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Neurological and Neuropsychiatric Diseases through the Lens of Roman Sculpture

Salvatore Fadda, Università degli Studi di Sassari, IT, salvatore.fadda.s@gmail.com

Roman sculpture has often given the impression that it provides such a precise simulacrum of the bodies of ancient Romans that their portraits can be studied autoptically as if they were a patient. Specialists in medicine and art-history have studied Roman sculptures to the point of producing real medical diagnoses, generating a research niche which, while controversial, has led to some interesting discoveries. However, scholars had sometimes misunderstood certain elements of ancient sculptures, interpreting aesthetic choices as clinical signs. In this article several portraits from the Republican period to the Tetrarchic age will be observed, to assess if the diagnoses made on them are due to actual physical features of the individuals portrayed or not. This article analyses the strengths and weaknesses of the study of ancient pathologies through Roman sculpture to delineate the limits and the possibilities of such an approach.

Researching the Signs of the Mind on the Body

The available sources for the study of mental illness in the Roman world comprise of a limited range of literary medical, philosophical, and occasionally legal treatises. Given the 'immaterial' nature of mental illnesses, there are so few archaeological sources that they are often not even considered. In fact, scientifically speaking, it is currently impossible to approach such infirmities paleopathologically. Accordingly, there is no apparent space for the analysis of mental illness in Roman Archaeology.

Nonetheless, some of the most evenemential figures in Roman history were frequently described as 'mad' in the chronicles of their contemporaries. Modern archaeological historiography, while recognising the cognitive bias generated by the survival of written sources describing their adversaries, has often accepted these diagnoses and assertions with little critical inquiry.

This article aims to draw attention to the possible application and the usefulness of archaeology and the history of art for understanding mental illness in the Roman world. Although it seems unlikely to find a physical representation of disorders that might be said to be 'inside' people's heads in the verism of ancient portraiture, some neurological and neuropsychiatric disorders are symptoms of diseases that do leave certain signs on the body.

Body and Mind

To know what markers to look for in ancient sculpture, it is necessary to distinguish specific neurological disorders (and their possible neuropsychiatric consequences) from broader concepts of mental illness. In the Roman world, the latter was a socio-cultural construct indicating a deviation from socially accepted norms, regardless of the possible biological causes (Gazmuri 2006: 88). Various types of madness are distinguished in Roman literature, most of which are concordant with and all of which apparently derive from Cicero's distinction between *insania* and *furor* (Cicero, *Tusculanae Disputationes* 3.5.11); nonetheless, it was difficult to explain the origins of mental disorders until Galen spread theories derived from the Hippocratic tradition in Rome.

This school of thought saw mental illness as a consequence of the toxic effect produced in the brain by an imbalance of the pneuma and as a consequence of variant bodily humours (Drabkin 1955: 229). Most importantly, this physiological conception of mental illness implied that any mental disorder had a physical origin. However, Galen approached disorders affecting the brain and nervous system indiscriminately, ignoring whether they were psychiatric or neurological (Ahonen 2014: 140).

Therefore, by investigating the history of physical signs apparently produced by problems of the brain and nervous system through ancient images, we want to understand if and how their identification could be useful for our understanding of ancient Roman ideas of mental health.

Roman Sculpture and the Human Body

Several origins for the crude verism of Roman Republican portraiture have been postulated. Possibly, the ancient Roman custom of making wax portraits of their ancestors––moulded from actual faces and then exposed in their houses––formed the basis of this tradition (Fejfer 2008: 246). Another theory is that the realism of Roman portraiture of the late Republic originated in the inclination towards a practical realism, inherited from a combination of the Italic tradition and the technical skills of naturalistic representation learnt from the Greek craftsmen who worked in Rome (or for the Romans) beginning in the third century BC (Richter 1955). It is quite possible that both theories are correct, and that Republican sculpture stems from a combination of both factors.

Whatever its origin, Roman verism features a level of adherence to reality which includes reproducing unsightly physical characteristics that the idealisation of other visual traditions would have omitted. That is, the so-called 'warts and all' style of Roman portraits meant including details allowing identification of elements that can be traced to medical conditions; in some cases, this enables speculative clinical diagnoses.

The portraits, like much of Roman sculpture, were originally painted hence a study of their colours might reveal some information about the medical conditions of the subjects. To make diagnoses, ancient medical science dealt in depth with the link between health conditions and somatic colour, in such a specific way that the great variety of terms and combinations created to indicate body colours is nowadays difficult to understand (Bradley 2009: 131).

The problem of interpreting ancient colour terminologies is exacerbated by the fact that in sculpture, particularly where flesh areas are concerned, pigments generally only survive in recesses and protected parts. Even when it is possible to determine which colours covered the flesh areas of Roman statues, it remains difficult to identify the exact shade. In the current state of research, it is particularly difficult to obtain medical information from the exegesis of colour traces on statuary. The systematic study of ancient polychromy is currently in a phase of great development, and perhaps new discoveries will soon make it possible to exploit the potential of the information preserved in residual pigments.

