

What Is a *Kolosso* and How Were *Kolosoi* Made in the Hellenistic Period?

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THE ACCEPTED WISDOM on the meaning of *kolossos* goes back to Wilamowitz's hypothesis in the 1920s: it was only at the end of the first century B.C. that *kolossos* came to be used specifically of colossal statues and not just of representations of human beings of whatever size.¹ Wilamowitz suspected that the change in usage was to be attributed to the fame of a particular statue to which the name *kolossos* had been attached: the enormous statue of *Helios*, erected in the 290s or 280s at Rhodes to thank the tutelary deity of the island for saving the city from the siege of Demetrius Poliorcetes. The sculptor was Chares of Lindos. Publication of two fourth-century inscriptions from Cyrene prompted Wilamowitz's theory: one contained what purported to be a curse pronounced on those who contravened the oath taken by the original settlers from Thera not to abandon the settlement; the other was a sacred law governing pollution.² The curse took the following form: wax *kolossoi* were to be fashioned and burned; as they burned, assembled men, women, boys and girls were to pronounce a curse that those who had not remained true to the oaths were to melt away and dissolve like the *kolossoi* along with their offspring and their goods.³ The relevant section in the

¹ U. von Wilamowitz-Moellendorff, "Heilige Gesetze: Eine Urkunde aus Kyrene," *SBBerl* (1927) 169.

² *SEG IX* 3.44–49 (Meiggs and Lewis no. 5), 72.115–19 (Solmsen and Fraenkel, *Inscriptiones ad illustrandas dialectos selectae*⁴ no. 39; Sokolowski, *Lois sacrées*, suppl. no. 115).

³ For a detailed discussion of the procedure and its precedents from the Near East, see C. Faraone, "Molten Wax, Spilt Wine and Mutilated Animals: Sympathetic Magic in Near Eastern and Early Greek Oath Ceremonies," *JHS* 113 (1993) 60–65.

sacred law laid down procedures to deal with the following eventuality: should a being called an *hikesios epaktos* be sent against a household and should the identity of the person sending it not be known, male and female *kolossoi* of wood or clay were to be constructed and food was to be put before them; once the proper procedures had been performed, the *kolossoi* and the food were to be taken far off to a wood in which no cutting had taken place and where they were either to be fixed to the ground or propped up. The most likely explanation of the latter ritual is that it was designed to exorcize hostile demons summoned up or sent by someone to haunt an enemy. The exorcism was accomplished by placating the demons with food and then by taking them to a deserted spot where they could harm no one.⁴ In view of the similarity of the procedures in both inscriptions to those employed in magic, it was understandable that the *kolossoi* of the inscriptions were assumed to be figurines.

Wilamowitz's theory, although daring, seems to have found almost universal acceptance.⁵ He has not, however, carried the

⁴ The best recent discussion of the clause is by R. Parker, *Miasma: Pollution and Purification in Early Greek Religion* (Oxford 1983) 347ff. The newly-published sacred law from Selinous of the late sixth century B.C. prescribes a similar technique for exorcizing hostile spirits: M. Jameson, D. Jordan, and R. Kotansky, *A Lex Sacra from Selinous* (=GRBM 11 [Durham 1993]) 14–17. Food and drink are to be put out for the hostile spirit. Whether the table containing the food and drink was placed before representations of the spirits is unclear. It is impossible to discern the significance of ἀγάλματος, found towards the bottom of Column A (21), as the lead tablet at that point is particularly fragmentary.

⁵ Cf. Benveniste, "Le sens du mot et les noms grecs de la statue," *RPhil* SER. 3 6 (1932) 118–22; C. Picard, "Le cénotaphe de Midéa et le 'Colosses' de Ménélas," *RPhil* SER. 3 7 (1933) 343; S. Lauffer, "Zu den altattischen Weihinschriften," *AthMitt* 62 (1937) 94f; E. Fraenkel, *Aeschylus, Agamemnon* II (Oxford 1950) 218f; D. L. Page, *Aeschylus, Agamemnon* (Oxford 1957) 107; Jacoby, comm. *ad FG̃rHist* 411F1 (n.3, p.155); C. Gallavotti, "L'epigramma dei Cipselidi," *RivFil* N.S. 90 (1962) 291–94; A. Gow and D. Page, *The Garland of Philip* II (Cambridge 1968) 280; J. Boardman, *Greek Sculpture: The Archaic Period* (London 1978) 26; P. Karakatsanis, *Studien zu archaischen Kolossalwerken* (Frankfurt a.M. 1986) 10f; A. Donohue, *Xoana and the Origins of Greek Sculpture* (Atlanta 1988) 27; J. Papadopoulos, *Xoana e Sphyrelata: Testimonianza delle fonti scritte* (Rome 1980) 87; R. Higgins, "The Colossus of Rhodes," in P. Clayton and M. Price, ed., *The Seven Wonders of the Ancient World* (London 1988) 127. The list could be expanded much further, if a bibliography were compiled of those who have written on the two Cyrenean inscriptions. Here, the tendency, exemplified in the recent work of Jameson,

