should not be over-simplified or overdramatised, and neither should it all be reduced to stereotypical geographical contrasts. 'Hawks' and 'doves', assuming these labels are actually meaningful, are broadly in agreement on the ultimate goal: to safeguard the inherently fragile yet vital role of fiduciary money.

In sum, let us remember that the gold and silver of our times are the prudence of central bankers, their constitutionally recognised independence, and the precious raw materials of technical competence, rigour and, when necessary, humility.

## General references

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