Research into the original appearance of ancient sculpture has recently accelerated thanks to new technologies that have made it possible to find even the smallest traces of polychromy still present on the materials through physico-chemical methods. If a sculpture had a conformation that conveyed traits related to the health of the represented individual, the use of colour would certainly have emphasised it. A very representative example of such a case is that of the Wounded Amazon, a statue attributed to Phidias known to us through several Roman copies mostly made during the Hadrianic period. Copies of the statue of the Mattei type and the Lansdowne type show a wound under the raised right arm. The wound is small and barely perceptible in the whiteness of the marble, although the sculptor took care to accurately represent the small rivulets of blood flowing from it. In the copy preserved in Copenhagen, however, the presence of Egyptian blue pigments, no longer visible to the naked eye, was detected. The colouring certainly made the bleeding from the wound on the side of the woman's right breast vivid (Neuenfeld 2015: 72). The presence of a blue pigment may be surprising if one does not take into account that, to achieve a more vivid rendering of the blood, it was certainly mixed with other pigments, probably red, of which no trace has been preserved (Skovmøller et al. 2016: 380). The colour in the case of the Copenhagen Amazon complemented a sculptural element and therefore performed a crucial role in the rendering of a fundamental detail of the health condition of the represented subject. But ancient marble statues (both white and coloured) were often entirely painted, and their colours were part of the representation of the individual's personality. The rendering of flesh tones in marble statues is still one of the most controversial aspects of the study of polychromy in ancient sculpture. It is an intricate matter and the evidence is sometimes conflicting although it frequently seems that marble skin was certainly painted it is not provable that the skin was painted in every case (Skovmøller 2020: 206).

Polychromy in Roman sculpture took place according to a broad variety of techniques and following different styles, whether realistic or symbolic and stylised (Abbe 2015: 173), as in the case of traces of lead-based red pigments visible even to the naked eye on a head of Jupiter preserved at the Ny Carlsberg Glyptotek (Fink-Jensen 2013). This practice is known from a passage in Pliny the Elder, who mentions the ritual of smearing the statues of Jupiter with red lead on feast days, just as it was customary to paint the bodies of generals red during triumphs (*Naturalis Historia* 33.111–112).

However, in most cases in Roman sculpture, flesh tones responded to another kind of symbolic meaning linked to the Hellenistic science of physiognomy, according to which external appearance and thus also somatic colour were manifestations of the psyche, morality, and sometimes destiny of people. In Pseudo-Aristotle's treatise on

physiognomy, the connections between body signs and psychic conditions are treated with the strict logic of syllogism (Leunissen 2018: 751) and certain chromatic skin traits are considered indicative of a psychiatric disorder. A reddish hue of the skin, for example, was considered characteristic of a manic personality: '*quibus color flammeus est, maniaci, qui ea qua sunt in corpore vehementer calefacta flammeum colorem habent*' ('A flaming skin colour, indicates mania, for it results from an overheated body, and great bodily heat is likely to mean mania') (Pseudo-Aristotle, *Physiognomonica* 812a). Unfortunately, as mentioned above, the current state of knowledge does not allow the chromatic characteristics of the sculpture to be used satisfactorily for this research purpose. This paper will focus mainly on the formal characteristics of Roman tridimensional portraiture.

The critical method for obtaining information from portraiture for our research is not dissimilar to that used for literary sources; it is necessary to identify those tell-tale signs that have been included in the portrait, with the awareness that they may have been distorted by ideological factors. In images, however, distortions are more subtle than in texts. The fact that the portraits (or their prototypes) were produced when the individuals were still alive, however, allows us to exclude a certain kind of distortion, usually pejorative ones, which in the historiography of the opposing side manifest themselves over time.

Therefore, the signs to be searched for are those somatic details that the artisans transferred faithfully, either because they were unable to perceive their clinical significance or because they had a positive value (in which case they could have been emphasised).

The search for such signs is more arduous for those times in the history of Roman art when portraiture moves away from a realistic rendering and produces images veiled in idealising classicism. Furthermore, in Roman female portraits in most cases, there are no details that can be investigated as signs revealing pathologies or medical conditions. Verisimilitude comes in a secondary place to idealised beauty in female portraiture, which due to the pursuit of idealised beauty and the rather reduced variety of body types as well as the homogeneity of hairstyle fashions presents a fainter degree of detail than male portraiture (Fejfer 2015: 243).

Paralysis and Spasms in the Plastic Arts of the Republican Era

One of the most ancient cases of the signs of a neurological infirmity being reproduced in Roman sculpture comes from the third century BC (Antenni and Ghini 2016), an *ex-voto* from a votive deposit near to the temple of *Juno Sospita* in the *Ager Lanuvinus* (Galieti 2015: 176) reproducing a human face contracted in an asymmetric grimace in

which the symptoms of Bell's palsy could be recognised (Baggieri and Galieti 2017). Bell's palsy is a condition in which the muscles on one side of the face become weak or paralysed as a consequence of the compression of the seventh cranial nerve. It affects only one side of the face at a time, producing very noticeable facial asymmetry.

Another Roman terracotta *ex-voto* from the beginning of the first century BC (**Figure 1**) was found in Izmir and preserved at the Rijksmuseum van Oudheden in Leiden. It also features physical characteristics which can be ascribed to certain pathological factors. Although the small fictile head has sometimes been identified as a caricature

