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I

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# LECTIO INAUGURALIS



LUCIA TRAVAINI

## Mints as Volcanoes: Fire and Technology

My paper for the International Numismatic Congress in Taormina 2015 was inspired by Mount Etna, the mythical land of Volcano, the god of fire, and of the Cyclops, who apparently settled in the Eolian islands for their metallurgical activities, and brought me to some considerations on mints as volcanoes, already emerged in some of my previous work on mints.

Vulcano, associated with the Greek God Hephaistos, was the god of fire, including the fire of volcanoes. As god of fire, he was also god of metalworking and the forge. Volcano was active in many fields, including, when time came, with coin production, and numismatics.

Goddess Moneta and God Volcano have in common a number of features: fire, metals, hammer and some iconography.<sup>1</sup> Volcano is often represented wearing a *pileus* and with tongs: see for example a coin of Malaca of the 2nd century BC<sup>2</sup> (Fig.1). The *pileus* is for most of us emblematic of liberty since it was especially associated with the manumission of slaves, who wore it upon their liberation. However, before this link with liberty, the *pileus* was a very common hat, round or pointed, made of wool or leather, typically used by manual workers generally, were they active in the fields, at sea, or in the forge:<sup>3</sup> this was therefore the origin of the *pileus* for Volcano. We can see him as a humble worker in his forge taken by surprise at the arrival of Apollo, as depicted by Velazquez in 1630 in a painting in the Prado Museum, Madrid.<sup>4</sup>

Some images of metal activities have been sometimes interpreted either as minting-scenes or else more generally as activities of goldsmiths or similar, and here I would like to comment briefly the problems of interpretation of such scenes. In order to do this, I think it is useful to examine the role of Volcano.

<sup>1</sup> The temple of Juno Moneta on the Capitolium is directly connected with the first Republican mint of Rome. Traditionally, the term Moneta as attribute of Juno has been linked by ancient authors to the verb *moneo* (advice, warn) and this meaning has been usually generally accepted; another tradition intends *moneta* as translation of the Greek *Mnemosyne* (Caccamo Caltabiano 2007, pp. 80-81). Recently, John Melville Jones suggested that the term Moneta should better be connected with the Etruscan goddess Moneta, brought to Rome from Veii after the capture of that city in 396 BC, and the link to the verb *moneo* "may be disregarded" (Melville Jones 2015, 137 note 1). The topic deserves a separate discussion but probably one may consider the possible connection of different origins and stratification of meanings.

<sup>2</sup> Ripolles 1986, vol. I, p. 40 nn. 47-50, vol. II, p. 229 n.8.

<sup>3</sup> Daremberg – Saglio, pp. 479-481.

<sup>4</sup> Capdeville 1995. For the painting in Madrid see [https://it.wikipedia.org/wiki/La\\_fucina\\_di\\_Vulcano#/media/File:Vel%C3%A1zquez\\_-\\_La\\_Fragua\\_de\\_Vulcano\\_\(Museo\\_del\\_Prado,\\_1630\).jpg](https://it.wikipedia.org/wiki/La_fucina_di_Vulcano#/media/File:Vel%C3%A1zquez_-_La_Fragua_de_Vulcano_(Museo_del_Prado,_1630).jpg)



Fig.1 Obv. Bust of Vulcan r. wearing conical pileus; tongs in field l. Rev. Facing bust of Sol. Malaca, II cent. BC, AE, 11.93g. British Museum, *SNG, Great Britain*, Vol. IX, Part 2: *Spain*, London 2002, no. 357.

Jan Brueghel the Elder (1568-1625), his son Jan Brueghel the Younger (1601-1678), together with their collaborators, painted a number of Allegories of the four elements, including Allegories of Air and Fire, very much on demand at the time. In one of these Allegories of Air and Fire by



Fig. 2 School of Jan Brueghel the Younger, circa 1620, Allegory of Air and Fire, oil painting. Potsdam, Prussian Palaces and Gardens, Foundation Berlin-Brandenburg, Inv. no. 7768: © all rights reserved.