day entirely: Irene Bald Romano's dissertation has raised serious questions about the validity of his conclusions. She bases her disagreement on a summary review of some of the passages in Herodotus in which *kolossos* occurs.⁶ It is also true that refinements and modifications to Wilamowitz's thesis have been suggested, but they do not affect its substance. From the point of view of the art historian and archaeologist, the most important of these is Georges Roux's argument that the *kolossos* of Rhodes was so-named because it essentially took the form of the primitive statues with unseparated legs that men called *kolossoi*; the *kolossos* of Rhodes, in particular, was not much more than a great pillar with a head on it.⁷ Roux's thesis, which is even more audacious than Wilamowitz's is often accepted by art historians.⁸ Donohue pronounces it "not completely satisfactory" and notes that Herodotus (4.152) calls three kneeling figures *kolossoi* (*supra* n.5: 27 n.65). Among those interested in literature or the history of ideas, Roux's thesis seems understandably to have aroused less attention.⁹ It is, however, rather surprisingly incorporated into the definition of *kolossos* in Chantraine's dictionary.¹⁰ Benveniste's theory (*supra* n.5) that a *kolossos* acts as a "double" for a living person has more to do with what a *kolossos* represents than with its size or posture—a line of argument that does not affect the present discussion.

Wilamowitz's thesis about the development in meaning of the term *kolossos* rests on one major assumption: the word was monolithically univocal and always had the same meaning in the Classical and Hellenistic periods. Even if we are prepared to

Jordan, and Kotansky (*supra* n.4: 76), is to assume that the *kolossoi* are figurines.

⁶ *Early Greek Cult Images* (diss. University of Pennsylvania 1980) 172ff.

⁷ "Qu'est-ce qu'un Κολοσσός?" *REA* 62 (1960) 5–40, followed by J. Servais, "Le 'colosse' des Cypselides," *AntCl* 34 (1965) 144–74.

⁸ Servais (*supra* n.7) 172ff; J. Ducat, "Fonctions de la statue dans la Grèce archaïque: *Kouros* et *kolossos*," *BCH* 100 (1976) 246–51; C. Rolley, *La sculpture grecque I* (Paris 1994) 22f; G. Pugliese Carratelli, "Kyrenaika," *QAL* 12 (1987) 30f; cf. L. and J. Robert, *Bull. épigr.* 1961, 215, with further references. B. S. Ridgway, *The Archaic Style in Greek Sculpture*² (Chicago 1993) 27, who accepts Roux's hypothesis, credits him with "reviewing all pertinent ancient sources." This is not the case: Roux only deals with the three passages in Herodotus that fit his thesis.

⁹ Cf. J.-P. Vernant, *Mythe et pensée chez les Grecs II* (Paris 1974) 65–78.

¹⁰ P. Chantraine, *Dictionnaire étymologique de la langue grecque* (Paris 1968–80) s.v. κολοσσός.

grant that the *kolossoi* mentioned in the Cyrenean inscriptions are likely to be figurines, we have no obligation to assume that *kolossos* in other contexts or in other dialects and at other times carried exactly the same meaning.¹¹ The second assumption of Wilamowitz and others writing about the Cyrenean inscriptions is that the *kolossoi* mentioned can only be figurines and not more than life-size representations. Yet it is by no means self-evident that this should be so.

The authenticity of the oath taken by the emigrants from Thera to Cyrene and the curse appended to it does not necessarily affect interpretation of the ritual accompanying the curse. Whether the curse is an antiquarian concoction in whole or in part or a miraculously preserved text, brought somehow from Thera to Cyrene, the wording of the inscription envisages a ritual in the presence of not just the men of the community, but also the women, boys and girls. The number required as witnesses to the ceremony of the burning of the images indicates objects of a certain scale, certainly greater than figurines and possibly more than life-size, if the drama of the event was not to be lost on most spectators.

In erotic magic, the wax magicians burned was (sometimes, at least) shaped to take the form of the person at whom the spell was directed:¹² the witch Canidia burned a wax effigy of her former lover (Hor. *Sat.* 1.8.44f). Vergil has an effigy passed three times around an altar (*Ecl.* 8.74f) followed by the burning of wax (8.80; cf. Hyg. *Fab.* 104; CCAG III 44.22-29). It is a reasonable supposition that the effigy, having been passed around the altar, is burned in wax. The size of such figurines is not clear, but if the surviving wax figurines employed in binding spells from Greco-Roman Egypt are anything to go by—and they almost certainly are—the wax figurines that were burned would have been very small indeed.¹³ The heights of the Egyptian figurines range from 7 cm. to 12.7 cm. It seems unlikely that the author of the Theran ritual had in mind the public burning of such tiny objects, if what he envisaged was an impressive piece of public theater. To sum up, if the burning of

¹¹ Pugliese Caratelli (*supra* n.8: 31) suggests that the Cyrenean *kolossoi* were faceless like the female funerary busts from Cyrene.

¹² It is unclear whether unfashioned wax or an effigy is being burned at Soph. fr. 536 Radt (*Rhizotomoi*) and Theoc. *Id.* 2.28.

¹³ Known examples with the dimensions, where available, are collected by C. Faraone, "Binding and Burying the Forces of Evil: The Defensive Use of 'Voodoo Dolls' in Ancient Greece," *CLAnt* 10 (1991) 204f.

the wax *kolossoi* on Thera had not been a publicly enacted ceremony conducted before the entire citizen body, it would be reasonable to suppose that the *kolossoi* were indeed the small wax dolls attested for private magical rites, but for a public occasion with a considerable number in attendance, it is a much less likely that tiny wax figurines are intended. Furthermore, if this train of argument has anything to it, it appears that the author of the ritual employs *kolossoi* to specify large wax effigies either life-size or greater.