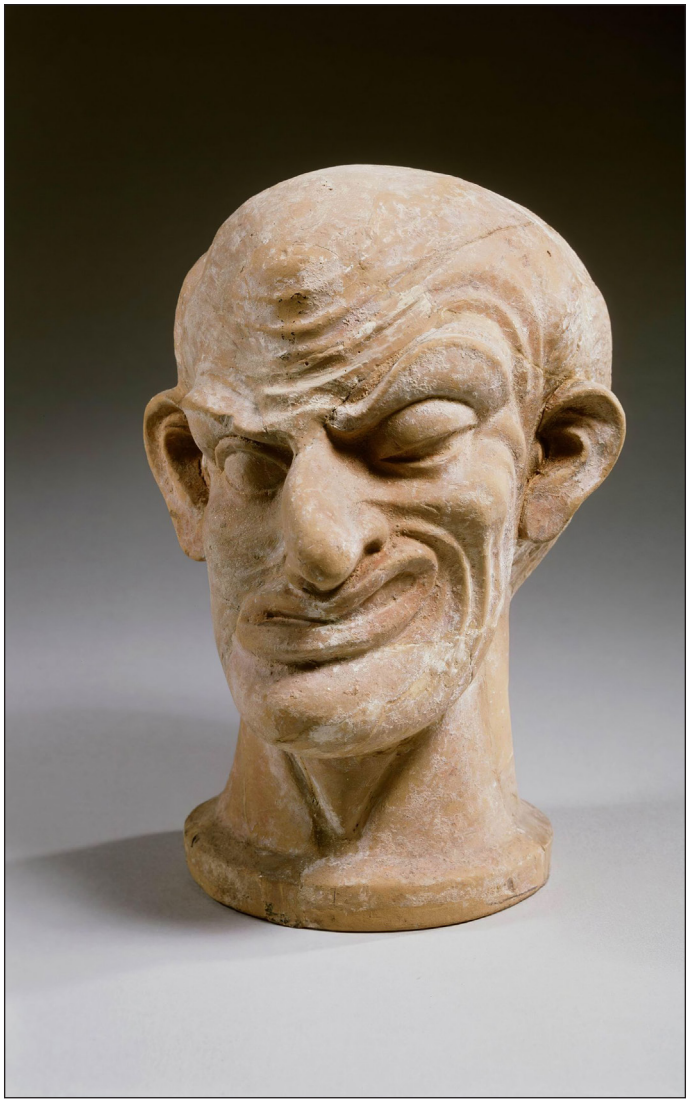

Figure 1: Roman terracotta *ex-voto* from the beginning of the first century BC, showing the simultaneous contraction of the ipsilateral orbicularis and frontalis muscles. (Photo: Artokoloro/Alamy, reproduced with permission.)

of an actor, it represents the simultaneous contraction of the ipsilateral orbicularis and frontalis muscles, a combination that is impossible to reproduce intentionally, indicating a facial spasm (Devoize 2010).

However, both these examples represent a condition; that is, they are not physiognomic portraits of an individual. In contrast, a late first century BC portrait preserved at the Metropolitan Museum of Art of New York (Zanker 2016: 112–117) features an individual portrayed in a rather realistic way with considerable facial asymmetry (**Figure 2**). Once identified as J. Caesar, the portrait discovered in Egypt was probably made by a craftsman well integrated into the figurative culture of Hellenistic Egypt, given it maintains certain distinctive features of the Egyptian sculptural tradition (Adriani 1970: 77–78). However, beyond regional peculiarities, the portrait presents all of the characteristics of late Republican realism, including, in addition to physiognomic

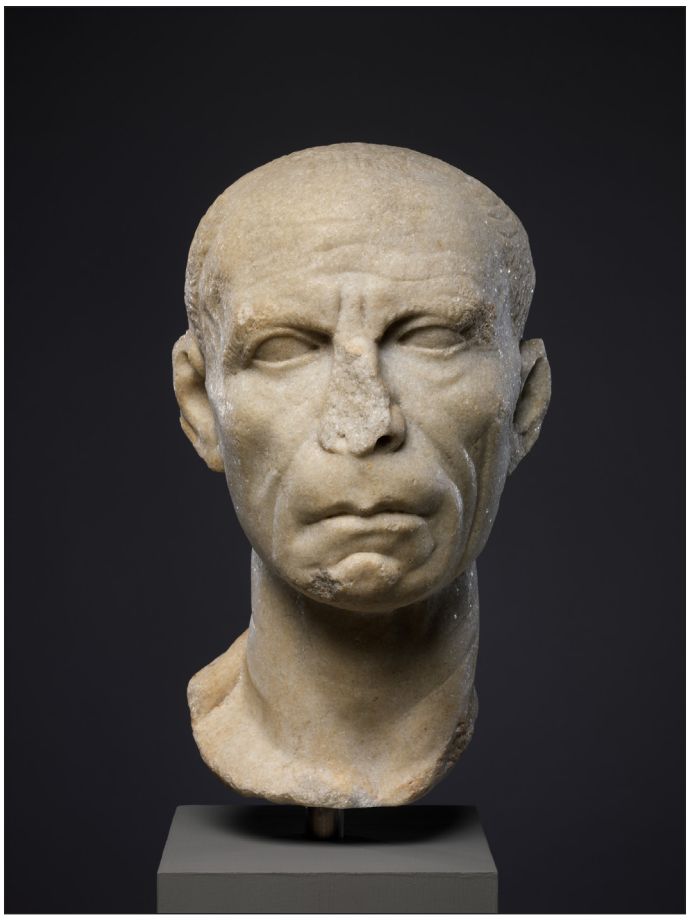

Figure 2: A late Republican marble portrait head from Egypt, now preserved at the Metropolitan Museum of Art of New York.
(Photo: The Metropolitan Museum of Art, (21.88.14) reproduced under CC0 1.0 License).

characteristics, elements that can be interpreted medically. Specifically, the right side of the face hangs downwards, and all of the muscles on that side of the face appear atrophied, in contrast to the relative tonicity of the left side. As such, the portrait has been assumed to belong to a man suffering from Bell's palsy (Johnson 2009).

The same study noted one further detail; namely, a scar on the right temple (**Figure 3**), potentially the result of trauma involving and damaging the seventh facial nerve, causing paralysis. Although the most common cause of Bell's palsy was a viral infection of the seventh cranial nerve, violent trauma could also have been the cause (Hung and Thomas 1998). Thus, the paralysis might have been associated with a blow fracturing the temporal bone and injuring the nerve passing through its petrous portion.