Brueghel the Elder, now in Milan (ca. 1608),<sup>5</sup> we see the forge of Volcano: all his metallurgical activities are somehow represented in an impressive monumental workshop with many workers, with apparently a volcano in the foreground, and among various metalworks coins can be seen on a table and on the ground. In another such Allegory by Brueghel the Younger, now in Potsdam (ca. 1620), we see Venus in the forge of Volcano: all his metallurgical activities are again represented, and gold and silver coins or medals are spread on the ground<sup>6</sup> (Fig. 2). However, coins or medals are only a minor part of the entire corpus of all metallurgical activities, among which the most prominent is probably the production of personal armor and weapons. I suggest to imagine God Volcano as the father and patron of all these activities: they all have in common fire, metals and hammer, but each may have its own specific and peculiar tools: the dies were the emblematic tools of moneyers only.

There are also explicit images of Goddess Moneta, the most famous one being probably that on the Roman

Republican denarius of Carisius<sup>7</sup> (Fig. 3), but also represented full length holding scales and cornucopia, on Roman coins and other media. On the contrary, explicit minting scenes are not easy to be ascertained and they are relatively rare.

A survey of minting scenes – or presumed such scenes – from Antiquity to the 17<sup>th</sup> century, brought the evidence that in most cases when a mint was represented a die was shown with the hammer and other tools. Missing the die, uncertainty reigns.<sup>8</sup>

Let us see the *amorini* of the Vettii fresco in Pompeii (Fig. 4): this scene has been much debated – are they moneyers or goldsmiths? Nowhere we can see a die with the hammer, anvil and other tools; there is no coin without a die, and in my opinion this is not a minting scene: these *amorini* were probably involved in some delicate goldsmith activity in which they put all their efforts, great efforts indeed being they small children.<sup>9</sup> More likely referring to the mint are the tools on the *aes* of Paestum dated 89 BC: it seems that the upper die is posed on the anvil, and moreover this is a coin not a fresco; the medium is not irrelevant.<sup>10</sup>

<sup>5</sup> Milan, Pinacoteca Ambrosiana, [https://www.google.it/search?q=jan+brueghel+allegory+of+air+and+fire&espv=2&biw=1024&bih=653&source=Inms&tbn=isch&sa=X&ved=0ahUKewikt7n9lp\\_JAhXF1RoKHRgICXsQ\\_AUIBigB&dpr=1#imgrc=45JQfStV4s57dM%3A](https://www.google.it/search?q=jan+brueghel+allegory+of+air+and+fire&espv=2&biw=1024&bih=653&source=Inms&tbn=isch&sa=X&ved=0ahUKewikt7n9lp_JAhXF1RoKHRgICXsQ_AUIBigB&dpr=1#imgrc=45JQfStV4s57dM%3A)

<sup>6</sup> Potsdam, Foundation of the Prussian Castle and Garden at Berlin-Brandenburg: [http://www.janbrueghel.net/Allegory\\_of\\_Air\\_and\\_Fire](http://www.janbrueghel.net/Allegory_of_Air_and_Fire) Another similar painting, dated ca. 1630, is held in the Brooklyn Museum, New York, Bequest of Dr. George M. Dunaif <https://archive.org/details/brooklynmuseum-o4747-allegory-of-air-and-fire>.

<sup>7</sup> See below.

<sup>8</sup> See Travaini 2007b.

<sup>9</sup> A summary of the bibliography, with the different attributions, is in Travaini 2007b, pp. 269-270.

<sup>10</sup> See Travaini 2007b, p. 267. The representation of some tools such as tongs, hammer and anvil as control marks on Republican denarii has been interpreted as referring to mints by some scholars, although





Fig. 3 Rome, denarius T. Carisius 46 BC ca., AR 3.09g. Obv. MONETA Head of Juno Moneta; Rev. T·CARISIVS Coining implements; on top, garlanded pileus. (Fr. R. Künker GmbH & Co. KG, Auct. 273, 14.III.2016, no. 541).