There is no very good reason to think that the *kolossoi* of wood and clay in the ritual of exorcism prescribed by the Cyrenean purificatory law are figurines or dolls and not life-sized or greater representations of a man and a woman. Two considerations tell somewhat against the objects being tiny figurines used in magic: (1) if the procedure of setting food beside the *kolossoi* is modeled on a *theoxenia* or *lectisternium*, then the images are likely to be larger rather than smaller; (2) use of ἐπέισται to describe what is to be done with the *kolossoi* when they are taken to the unworked wood suggests that they are not tiny dolls but sizeable objects to which a degree of effort must be devoted to make them stand upright, whether by propping them up or by fixing them in the ground.

It is clear that small figurines made of wood or clay could have been created easily. The creation of a figure made of wood that is greater than life-size presents no difficulties. Strabo's discussion of human sacrifice among the Gauls speaks of *kolossoi* constructed from hay and timber that were burned in an all-consuming sacrificial ritual: inside these *kolossoi* were placed domestic animals, wild beasts of all varieties and men (4.4.5). The story suggests that the construction of *kolossoi* of an impermanent nature for ritual purposes was known. Erycius' epigram notes a *kolossos* in fig-wood of Hercules that protects the stalls of a cowherd.¹⁴ Greater than life-size statues in clay—however simple—would have been more difficult to manufacture. Terra-cotta statues (1st c.), somewhat larger than life, from the *Domus Tiberiana* in Rome are apparently renderings of Classical Greek statues.¹⁵

¹⁴ Gow and Page (*supra* n.5) 2206–11=*Anth. Pal.* 9.237; for a fig-wood statue of Priapus, cf. *Hor. Sat.* 1.8.1ff.

¹⁵ M. Tomei, "Statue di terracotta dal Palatino," *RömMitt* 99 (1992) 172–226, pls. 48–63.

If we turn to the literature of Classical Greece, we find that *kolossos* is not a particularly common word: Aeschylus employs it once and Herodotus eleven times of eight different statues or groups of statues.¹⁶ It does not necessarily carry the same meaning in Aeschylus as it does in Herodotus, who uniformly uses the word for statues of massive dimensions—in particular of enormous Egyptian statues, whether of wood or stone, and once of a group of three kneeling bronze statues seven cubits in height dedicated at the Samian Heraeum after an especially successful voyage (4.152.4). Herodotus three times gives dimensions for Egyptian *kolossoi*: those that take the place of pillars in the courtyard of the temple built by Psammetichus at Memphis are twelve cubits in height (2.153); the recumbent *kolossos* in front of the Hephaestum at Memphis is seventy-five feet in length (2.176.1); and the two *kolossoi* that stand by the base of this great *kolossos* are twenty feet in height (2.176.1). Other indications of size are less precise, but still point to massive dimensions. Thus the two seated stone *kolossoi* set on the two pyramids in the so-called Moerian Lake are, presumably, in keeping with the huge dimensions of the pyramids, fifty fathoms of which are under water and fifty above (2.149.2f). Finally, in another passage, after relating the story of priests in Saïs that the likenesses (*eikones*) in a certain building represented the concubines of the Pharaoh Mycerinus, Herodotus goes on to explain what it was that had given rise to the story: twenty unclad wooden *kolossoi* stood in the building (2.130.2). The explanatory sentence introduces another word for a statue, as if to define what kind of likenesses the statues just mentioned were. The implication is that the *kolossoi* are a particular kind of *eikones*. Although it is impossible on the basis of the immediate passage to say how *kolossoi* differ from other representations, it is a reasonable supposition that *kolossoi* are for Herodotus statues of especially large dimensions. As for the *kolossoi* in Aeschylus' *Agamemnon*—whose beauty Menelaus, haunted by the thought of the wife who had deserted him, finds hateful—context does not permit us to determine whether the poet has greater-than-lifesize *korai* in mind, but nothing precludes the possibility.

Roux's thesis that *kolossoi* were originally standing figures with their legs together or concealed under a skirt is refuted by

¹⁶ Aesch. *Ag.* 416; Hdt. 2.130.2, 131.1, 3, 143.2, 4 (*bis*), 149.2, 153, 175.1, 176.1 (*bis*), 4.152.4.

two examples from Herodotus: the three kneeling bronze *kolossoi* from the Samian Heraeum (4.152.4) and the two seated *kolossoi* on pyramids in the Moirian Lake (2.149.2-f) are enough to give it its quietus. There is, in short, nothing in Herodotus' use of *kolossos* that implies a particular posture on the part of the statue.