This link between nerve injury and paralysis was likely unknown to medical science in the Roman Republican era, with few medical descriptions of paralysis by ancient physicians having been located. However, Hippocrates does hint at facial paralysis,

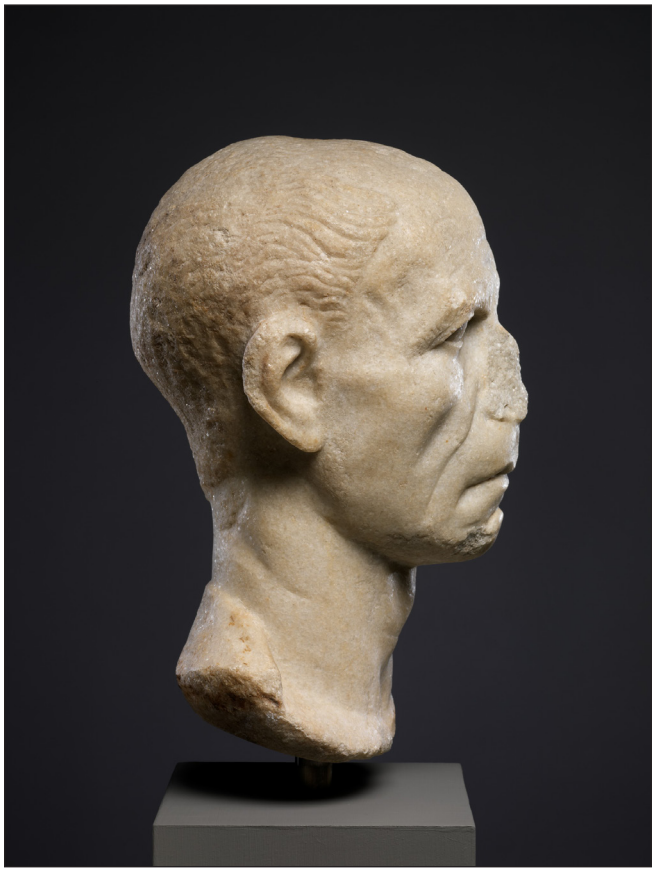

Figure 3: A late Republican marble portrait head from Egypt, right side view, now preserved at the Metropolitan Museum of Art of New York.
(Photo: The Metropolitan Museum of Art, (21.88.14) reproduced under CC0 1.0 License).

identifying the phenomenon as transient or, if persistent, signs of other ailments located in other parts of the body (Walshe 2016: 103; Hippocrates, *Prorrheticon* 2.38.).

Furthermore, writings by Aretaeus of Cappadocia, dating to the mid-second century BC, also describe paralysis, defining unilateral facial paralysis as *κυνικὸν σπασμὸν* (cynic spasm) due to the mouth distortion causing the patient to look like a snarling dog (Pearce 2013: 108). Aretaeus studied medicine in Alexandria and most probably practised it in Rome (Karenberg 2009), where his writings became well known through being reproduced in the first century AD in Aulus Cornelius Celsus' *De Medicina* (Celsus, *De Medicina* 4.3) and then, one century later, in the writing of Archigenes, which was preserved indirectly through the late-fourth century AD recompilation by Oribasius (*Συναγωγαὶ ἰατρικαί*). It was only through observing the results of the dissection of specific nerves on animals, mostly oxen and apes (Rocca 1998: 219), in the second century AD that Galen was able to expand knowledge of the link between paralysis and specific lesions within the nervous system. Thus, although the Metropolitan Museum's portrait reveals a correlation between the temporal wound and the paralysis, this link was not even known to the craftsman who represented it with such vivid verism.

A Few Diagnoses Beyond the Veil of Idealisation of Julio-Claudian Portraiture

Republican sculpture's vividness and attention-to-detail have regularly led medical specialists to recognise clinical signs in ancient busts, often with very convincing speculations. However, although the considerable verism of the late Republic's representations ensures inclusion of many anatomical details, the veil of idealisation permeating the portraiture of the Julio-Claudian period complicates such speculation. Nonetheless, official portraits of Roman emperors have been used to support paleopathological diagnoses of neurological diseases among members of the Julio-Claudian dynasty (Camargo 2018). Such investigation has mainly focused on the figures of Gaius (Caligula) and Nero, both described as mentally ill in ancient historiography.

In the case of Caligula, his 'madness' has been linked to a glandular dysfunction (Katz 1972), with some details of Suetonius' description attributed to symptoms of hyperthyroidism. The third emperor's collapse a few months after his coronation (Philo of Alexandria, *De Legatione ad Caium* 14) could even be speculated to have been a consequence of the hormonal dysfunction he was suffering from. Both Suetonius and Tacitus indicated this event as the origin of the young emperor's radical change in character (Suetonius, *De vita Caesarum* 4.14; Tacitus, *Annales* 6.20), a change also clearly reflected in the autocratic turning point and the extremely hostile relationship established between the emperor and the Roman aristocracy, represented politically by the traditional institutions and, above all, the Senate (Pablo Alfaro 2013: 55).

Caligula's deviant behaviour produces an extremely complex picture, in which it has been hypothesised that the coexistence of multiple disorders afflicting the emperor from an early age (Sidwell 2010: 183–206), including schizophrenia (Lucas 1967: 159–189; Baratta and Halleguen 2009: 83–92.), was further aggravated by alcohol abuse (Jerome 1923: 381–421). Suetonius also claims that Caligula suffered from epilepsy as a child, therefore hypothesising that his maniacal behaviour and excesses were due to interictal temporal lobe epilepsy (Benediktson 1989).