Jumping a few centuries, we can see the denarii of the Carolingian Emperor Louis the Pious (814-840) from the mint of Melle (Fig. 5): the reverse shows two dies and two hammers, elegantly arranged in the form of a cross around a pellet (the latter must have been the flan to be struck). To be noted that the mint of Melle was where the silver mines were: METALLVM, as we can read in the legend. Here we can also observe that the needs of symmetry in the engraving of the die determined a disproportion of the size of the tools represented: for example, the hammer is normally longer than the hammer die<sup>11</sup>.

Now we can observe the Republican denarius of Carisius of 46 BC, probably the most famous one for our topic: the obverse shows the head of Goddess Moneta, the

mint herself; the reverse has an anvil die between tongs and hammer; but what do we have on top? An upper die or a *pileus* of Volcano? Whatever it is, we can note that it is laureate or garlanded.<sup>12</sup>

In 1901 Ernest Babelon observed that the hammer die is here represented in the shape of the laureate *pileus* of Volcano; before him Friedlaender in 1859 wrote that the presence of the *pileus* of Volcano would deny the other tools the status of minting tools, but wisely Babelon asserted that the same objects - hammer, anvil and tongs - are also attributes of Volcano, and therefore Volcano is not an intruder in the mint<sup>13</sup>. Also Grueber in 1910 described the object as the *pileus* of Volcano<sup>14</sup>. In 1954 Cornelius Vermeule, in his *Some notes on ancient dies and coining methods*, defined the top object as a 'wreathed conical object' - a neutral description - accepting the possibility that it could be an upper die, of the type that used to be inserted in iron to be struck. Michael Crawford, on the other hand, described the object directly as a 'garlanded punch die', rejecting the *pileus* idea altogether.<sup>15</sup> However, one may observe that there are apparently no cases of laureate/garlanded tools, but instead we have more than one case of a laureate *pileus* in Antiquity, including Volcano's *pileus* on several coins: Roman Republican denarii of 105 BC<sup>16</sup>, and aes of Aesernia and Populonia.<sup>17</sup> God Volcano was laureate because he well deserved it, having forged all sorts of marvelous objects for the gods: thrones, arms and jewels. Also Johan van Heesch more recently rejected the interpretation as 'garlanded die' with the same arguments ("it would be quite strange to decorate

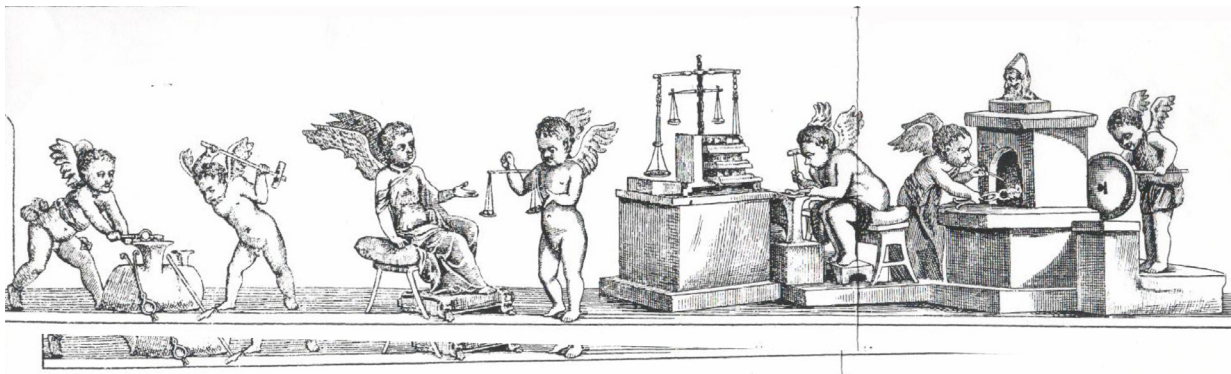


Fig. 4 The 'amorini' in their workshop: drawing of the fresco in the Vettii house, Pompeii, from T. Ely, 'The process of coining as seen in a wall painting at Pompeii', *NC* 1896, pp. 53-58, plate VI.

others have rejected this view noting that these objects are of common use; it is true that control marks are various but one may note that die engravers, having to choose many different objects, would have been inspired by his own tools; if the medium is a coin, the link with minting tools should not be rejected: for such objects see Travaini 2007b, p. 267; the denarii involved are those recorded in *RRC*, nos. 384, 412, 442.