In Hellenistic Greek before 100 B.C. there are five examples in verse and seven in prose of *kolossos* or an adjective or noun derived from it. Of these the earliest datable is a fragment of Sopater of Paphos in iambic trimeters on the fondness of Alexandrians for lentils (Ath. 3.158D). Whoever utters the lines maintains that the sight of a great *kolossos* of beaten bronze would put him off his food. The speaker may refer to the Colossus of Rhodes, but that is very uncertain.¹⁷ What cannot be gainsaid is that he is speaking of a huge statue. It does not, however, follow, as supposed, that because *kolossos* is qualified by *meγas* here and elsewhere, some *kolossoi* were not huge and that the adjective was needed to make it clear the statues in question were indeed large.¹⁸ *Megas kolossos* might have at least three different meanings: (1) a *kolossos* that stands out from other *kolossoi* in being large; (2) a *kolossos* that even by the standards of colossal statues was large; and (3) a big *kolossos*, where "big" is emphatic but semantically redundant, in that it conveys no additional information about the size of the statue.¹⁹

Theocritus, using a device that originates in the cumulation of similes in epic, deploys in succession two comparisons to conjure up on the one hand the great sweep of the back and chest of Amycus, the boxer-king of the Bebryces, and on the other the massive muscles standing out on his arms (22.45–50):²⁰

στήθεα δ' ἐσφαίρωτο πελώρια καὶ πλατὺ νῶτον
σαρκὶ σιδηρεΐη, σφυρήλατος οἶα κολοσσός·

¹⁷ Gulick, the Loeb translator, supposes (*ad loc.*) that the speaker, an Alexandrian living in Rhodes, where lentils were a favorite dish, cannot even in these circumstances bring himself to eat lentils. This view rests on the apparently *ad hoc* hypothesis, for which I can find no evidence, that lentils were highly esteemed in Rhodes. P. Moreno, *Scultura hellenistica* I (Rome 1994) 129, also assumes that Sopater has the Colossus of Rhodes in mind.

¹⁸ F. W. Walbank, *A Historical Commentary on Polybius* I (Oxford 1957) 617; for other instances of the collocation of *meγas* with *kolossos*, cf. Hdt. 2.175.1; Polyb. 5.88.1; Lucian *Gall.* 24.

¹⁹ With this use of *meγas* to express awe or to emphasize may be compared such English expressions as "a great mountain of a man."

²⁰ Cf. *Il.* 2.455–81, 11.546–65, 17.735–59; *Od.* 22.299–308.

ἐν δὲ μύες στερεοῖσι βραχίουσιν ἄκρον ὑπ' ὤμων
 ἕστασαν ἥτε πέτροι ὀλοῖτροχοι οὔτε κυλίνδων
 χεϊμάρρους ποταμὸς μεγάλαις περιέξεσε δίνας.

Gow holds that *kolossos* does not necessarily signify a statue of great size, although he grants that great bulk is probably implied here.²¹ Context suggests very strongly that size is what is above all at issue in the simile. There can be no doubt that Theocritus' Amycus is an enormous man: (a) he is *ὑπέροπλος* (44); (b) his chest is massive (*πελώρια*, 46); (c) muscles like the smooth boulders (*πέτροι ὀλοῖτροχοι*) rolled down by a river stand out on his arms (48ff); (d) and he is like Tityus (94), a giant who traditionally covered nine stades as he lay stretched out on the ground;²² (e) a lion-skin hangs suspended over his neck and back (51).

Roux suggests that Theocritus is making a comparison between the upper body of Amycus and a herm done in the new Hellenistic fashion; such herms were not just a head on a pillar, but consisted of a head resting on a representation of a male upper body.²³ In support of that contention Roux points out that the simile refers only to Amycus' torso and arms. In Roux's words: "Ce pugiliste n'a point de jambes!" Those describing the physique and appearance of a boxer will generally not concentrate their attention on his legs, but on his chest, cauliflower-ears, broken nose, scarred eyes and arms. There is in Amycus' case an additional and overwhelming reason for the absence of his legs from Theocritus' evocation of his presence: he is sitting by a spring taking the sun (*ἐνήμενος ἐνδιάσκει*, 44).²⁴ One would like to know what the *tertium comparationis* of the simile is on Roux's understanding, for a herm does not exactly conjure up an impression of a massive physique. Roux has an answer: in the archaeological precision of

²¹ A. S. F. Gow, *Theocritus* II² (Cambridge 1952) 390.

²² *Od.* 11.576f; Quint. Smyrn. 3.396; Verg. *Aen.* 6.595ff; Tib. 1.3.75; Ov. *Met.* 4.456–75.

²³ Roux (*supra* n.7) 32f. Roux's analysis of the passage is endorsed by Louis Robert, "Les épigrammes satiriques de Lucillius sur les athlètes: Parodie et réalités," in *L'épigramme grecque* (=Entretiens Hardt 14 [Vandœuvres–Geneva 1986]) 270 n.4 (=Opera Minora Selecta VI [Amsterdam 1989]) 406 n.4). On the earliest known instance of a hip herm dating to 333/332 B.C., see O. Palagia and D. Lewis, "The Ephebes of Erechtheis 333/2 B.C. and their Dedications," *BSA* 84 (1989) 338ff.