However, despite such a detailed physical and behavioural description, there is no observable evidence in portraiture. Caligula's portraits are very traditionalist, aligning stylistically with those of his predecessors Augustus and Tiberius; see, for example, the typical Julio-Claudian arrangement of hair on the forehead. Few portraits exist due to *damnatio memoriae*, and none of them reflects the *torvitas* attributed to him. Furthermore, the most realistic date to the time before his reign and, thus, before the personality change that, according to Philo of Alexandria, would have taken place a few months after his coronation.

Later, as observable in the two portraits preserved at Ny Carlsberg Gliptotek in Copenhagen (Johansen 1987: 100–101), idealisation complicates recognition of almost any clinical sign, with exceptions being a receding lower lip potentially suggesting a slight maxillary prognathism, which is not significantly relevant to this research, although according to the pseudo-Aristotle's *Physiognomy* the prominence of the upper lip is among the signs of a magnanimous disposition (Crawford 1977: 50), and the hardness of slightly frowning brows can indicate his *rigentes* eyes (Pliny the Elder, *Nat. Hist.* 11.144). Nonetheless, this is a more scenic than clinical detail. In short, even the portraits of Caligula after his transformation into a *monstrum* (Suetonius, *De vita Caesarum* 4.22.1) represent a good-looking man seemingly remote from the turpid description made by Suetonius, who, it should be remembered, was born about thirty years after the emperor's death. It is quite probable that the physical description contained in *De vita Caesarum* was not based on images or portraits of Caligula, of which there were few, because of the systematical destruction of them ordered by the Senate after his death. The historian's account was more likely based on the defamatory legends that circulated about the emperor during and after his life, which were influenced by the theories of *de Physiognomonia* by Polemon of Laodicea (Pollini 2013: 272). In Suetonius, the connection with Polemon's conjectures is particularly evident in the sections in which the emperor's physical features are associated with those of a goat, or a panther (Evans 1935: 67).

The reason why in the portraits of Caligula it is not possible to find the revealing signs of the emperor's personality described by Suetonius is clear, and the contrary would be

exceptional. The official portraits of emperors were meant to celebrate them and would hardly have represented any element that could have characterised them negatively. Investigation to extrapolate physiognomic information related to infirmities or mental disorders in imperial portraiture is therefore bound to be fruitless for the simple reason that if these were known they would have been omitted or masked by the craftsman.

Ancient images are not passive casts of the people portrayed, they are representations constructed to respond to political and social needs. If one tries to analyse them from a medical point of view, one has to filter out the distortions of reality that may have occurred in their creation. As mentioned above, the advantage of analysing portraits over the analysis of written sources lies in the fact that portraits (or at least their prototypes) were made when the subject was still alive, and thus they are generally free from the pejorative distortion that often occurs in posthumous historiography (Smith 1997: 194). Every single detail in Roman portraiture, every wrinkle or wart was represented (or omitted) for a specific reason, and their presence was weighted to add a layer of characterisation to the depicted figure.

There are, however, particular cases in which this kind of information was conveyed unwittingly because the clinical significance of certain signs, clear to modern medicine, was obscure to the ancients. The distinct situation can be observed with regard to another Julio-Claudian dynast, who, a few years later, met a similar fate to Caligula. The emperor Nero, another great adversary of the senatorial class, was described by historians to regularly exhibit extremely bizarre behaviours, often considered expressions of serious mental disorders. During Nero's reign, the characteristic idealisation of portraits diminished and a new verism, less crude than that of the late Republic, progressively spread; unfortunately, due to the *damnatio memoriae*, the series of marble portraits of Nero is among the most incomplete of the first-century emperors. However, based on the monetary portraits, it is possible to observe the emperor's rapid physical decay. One of the most evident details of this decay is the progressively increasing fatty deposits on both his face and upper back. Although these features could be attributed to the emperor's dysregulated food and alcohol consumption, which were described in depth by ancient sources, it is possible to hypothesise that he was afflicted with hypercortisolism or Cushing's syndrome (Gardner 2015: 19), the symptoms of which might have been aggravated by alcohol abuse (Besemer et al. 2011: 318–323). An excess of the cortisol hormone in the body likely prompted certain signs of this syndrome, including obesity combined with thin legs, a round 'moon face' caused by fatty deposits on face and neck, a fatty deposit behind the back of the neck (sometimes known as a 'buffalo hump'), severe stretch marks (known as '*strie rubre*'), skin lesions and acne infections, high blood pressure, and headaches.

Some of these signs and symptoms are described with surprising accuracy in the physical descriptions of Nero handed down by Suetonius: '*corpore maculoso et fetido, […] cervice obesa, ventre proiecto, gracillimis cruribus, valitudine prospera*' ('He had a blotchy and stinky body […] a fat neck, a projecting belly, skinny legs and a good health') (Suetonius, *De vita Caesarum 6.*51). Additionally, patients with Cushing's syndrome demonstrate a relatively high rate of mood disorders (Krishnan 2005: 4; Sonino et al. 2009: 95–104), allowing speculation of a link between Nero's behaviour and neuropsychiatric consequences of the disease.

Looking back at the history of the representation of body fat, it seems that Nero's reign inaugurated a season of acceptance of it in portraiture. The portraits of the emperors of 69 AD, as well as those of the founder of the Flavian dynasty, especially in their monetary profiles, show some evident corpulent features (Bradley 2011: 33).