<sup>11</sup> Travaini 2007b, p. 273.

<sup>12</sup> *RRC*, no. 464.

<sup>13</sup> Babelon 1901, coll. 901-902, with previous bibliography. Travaini 2007b, p. 261.

<sup>14</sup> Grueber 1910, p. 528.

<sup>15</sup> *RRC*, n. 464.2.

<sup>16</sup> *RRC*, no. 314.

<sup>17</sup> For coins of Aesernia see Rutter 2001, p. 58 no. 430.



Fig. 5 Louis the Pious (814-840), denarius, mint of Melle, 814-819, 1.70g. Obv. HLVDOVVICVS IMP AVC Laureate bust r. Rev. + METALLVM Two dies and two hammers (J. Elsen & ses Fils S.A., Auc. 98, 13.XII. 2008, no. 683).

a coin die with a laurel wreath”); moreover, he stressed that, as already quoted by Crawford, according to epigraphic evidence the moneyer T. Carisius probably belonged to the Gallic Volcae family, thus making more likely any allusion to Vulcano<sup>18</sup>.

My point here is to stress what Babelon already observed; Volcano has all good rights to be associated with the mint activity and with Goddess Moneta, and he can be represented via his hat, just like the mint would be represented via hammer and die: it was a good coincidence that some dies had actually the shape of a *pileus*, so the design of Carisius’ denarii was a sort of pun. Obviously, the proportions of the objects represented are not realistic. Anyway, the *pileus* between two daggers on the denarii of Brutus of 43-42 BC<sup>19</sup> has never been thought to be otherwise – it was by then a *pileus* of liberty-, and its shape is identical to the one on the denarii of Carisius.

Many centuries after Carisius, we find Volcano and Moneta together again in Antwerp in 1635, complementing each other. The city had been important for trade industry and the arts but Antwerp’s prosperity begun to be eroded during the damaging religious troubles of the 1560s. In 1635 Peter Paul Rubens realized an ephemeral arch, commissioned by the Mint of the city for the entrance of the new Spanish Governor; the arch had to convey a very specific message: the government was asked to encourage merchants to bring in their metals to make the mint work, reverting the measures against Protestant trade which had caused great damage. In synthesis, the front part of the arch shows Goddess Moneta in the centre holding scales and cornucopia, between the two American rivers Peru and Rio de la Plata; the reverse part of the arch shows God Volcano in the centre, hammering on the anvil a gold thunderbolt (*fulmen aureum*); around him are scenes of metal extraction: both sides referred to the riches of

American metals and coins are represented in festoons<sup>20</sup> (Fig. 6).

To show another link between Moneta and Volcano we shall move back to Italy. The Italian word for mint is ‘zecca’. It comes from the Arabic *sikka* – meaning minting tool/minting - and it was borrowed from Arabic Sicily. There, the mint of Palermo was extremely important in producing gold quarter dinars for the Arabic rulers when in Northern Italy and in the rest of Europe there was no gold production. When the Normans took Palermo in 1072 they continued the production of similar gold coins in Arabic, and the same tradition was carried on by the Hohenstaufen well into the mid 13<sup>th</sup> century. In the Kingdom of Sicily the mint kept its specialization and its Arabic name, Latinized as *sicla* or *sicca* in Latin documents. In Central and Northern Italy the Latin *moneta* was the term for mint.<sup>21</sup> After the reintroduction of gold coins in Northern Italy (Florence and Genoa introduced their first gold coins in 1252) the term ‘zecca’ (or *ceca* or *zeca*) gradually came in use; in Venice we have a precise correspondence between the introduction of the new gold ducat, ordered in October 1284, and the first use of the term *zecca* to indicate the building of the mint in 1285<sup>22</sup>. For a while we find occasionally the use of both terms *moneta* and *zecca*, with distinct meaning: in a mint contract in Bologna in 1269 the farmer is defined as *conductore monete* (meaning his responsibility for the entire production), but the mint building is defined as *zecha*, implying that the new term was first applied to the ‘technological’ part of the activity<sup>23</sup>.