²⁴ Karakatsanis (*supra* n.5: 32) makes the same objection.

the image it evokes an athlete, not to be budged, who stands fixed in the ground like a boundary stone, not relying on the uncertain foundation that human legs provide but on the architectural stability of a pillar.²⁵ This exercise in ingenuity flounders on one simple fact: Amycus is sitting, not standing. There is a second difficulty: if Roux is correct, we have evidence of a quite novel type of herm, made not of stone but of bronze beaten out on an anvil, not just of cast bronze.²⁶ To maintain that no such herms ever existed would be to give a hostage to fortune, but it is an issue that needs to be addressed by someone who puts so much weight on the archaeological precision of the image. It will not do to pass off the adjective *sphyrelatos*, as Roux does, with talk of an impression of strength splendidly conveyed and reinforced by the massive sonority of a word whose resonances of bronze would not go unmarked by a poet-musician.²⁷ As an erudite poet-musician has chosen to employ the word, one may safely suppose that he knew what it meant.

In Lycophron's *Alexandra*, Diomedes is imagined standing in the vales of Ausonia on boulders that he had taken from the wall built by Poseidon at Troy and used as ballast for his ship. He stands on the boulders to survey the Daunian lands he is to occupy (615–28). Wilamowitz (*supra* n.1: 169) took the adjective to mean “standing with his legs astride like a statue.” The *scholia* give two explanations for the adjective: Diomedes stood statue-like on mighty rocks and boulders; Diomedes stood on a *kolossos*, *i.e.*, a high place (*ΣAlex.* 615 Scheer). The context suggests that Diomedes stood like an enormous statue with his legs set on the boulders, which he had unloaded from his ship to survey the length and breadth of his future domain.²⁸ The

²⁵ “Dans sa précision archéologique, le mot suggérait bien l'image d'un athlète inébranlable, fixé au sol comme une borne, assurant sa solidité non sur l'équilibre incertain de jambes humaines, qui peuvent trébucher ou ployer, mais sur la stabilité architecturale d'un pilier.”

²⁶ In later times, bronze portrait-busts certainly sat on marble herms as they do in the Villa of the Papyri on the outskirts of Herculaneum, on which see R. R. R. Smith, *Hellenistic Royal Portraits* (Oxford 1988) 70.

²⁷ “Et cette impression de vigueur était admirablement traduite aussi par la sonorité massive du mot, dont la résonance de bronze ne pouvait laisser insensible un poète musicien.”

²⁸ LSJ⁹ *s.v.* κολοσσοβάμων has “with colossal stride.” This is almost certainly wrong, as the length of Diomedes' stride is not at issue. The rendering of F. W. Mooney, *The Alexandra of Lycophron* (London 1921) 65 is to be preferred: “Like a Colossus in Ausonian Vale he stands.”

Alexandra, if it has not suffered interpolation, must have been composed in the aftermath of the battle of Cynoscephalae in 197 to judge from the prophetic utterance at 1439–50, which may be interpreted plausibly to constitute praise of the victor Flamininus. If the lines are interpolated, then a date at the end of the the fourth century would make sense.²⁹

Finally, epigrams are cited by Photius and in the *Suda* (*s.v.* Κυσελιδῶν ἀνάθημα ἐν Ὀλυμπίᾳ) on the stauē of Zeus that Cypselus or his family dedicated at Olympia (*Anth. Gr.* App. 4 Cougny):

αὐτὸς ἐγὼ χρυσοῦς σφυρήλατος εἰμι κολοσσός·
ἐξώλης εἶη Κυσελιδῶν γενεά

εἰμὶ ἐγὼ Phot.; εἰμὶ αὐτὸς *Suda*; εἰ μὴ ἐγὼ Cobet; χρυσοῦς *om. Suda*.

and:

εἰμὶ ἐγὼ Νάξιος, παγχρύσεος εἰμὶ κολοσσός·
ἐξώλης εἶη Κυσελιδῶν γενεά

εἰ μὴ ἐγὼ Cobet; νάξιος Phot.; νάξιος *Suda*

The source on which Photius and the *Suda* draw is Didymus Chalcenterus (p.404 Schmidt). The epigram, accordingly, belongs to the first century B.C. or more likely earlier, for the notice in the lexica also reports that Apollas or Apellas Ponticus (*FGrHist* 266F5) cited the second version of the epigram. Apollas or Apelles may plausibly be assigned to the generation after Callimachus (comm. ad *FGrHist* 266). Hence it follows that at least one version of the epigram belongs to the the first half of the third century B.C. Whatever difficulties the text at the beginning of the hexameter may present, there can be no doubt that the word *kolossos* occupied the end of the line in both versions.³⁰ The statue was famous.³¹ Strabo's discussion of the offerings with which Olympia was embellished singles it out along with Phidias' chryselephantine statue of Zeus (8.3.30). The context suggests that he does so in part because of its great size.

²⁹ For the early second century date: M. S. Sudhaus, "Die Abfassungszeit der *Alexandra*," *RhM* 63 (1908) 481–87; K. Ziegler, "Lykophron (8)," *RE* 13 (1927) 2354–65; S. Josifovič, "Lykophron (8)," *RE Suppl.* 11 (1968) 927–30; for the end of the fourth century B.C.: P. Fraser, *Ptolemaic Alexandria* (Oxford 1972) II 1066f with bibliography.

³⁰ Cf. Gallavotti (*supra* n.5) 291–94; Servais (*supra* n.7) 154–72.

³¹ Pl. *Phdr.* 236A5–B5; Ephorus, *FGrHist* 70F178; Theophr. fr. 128 Wimmer; Apollas Ponticus, *FGrHist* 266F5; Agaelytus, *FGrHist* 411F1; Didymus Chalcenterus p.404 Schmidt; Strab. 8.3.30, 6.20; Plut. *Mor.* 400E; Paus. 5.2.3.