Perhaps one can speculate that some of the portraits made in the turbulent post-Neronian period aimed at a certain iconographic continuity, more explicit in the case of Vespasian since some of his official portraits were made by recutting the face of the last Julio-Claudian emperor (Pollini 1984). But there is no reason to speculate that the body fat in official portraits of Nero, with its characteristic accumulations on the neck and under the chin, is to be considered as influenced by particular socio-political factors. On the contrary, it seems to be the result of a certain freedom of representation of a physical characteristic that only later historiography judged as a sign of moral defectiveness and immoderate gluttony.

Reading the Physiognomic Details from the Second Century AD

Moving to the second century AD, the progressive reaffirmation of a naturalistic tendency in portraiture, which reached its peak during the reign of Hadrian, returns the possibility of identification of diagnostically useful signs in portraits. Portraiture during this period was, in fact, so detailed that it allowed, for example, the emperor Hadrian to be diagnosed with a cardiovascular disorder (Petrakis 1980) based on the presence of diagonal earlobe crease (Frank 1973) in his official portraiture.

Portraits of the Hadrianic era have been studied to identify neurological disorders based on recognisable symptoms in sculpture. For example, the combination of pronounced corrugation of the forehead and ptosis allowed interpretation of an anonymous bust preserved in the Capitoline museums (Fejfer 2008: 281) as suffering a neuromuscular disorder, most likely Kearns-Sayre syndrome (Engmann 2013). The same author also proposes interpreting certain anomalous elements in a portrait of Menander as indicating a palsy of the oculomotor nerve. This thesis remains purely speculative given that the portrait is a Roman copy of a Greek original made between

late Classicism and the early Hellenism by Cephisodotos the Younger and Timarchos, a fact to which the author alludes.

Commodus is another Emperor whose behaviours, like those of Caligula and Nero, were commonly described as extremely inappropriate; however, they have been less deeply investigated from this paper's point of view.

Portraiture during the time of Commodus maintains a high degree of realism; however, this was flanked by a palpable psychological expression, representing not only the monarch's physical appearance but also his psychological state, pushing the figure of the emperor towards a supernatural horizon (Hekster 2002: 81–186).

This divergence from pure verism complicates identification of elements in which to recognise medical signs; in fact, the physiognomy of Commodus in his official portraiture does not seem to present any insight into his health. One of the most characteristic features of Commodus' portraits is the protruding eyes, a detail observable in the early portraits of the emperor and which could be interpreted as proptosis, one of the most obvious signs of disorders linked to excessive thyroid-gland activity. Although there is again temptation to blame an emperor's thyroid gland for his madness, Commodus' protruding eyes actually seem to be a family trait: the detail is also present in the portraits of his father, Marcus Aurelius. Even portraits of his mother, Faustina the Younger (his father's first cousin), apparently represent this trait. Although it might have been a family trait, it is rather likely an exaggeration resulting from the common tendency of portraiture of Antonine times to psychologise portraits by casting eyes as big, remote, melancholic and protruding (Charbonneaux 1957: 69).

In the case of Commodus, the style of his official personal portraiture provides specific clues to his '*turpis, improbus, crudelis, libidinosus, ore quoque pollutus et constupratus*' ('Despicable and dishonourable, cruel and lewd, defiled of mouth moreover, and debauched') (*Historia Augusta, Commodus* 1.7) personality. Although many of the most gruesome anecdotes about the life of the last of the Antonines likely derive from propaganda against him, every contemporary source reported on his obsession with identifying himself as Hercules and his violent mania, which led him to descent into the arena to fight as a gladiator on several occasions (Cadario 2017).

The most famous portrait of Commodus is almost certainly the magnificent bust kept at the Palazzo dei Conservatori (von den Hoff 2005: 115–135), which portrays him as Hercules, dressed in the skin of the Nemean Lion and clutching a club in one hand and the golden apples of Hesperides in the other. The sculpture exemplifies the supernatural tendency epitomising the paradigm of the official art of Commodus' time, even in the illusionistic expedient that seems to make the bust hover over a thin pelta placed on a globe featuring certain zodiac signs (Taurus, Capricorn, and Scorpio)

linked to the Herculean identification of Commodus (Hannah 1986). The globe is flanked by two genuflected Amazonians, which refer to one of Commodus' epithets, 'Amazonius' (Cassius Dio, *Historia Romana* 72.15), and the entire sculpture was part of a group that also included two triton statues, positioned at either side of the imperial bust, supporting a *parapetlasma* symbolising both the apotheosis of the emperor and his dominion over both land and sea (Cadario 2017: 48).

This sculpture provides substantial insight into the superhuman self-representation Commodus intended for himself, of which he was probably sincerely convinced.

However, only these features, and not any physiognomic ones, supply clues regarding the emperor's mental health. Nonetheless, a portrait of an apparently mad and megalomaniac emperor isn't strictly or solely proof of such madness, not even one incorporating identification with Hercules. Therefore, although this self-representation was potentially part of his *μανίας καὶ παροινίας* (Herodian, *History of the Empire from the Death of Marcus* 1.14.8), it mainly formed part of an ideological message in his political communication plan, the aesthetic expression of his reign (Hekster 2001: 52; Galimberti 2018: 350).

Nevertheless, It must be considered that some scholars have interpreted the whole composition as a posthumous image attributable to the period after Commodus' rehabilitation by Septimius Severus in AD 197 (Wood 2015: 271). This interpretation is based on the parallels between the composition of Commodus flanked by two tritons and the *imagines clipeatae* on some marine-themed sarcophagi produced in Rome between the second half of the second and the first half of the third centuries AD (Zanker 2008: 117–128).