The term ‘zecca’ gradually spread up north, but between the 13<sup>th</sup> and 14<sup>th</sup> centuries there was a small linguistic island in Tuscany where the building of the mint was called ‘bulgano’ (Siena, Arezzo, Volterra). Most importantly, in Siena in the 13<sup>th</sup> century the mint was in the Palazzo comunale itself, and documents indicated the building indifferently ‘bulgano’ or communal palace (*bulgano sive palatio comunis*).<sup>24</sup> In Arezzo in 1262 we find the use of both the Latin *moneta* and ‘bulgano’: in 1262 the bishop of Arezzo granted the mint masters of Cortona – defined *dominis de moneta* - the right to extract coins from the ‘bulgano’, the latter again used to indicate the building.<sup>25</sup>

When I first studied the term ‘bulgano’, finding no better explanation, I suggested that it could come from the Latin *bulga* for leather bag, or that it could mean bolzone, i.e. bullion.<sup>26</sup> Now we have a far better explanation for this

<sup>18</sup> van Heesch 1999, p. 64 no. 338. For the Volcae family both Crawford (*RRC*) and van Heesch quoted Wiseman 1971, pp. 22-23, 221-222. I am very grateful to Johan van Heesch for sending me his paper.  
<sup>19</sup> *RRC*, no. 508, 3.

<sup>20</sup> The arch was illustrated and described by Gevaert 1641 (1642): see McGrath 1974 and Knaap - Putnam 2013 (with a contribution by C. Arnold-Biucchi on the coins illustrated on both sides of the arch). The relevance of this arch for mint studies was noted by Travaini 2001, p. 13 and figs 2-3, and Travaini 2007b, pp. 289-290.

<sup>21</sup> Travaini 1995, Travaini 2011.

<sup>22</sup> Stahl 2000, pp. 33-34. The Catalan term *seca* came into use via Sicily.

<sup>23</sup> See Travaini 2001, p. 73, e 2011.

<sup>24</sup> Travaini 2001, p. 72.

<sup>25</sup> Travaini 2011, p. 32 note 11.

<sup>26</sup> Travaini 1988, pp. 42-43.



Fig. 6 Peter Paul Rubens, Arch of the Mint, Antwerp 1624; ‘pars anterior’ Goddess Moneta; ‘pars posterior’ God Vulcan. Drawings from C. Gevaert, *Pompa introitus honori serenissimi principis Ferdinandi Austriaci Hispaniarum Infanti...*, Antwerp 1641 (1642).

term, most suited to its use meaning the location and building of the mint. The Florentine merchant Francesco Balducci Pegolotti in his ‘pratica di mercatura’ of the early 14<sup>th</sup> century listed among various products also ‘allume Bolgano’<sup>27</sup>: this is to be intended as alum from the Island of Vulcano in the Eolian Islands, which was the most important source of alum at the time. And we are brought back where we started, in the mythical land of God Volcano. The mint was indeed a ‘bulgano’: it was metaphorically a volcano, as so much of its activities were related to what God Volcano was supposed to do, volcanic activities, with metals, fire, tongs, anvil and hammers.

*Bibliographie*

BABELON E. 1901, *Traité des monnaies grecques et romaines*, I, Paris.  
 CACCAMO CALTABIANO M. 2007, Moneta docet, ΣΥΡΑ o dell’Astro, in L. Travaini (ed.), *Valori e disvalori simbolici delle monete. I Trenta denari di Giuda*, Rome, 79-101.

<sup>27</sup> Pegolotti 1936, p. 293. Travaini 2011, p. 32 nota 11. I am grateful to Gabriella Piccinni for this reference.