Later he says quite specifically that it was very large (σφυρήλατος χρυσοῦς ἀνδριᾶς εὐμεγέθης, 8.6.20).³² It is reasonable to suppose that it was its great size that led the author or authors of the epigrams to refer to it as a *kolossos*.

In Hellenistic prose and its immediate aftermath, the Cypselid dedication at Olympia is called a *kolossos* by Theophrastus (fr. 128 Wimmer), Agaclytus (*FGrHist* 411F1), and Didymus Chalcenterus (p.404 Schmidt). They too will refer to it as a *kolossos* because of its great size.

Polybius uses the term *kolossos* four times: twice of the Colossus of Rhodes (5.88.1, 89.3); of a statue of Attalus of Pergamum ten cubits in height that in 197 B.C. the citizens of Sicyon erected in their agora beside the statue of Apollo (18.16); of a statue of the Roman People thirty cubits in height that the Rhodians voted to erect in the temenos of Athena (31.4.4). It follows that Polybius uses *kolossos* for very big statues. Polybius' account of the honors voted Attalus at Sicyon is semantically the most revealing: when the benefaction on Attalus' part that had led the Sicyonians to vote him the honor of a greater-than-life-size statue in the agora was followed by a second benefaction, a gift consisting of ten talents and ten thousand bushels of wheat, the Sicyonians' good will towards Attalus knew no bounds and they voted him a gold statue and an annual sacrifice.³³ Polybius' term for the gold statue is *eikon*. Although a much grander honor, it was clearly not as large as the ten-cubit statue he calls a *kolossos*. That suggests that for Polybius a *kolossos* was a large statue.

Besides the two inscriptions from Cyrene the epigraphic evidence for the term from the Classical and Hellenistic periods amounts to two inscriptions: one from Argos (end of 4th/beginning of 3rd c. B.C.), the other from Delos dated 302 B.C.³⁴ The Argive inscription records work done on the sanctuary of Apollo Pythaeus and mentions, besides the building of a road and an embankment for the terrace on which the sanctuary stood, the shifting into position of both *kolossoi* and some other objects whose identity cannot be recovered from the

³² Cf. Σ Pl. *Phdr.* 236B: οἱ δὲ κρατήσαντες Κορίνθου ἀνέθεσαν ἐκεῖσε μέγιστον ἄγαλμα χρυσοῦν τοῦ Διός.

³³ For statues in the agora accorded royal benefactors in the Hellenistic period, see P. Gauthier, *Les cités grecques et leurs bienfaiteurs* (= *BCH Suppl.* 12 [Paris 1985]) 45.

³⁴ W. Vollgraff, *Le sanctuaire d'Apollon Pythaeus à Argos* (Paris 1956) 110 lines 16f; *JG* XI.2 145.24.

stone. The next sentence speaks of leveling the terrace.³⁵ As the moving of the *kolossoi* is connected with what looks to be major earthworks and building, we may infer that their removal, apparently to a new location, was also a project of some magnitude. That in its turn suggests that the statues were large and occupied a prominent position on the terrace of the sanctuary. They were no doubt Archaic *kouroi*. Related to the moving of sizeable statues is Hermann Kienast's recent demonstration that at some point two of the four courses of stone were removed from the base on which the Geneleos group stood in the Samian Heraeum to create a new base in which the stone was cut to accommodate the six figures.³⁶ In the Delian inscription, the presence of a *kolossos* (θαλάμῳ τῷ τοῦ ναοῦ οὗ ὁ κολοσσός) names and defines the temple. That the temple should be identified in this way points to the statue's having been in some way extraordinary and not just a run-of-the-mill cult-statue. Now, it is virtually certain that the statue is the monumental Archaic cult-state of Apollo that Pausanias mentions (2.32.5, 9.35.3). The statue was golden, which normally means of gilded bronze. Its precise dimensions must remain uncertain, but it will have been well over life-size.³⁷

Neither the Classical nor the Hellenistic literary texts support Wilamowitz's contention that *kolossos* was not used specifically of extremely large likenesses of human beings or gods until the end of the first century B/C. The term is employed to signify a greater-than-life-size statue long before that date, and there is no reason to think that the practice of calling the huge statue of *Helios* on Rhodes a *kolossos* led to the adoption of the term as the name for large statues in general. Secondly, there is no evidence to support Roux's thesis that *kolossos* originally denoted a statue with its legs together like a pillar, and good evidence that the term could be used of sitting or kneeling statues.

³⁵ Lines 13–18: καὶ τὰν ὁδὸν ἠργάσαντο ἅπανσαν καὶ ὄφρ' ἰαρόν καὶ τὰν ἐπιπολάν, καὶ τοὺς μ[...] ἐνς τάξιν πεδάγαγον καὶ τ[ὸν]ς κολοσσόν, καὶ τὰν ἐπιπολάν ὠ[μά]λιξαν.

³⁶ "Die Basis der Geneleos-Gruppe," *RömMitt* 107 (1992) 29–42.

³⁷ Arguments in Romano (*supra* n.6) 170ff.