The end of the Antonine dynasty began a reconception of imperial power as progressively indistinguishable from military power, starting the transition from the *principatus* to the *dominatus*. The reverberations of this transition can be clearly felt in the official art, which shifted dramatically away from the flourishing of classicism in Roman sculpture that had begun during the reign of Hadrian.

The Rise of the *Dominus* and the Disappearance of the Body Signs

In the Severan period, the naturalistic elements of Roman portraiture survived in a more raw and vividly expressive manner before experiencing a gradual decline. Following the last gasps of the classicistic rebirth of the Galenian period, a definitive deterioration began.

Accordingly, beginning in the final years of the third-century AD, the gradual loss of verism increasingly and drastically complicated the identification of secondary physical

detail in the portraits. It then became virtually impossible when the institution of the Tetrarchy changed all of the social and ideological elements forming the foundations of official artistic expression. Although naturalistic elements derived from Hellenism survived in the cultured art, the hieratic symbolism arising from that tetrarchic ideological shift completely obscured what remained of the Roman verism, the slow death of which accompanied the ancient world's end.

Despite difficulties identifying naturalistic elements in portraits of the Tetrarchic era, an emperor of the beginning of fourth century, Maximinus II, has recently been diagnosed with hyperthyroidism (Papapetrou 2013; Tassinari and Sisti 2016). The main arguments for this hypothesis are drawn from accounts of his death recorded by Eusebius of Caesarea and Lactantius.

Again, these appear extremely biased accounts, written by Christian authors with cause for vilifying the figure of a reactionary pagan emperor (Christensen 2012: 311). Nonetheless, Lactantius attributed the torments preceding the death of the Eastern Augustus to a partial immunity rendering ineffective the poison intentionally taken by the emperor after being defeated by Licinius in the battle of Tzirallum (Lactantius, *De Mortibus Persecutorum* 49.3). Meanwhile, Eusebius attributed fever, insatiable hunger together with emaciation, and pronounced exophthalmia to divine punishment (Eusebius, *Historia Ecclesiae* 9.10.14–15). All of the signs described by Eusebius are compatible with Graves' disease, an autoimmune disease affecting the thyroid gland and ultimately provoking a thyrotoxic crisis. Further confirmation has been found in a porphyry torso from Cairo identified as Maximinus II (**Figure 4**). Although the imperial bust undoubtedly features unnaturally bulging eyes, it is difficult to definitively recognise in it a representation of a case of ophthalmopathy. Accordingly, while suggestive, the information conveyed by Lactantius and Eusebius is a weak basis for a diagnosis, especially given both authors repeat in their narration of the emperor's death certain elements of narratives concerning impious tyrants derived from both Greco-Roman and Judeo-Christian repertoires (Marcos 2013: 32).

While it is absolutely true that the Egyptian portrait features certain somatic traits that may recall particular medical conditions, it is necessary to contextualise sculptures within the historical and artistic frameworks in which they were created. It is more likely that the vitreous and unnatural gaze of the man represented in the Egyptian bust was due to a tendency towards the psychologising of the portrait, a symbolic representation typical of the hieratic style of the Tetrarchic era: a gaze of supernatural intensity directed not towards the spectators but towards some indefinite horizon. This is combined with a convention of portraiture that tends to deliberately represent emperors in a similar way to each other by Roman sculptors working in the porphyry

Figure 4: A plaster cast at the Pushkin Museum of the red porphyry torso of the emperor Maximinus II preserved in the Cairo Museum (Photo: Shakko, reproduced under CC BY 3.0 License).

quarries of *Mons Claudianus*. (Delbrück 1932: 10). Notably, homogeneity was an essential element of the political-religious concept of the Tetrarchy, a deliberate choice made to strengthen perceptions of concord and cohesion through iconographically assimilating emperors (Haynes 1976: 351). The reason for this change in the figurative language was the need to find a form of expression that would emphasise the distinctive qualities of the *dominus* by accentuating the expressiveness of their facial features, including the eyes, which were unnaturally enlarged (Witschel 2015: 329). In this way, the physiognomic characteristics of the subject became secondary, as his recognisability was guaranteed not by their somatic features but by other symbols of power included in the representation or, as in the last observed cases, by the use of porphyry itself. This same enhancement of expressiveness can also be found in private portraits, but it should be borne in mind that in late antiquity, partly because of the spread of other media of visual communication, the individuals honoured with statues were almost all part of the senatorial class and, albeit on a smaller scale, had the same need for self-representation as emperors (Smith 1999: 187). In the case of porphyry sculptures, the rigidity of the material and the process of sculpting this stone which would have

facilitated the creation of hard and schematic features, must also be taken into account. Unfortunately, there are scarce images of Maximin II available for comparison because representations of the emperor were systematically destroyed after his death (*Eus. HE*: 9.11.2). Although a fairly pertinent comparison appeared to have been found in a porphyry head acquired by the British Museum in 1976, subsequent studies have shown it to be a modern forgery (Cook 1984).

Instead, examples of tetrarchic porphyry portraiture with which to compare the sculpture of Maximin II can be found not only in the famous reliefs of the columns that reached Constantinople, probably from Nicomedia, and which are now located in Piazza San Marco in Venice or in the Vatican Library (Rees 1993: pl. 2, 9, 10) but also in a head of Galerius found in Gamzigrad (**Figure 5**, Srejović 1993), a fragment found in the National Museum in Belgrade (**Figure 6**, Srejović 1988: 189), and a slightly more

Figure 5: A red porphyry head of the emperor Galerius from Gamzigrad.
(Photo: Shinjirod, reproduced under CC BY 3.0 License.)