CAPDEVILLE G. 1995, *Volcanus. Recherches comparatistes sur les origines du culte de Vulcain*, (BEFAR 288), Roma.  
 DAREMBERG C.V. – SAGLIO E. 1877-1919, *Dictionnaire des Antiquités grecques et romaines*, 10 vols., Paris.  
 GEVAERT C. 1641 (1642), *Pompa introitus honori serenissimi principis Ferdinandi Austriaci Hispaniarum Infanti...*, Antwerp.  
 GRUEBER H.A. 1910, *Coins of the Roman Republic in the British Museum: vol. 1. Aes rude, aes signatum, aes grave, and coinage of Rome from BC 268*, London.  
 KNAAP A. - PUTNAM M. (eds) 2013, *Art, Music and Spectacle in the Age of Rubens*, Turnhout.  
 MCGRATH E. 1974, Rubens’s Arch of the Mint, *Journal of the Warburg and Courtauld Institutes*, 37, 191-217.  
 MELVILLE JONES J.R. 2015, The location of the Trajanic Mint at Rome, “Numismatic Chronicle”, 175, 136-145.  
 PEGOLOTTI F. BALDUCCI, *La Pratica della Mercatura*, ed. A. Evans, Cambridge, Mass., 1936.  
 RIPOLLÈS P.P. 1986, Catalogo, in *Monete ispaniche nelle collezioni italiane*, “Bollettino di Numismatica”, Monografia, 2 vols, Roma.  
 RRC = M. H. CRAWFORD, *Roman Republican Coinage* (2 vols.), London - New York 1974.  
 RUTTER N.K. 2001, *Historia Numorum Italy*, London.  
 STAHL A.M. 2000, *Zecca. The Mint of Venice in the Middle*

- Ages* (The John Hopkins University Press, Baltimore and London, in association with the American Numismatic Society; New York).
- TRAVAINI L. 1988, Mint organisation in Italy between the twelfth and the fourteenth centuries: a survey, in Mayhew N.J. - Spufford P. (eds) 1988, *Later Medieval Mints: Organisation, Administration and Techniques*, The 8th Oxford Symposium on Coinage and Monetary History, (British Archaeological Reports, int. ser., 389), Oxford, 39-60.
- TRAVAINI L. 1994, Zecche e monete nello Stato federiciano, in P. Toubert - A. Paravicini Bagliani (eds), *Federico II e il mondo mediterraneo*, Palermo, 146-164.
- TRAVAINI L. 1996, 'Federico II mutator monetarum: continuità e innovazione nella politica monetaria (1220-1250)', in A. Esch - N. Kamp (eds), *Friedrich II: Tagung des Deutschen Historischen Instituts in Rom in Gedenkjahr 1994*, (Bibliothek des Deutschen Historischen Instituts in Rom 85), Tübingen, 339-362.
- TRAVAINI L. 2001, Sedi di zecca nell'Italia medievale, in *I luoghi della moneta. Le sedi delle zecche dall'antichità all'età moderna*, Atti del Convegno internazionale, 22-23 ottobre 1999, Milano, pp. 69-85.
- TRAVAINI L. 2007a, I conii e le zecche, in L. Travaini - A. Bolis (eds), *Conii e scene di coniazione*, Rome, 27-66.
- TRAVAINI L. 2007b, Le zecche illustrate: iconografia e interpretazione, in L. Travaini - A. Bolis (eds), *Conii e scene di coniazione*, Rome, 259-299.
- TRAVAINI L. 2011, Le zecche italiane, in L. Travaini (ed.) 2011, *Le zecche italiane fino all'Unità*, Rome, 31-122.
- VAN HEESCH J. 1999, Roman Republican Coins, in F. de Callatay - J. van Heesch, *Greek and Roman Coins from the du Chastel Collection*, London.
- VERMEULE C.V. 1954, *Some notes on ancient dies and coining methods*, London 1954 (anastatic reproduction in L. Travaini - A. Bolis (eds), *Conii e scene di coniazione*, Rome, [373-423]).
- WISEMAN T.P. 1971, *New men in the Roman Senate, 139 BC-AD 14*, Oxford.