Manufacture of Hellenistic Colossal Bronzes

There is every reason to suppose that Sopater and Theocritus have colossal statues in mind when they speak of *kolossoi*. The issue now is why they predicate the adjectives *chalkelatos* and *sphyrelatos* of *kolossoi*. The adjectives are to all intents and purposes synonymous in meaning in most contexts: they both refer to the same process of manufacture. Were it not the case that both Sopater and Theocritus speak of *kolossoi* in essentially the same terms, it might just be possible to maintain that in comparing Amycus to a σφυρήλατος κολοσσός Theocritus means no more than that Amycus' flesh has a hard unyielding quality. This at any rate is how Gow interprets the intent of the adjective: he insists that Theocritus' use of the adjective carries no suggestion that Amycus looked like a statue made of bronze plates beaten out on an anvil (Gow [*supra* n.20] 390). Theocritus' predicating *sphyrelatos* of a *kolossos*, on the other hand, makes it extremely unlikely that Sopater uses *chalkelatos* in a weakened sense to mean "bronze."³⁸

There is a second reason for giving *sphyrelatos* its full force in Theocritus: in one version of the epigram, said to have been inscribed on the massive gold statue dedicated by Cypselus at Olympia, *sphyrelatos* and *kolossos* respectively occupy the same position in the hexameter as in Theocritus' version. Plato (*Phdr.* 236B) and Strabo (8.3.30, 6.20) both describe the statue as *sphyrelatos*. It is incontrovertible, accordingly, that *sphyrelatos* in the epigram means "hammered out" and refers to the way in which the gold statue was manufactured from thin gold plates hammered out on wooden forms. The relationship between Theocritus and the epigram may have taken any of the following three forms: (1) Theocritus and the unknown epigrammatist have a common source; (2) Theocritus uses the unknown epigrammatist as his model; (3) the unknown

³⁸ There is no room for doubt, however, that *chalkelatos* means merely "bronze" in two verse-inscriptions from Oenoanda of the third century (A. Hall and N. Milner, "Education and Athletics. Documents Illustrating the Festivals of Oenoanda," in D. French, ed., *Studies in the History and Topography of Lycia and Pisidia* [=British Institute of Archaeology Monograph 10 (Ankara 1994)] nos. 10.16, 18b.20) and in an epigram on stone from Attica of much the same vintage (*IG* II² 3622.7f). In the case at least of the Oenoandan inscriptions the same taste for archaic and high-sounding terms that lead the poetaster or poetasters who composed the verses to use *xoanon* for a bronze statue will have been responsible for the choice of the grandiloquent *chalkelatos* in place of the more prosaic *chalkeos*.

epigrammatist follows the verse-pattern established by Theocritus. Whatever the precise relationship between Theocritus and the epigram, there is a relationship. *Sphyrelatos* in the epigram unquestionably refers to the same kind of statue as the Cypselid dedication and is not a meaningless filler. It is therefore likely that the term is invested with the same meaning in Theocritus.

The statue that puts the speaker of Sopater fr. 1 off his food is a *chalkelatos kolossos*. *Chalkelatos*, more specific than *sphyrelatos*, means "of beaten-out bronze." For the most part the epithets will be interchangeable, because most metal statues, other than very splendid gold, silver, and chryselephantine statues, were made of bronze. There is no reason to think that Sopater uses *chalkelatos* to mean merely "bronze," although the epithet did come at a very much later date to be used in that way. The adjective is likely to retain its proper technical sense in the first half of the third century B.C.

It can hardly be an accident that both Theocritus and Sopater predicate essentially the same epithet of *kolossoi*. Their doing so suggests that some greater-than-life-size statuary was made from sheets of hammered bronze attached to a wooden core or more likely suspended on an armature. The question that now needs to be asked is what *kolossoi* do Sopater and Theocritus have in mind? Are they thinking of archaic statuary or that of their own day? It seems on the whole more likely that they have in mind a contemporary technique with which they are familiar and that they are not displaying antiquarian learning. That is not to say that all very large statues in the early Hellenistic period were *sphyrelata* but that some were.

We are singularly ill-informed about how very large Hellenistic statues were made. If we had the remains of colossal bronze statues from the third or second centuries B.C., we would almost certainly be able to reconstruct something of the way in which they were made. An inscription specifying the materials needed for such a statue would also help. As it is, what we have is a text that purports to describe the construction of the Colossus of Rhodes—the *De septem orbis spectaculis* of the early Byzantine paradoxographer Philo. If Philo had access to a Hellenistic technical treatise on the construction of colossal bronze statuary or specifically on the manufacture of the Colossus of Rhodes, then we would be better placed to speak in an informed fashion. Philo says quite unequivocally that the Colossus of Rhodes was cast in section (p.30 Hercher). Those

who have written on that statue have in general been quite happy to accept what Philo has to say and have not inquired too closely into the nature of the work or asked insistently enough where Philo could have acquired the information that he apparently possesses.³⁹ In what follows I shall argue that the *De septem orbis spectaculis* is essentially a rhetorical exercise and does not contain reliable technical information on the way in which the Colossus of Rhodes was manufactured.