Figure 6: Fragment of porphyry portrait head of an emperor of Tetrarchic age from Transdierna, now at the National Museum of Belgrade.
(Photo: Author.)

complete one from the National Museum in Niš (Jevtović 1987: 232). To this list, we could also add a smaller head of a tetrarch (probably Diocletian) found in Antioch but now lost (Brinkerhoff 1970: 22–23).

In all of these cases, one can observe grainy eyes surrounded by marked and contracted frontal muscles that push the gaze of the emperor beyond the human horizon with a supernatural vitality. It would seem that the only truly recognisable symptom in these portraits is not medical but indicative of the gradual fading ancient naturalism, marking the birth of the symbolic language grounding first Byzantine art and then the medieval figurative production of the Western world.

Our final study is a polychrome marble relief dating to a period between AD 288 and 293 which was discovered in the Çukurbağ district in İzmit, part of ancient Nicomedia. The Diarchs Diocletian and Maximian Herculius are represented with substantially more realistic features than they were in tetrarchic times, meaning they were absent of any symbolic formula that could be mistakenly interpreted for a clinical sign (Ağtürk 2018). The relief was produced a few years before the Tetrarchy was established, making it very useful for observing how certain stylistic changes in sculpture punctually followed changes in state organisation and associated conceptions of power.

Nonetheless, ultimately, the scarcity of graphic information combined with the partisanship of literary sources precludes credible speculation on the health conditions of Maximinus II.

Conclusion

Although studies of health in antiquity based on sculpture are interesting and exciting, their historical relevance is limited because the sample of individuals represented in Roman portraiture is partial and limited. Accordingly, such speculation cannot be used to statistically estimate the historical incidence of a given pathology. Furthermore, style greatly influences the verisimilitude of portraiture, while having a single copy of a certain portrait can render distinction of physiognomic characteristics based on a stylistic trait impossible. Accordingly, this kind of study can only be conducted where multiple sources can be cross-referenced, a situation that rarely occurs and usually concerns emperors.

Portraits of the emperor had the primary function of making him recognizable and identifiable by viewers throughout the empire. Physiognomy and hairstyle were the main elements useful for this purpose (Frejfer 2008: 407–419). Linear shapes of the hair are easier to reproduce than other somatic details, and so they are still one of the first elements to be observed for the identification of ancient portraits. However, the need for identification of the emperor in the statues also exploited other expedients beyond the physical resemblance, for instance the positioning in the context of the social spaces of the cities and buildings, the inscriptions, the material they were made of, and even their size. All this information is part of a language that was clearly understandable to the Romans, but does not convey any useful information for the topic of this research.

Along with portraits on coins, statues were the main (and most durable) means of visual interaction between the ruler and the population of the empire, a realistic portrait could certainly establish an ideal reciprocal interaction between the observer and the represented subject, while a schematic portrait in a process of ideal abstraction established a unidirectional and more authoritarian relationship.

Including minor anatomical details ensured an empathetic relationship with the image of the sovereign. The search for this humanising accuracy by the designers of the prototypes could lead to the unconscious inclusion of tell-tale details. These were not unimportant esthetic choices, how the emperor's image was perceived directly influenced politics. We know little about the procedure by which the prototypes were developed and selected. It was a very delicate first stage followed by widespread distribution throughout the empire, either by sending finished copies or intermediate prototypes needed for local production of replicas (Frejfer 2008: 419–429).

One of the cases that lends itself well to this type of investigation is certainly Gardner's (2015) study of physiological and psychosomatic causes of Nero's behaviour, in which the abundance of sources allowed the development of a reliable interdisciplinary information grid on which a diagnosis of the health conditions of the last Julio-Claudian could be based, a man who lived in a time when verist trends in portraiture were flourishing. In this case, the importance of the research was also indubitable because the disease of the subject in question is linked to the macro-history of Rome, allowing observation, from a unique vantage, of the relationship between 'senatorial propaganda' and the psychophysical conditions of an emperor.

Studies on health and mental health are certainly desirable for other figures linked to the *histoire événementielle* of Rome, and they can certainly be conducted in relation to other emperors painted negatively by an adverse senate or Christian historiography. However, conducting serious interdisciplinary medical and historical-artistic research based only on ancient portraiture requires an extremely unstable approach, with pitfalls dictated by the distortions that stylistic languages bring to the representation of anatomical forms.

Although one might be tempted to consider studies of the health of historical figures as a mere historical curiosity, in reality, they enable deep investigation of the ability of the craftsmen to render or omit anatomical details and of the perceptions of certain physiognomic characteristics during classical antiquity, if not of the state of health of the subjects represented.

Ultimately, observing and studying the history of the reproduction of the human figure in classical art is always a step towards understanding the history of humanity's understanding of itself. Certain periods of Roman portraiture have developed a formal sincerity and verism that has remained unparalleled until modern times; meanwhile, perhaps no other artistic expression opens up a breach in human thought like portraiture. However, in these cases, the art produced provides more insight into the craftsman and his society than the subject represented. That is, although historical-artistic analysis is a great tool for understanding historical perceptions and ideas of the human body and human mind, except for a few cases in which abundant data can balance biases, it is a fascinating but blunt tool for medical diagnosis, even when supported by historical-artistic knowledge, which at least precludes confusing stylistic elements with glandular dysfunctions and perhaps encourages using those elements to support historiographical facts of a completely different nature.

Competing Interests

The author has no competing interests to declare.

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