Two recent attempts have been made using Philo to reconstruct the process of manufacture. A practicing sculptor, Herbert Maryon seized—to the exclusion of other details in the work—upon Philo's figure of 500 talents for the amount of bronze used and concluded that a statue of 70 cubits in height could only have been constructed from 500 talents of bronze if it were made of thinly beaten-out sheets attached to an armature.⁴⁰ It was, in other words, *sphyrelatos*. Whether or not we accept the figure of 500 talents, there is a great deal of merit in Maryon's account. His reconstruction was immediately attacked by Denys Haynes, who reasserted the traditional view: the statue was made in sections of cast bronze.⁴¹ Haynes rested his case on Philo's statement that the statue was cast in sections and assembled on a great earthen ramp that grew as the height of the statue increased. The figure of 500 talents of bronze is the one part of Philo's account that Haynes does not accept. He posits a mistake in the manuscript tradition at this point, in effect conceding that Maryon has a case, if the figure is allowed to stand. Haynes would have been better advised to take issue with Philo's suspiciously round number, although that would have been a double-edged sword, as it might have led to questions about the authenticity of Philo's account as a whole, not least the figure of 70 cubits that Philo and some other

³⁹ C. Robert, "Chares (15)," *RE* 3 (1899) 2130; L. Laurenzi, "Colosso," *EAA* 2 (1959) 773f; A. Stewart, *Greek Sculpture: An Exploration* I (New Haven 1990) 39; Higgins (*supra* n.5) 130; M. Robertson, *A History of Greek Art* I (Cambridge 1975) 477, is something of an exception and takes a more cautious approach to what is preserved in Philo.

⁴⁰ "The Colossus of Rhodes," *JHS* 76 (1956) 68–86.

⁴¹ "Philo of Byzantium and the Colossus of Rhodes," *JHS* 77 (1957) 311f, and *The Technique of Greek Bronze Statuary* (Mainz 1992) 121–28.

writers give for the height of the statue, when yet others give 60 and others yet again 80.⁴²

Maryon (*supra* n.40: 68) chose to believe that Philo had written his essay not in the Early Byzantine period but *ca* 146 B.C. If that were true, it would be somewhat more likely that what Philo says about the technique in constructing the Colossus was not just a product of his imagination but was grounded in reality. The rhetorical nature of the work, its ecphrastic subject-matter, and its general similarity to the writings of the School of Gaza all combine to suggest a much later date in the sixth century.⁴³ There are, in addition, two indications that the essay does not belong to the second century B.C., when Babylon was under Seleucid rule or had recently been lost to the Parthians: the preface speaks of the necessity to visit the Persians to see Babylon (p.20 Hercher), and the walls of Babylon are equated with the outermost bulwark (*proteichisma*) of Persia (p.34 Hercher). It is also doubtful that a writer of the mid-second century B.C. would have called the Parthians Persians. The indications are that the essay was composed in the sixth century in the time of the Sassanids.

The basic question about Philo's rhetorical, highly contrived, and factually thin account of the Colossus' manufacture is: how could a man living 700–900 years after the erection of a statue that stood only for a short time before collapsing have known anything about its construction? No other sources dwell on the construction, although it has to be conceded that Pliny speaks of the great masses of stone employed to stabilize the statue; they could be seen within the cavernous hollows of the broken limbs.⁴⁴ As it is inconceivable that Philo resorted to autopsy and

⁴² 70 cubits: Strab. 14.2.5 (basing his figure on that given in an epigram); Plin. *HN* 34.41; 60 cubits: Σ Luc. in *Icarom.* p.13 Raabe; 90 feet: Hyg. *Fab.* 223; 80 cubits: *Anth. Plan.* 16.82. Higgins (*supra* n.5: 130), who is confident that the Colossus must have been about 33 meters (110 feet) in height, suggests that the different figures given for the height may be explained by changes in the length of the cubit in antiquity. That the cubit changed in length cannot be gainsaid. What is hard to believe is that ancient authors would have performed the calculations necessary to convert from one standard to another.

⁴³ Cf. W. Kroll, "Philo" (49), *RE* 20 (1941) 54f.

⁴⁴ *HN* 34.41: *vasti specus hiant defractis membris: spectantur intus magnae molis saxa, quorum pondere stabiliverat eum constituens.* Pliny's account suggests paradoxography rather than technical writing: (a) *ante omnes in admiratione fuit Solis colossus Rhodi*; (b) *sed iacens quoque miraculo est.* Dr Palagia points out that clay was used to give stability to colossal bronze statues and that it will have been vitrified clay that was visible within the fallen limbs of

examined the broken fragments of the statue—something he does not pretend in his preface to have done for any of the Seven Wonders he evokes—we have to suppose that he or some predecessor made the whole thing up, or that a source, now lost, which Philo went out of his way to consult, described the manufacture of the Colossus, or, finally, that an earlier paradoxographer whom he follows had done just that. It is exceedingly unlikely that Philo took special steps to ascertain how the Colossus was made, although he almost certainly had seen or used a paradoxographical source of the sort on which Pliny the Elder drew.⁴⁵ We should acknowledge, accordingly, that Philo's pretty story has only limited evidentiary value. It may well be that Philo's account of the statue's construction is essentially correct, but if it is correct, it is because Philo knows how in Late Roman times enormous statues were constructed from separately cast pieces, not because he had access to the residue of a technical treatise. I am inclined to doubt whether the Colossus of Rhodes was ever the subject of such a treatise and am disposed to believe that much of what was said about its size, weight, and cost had its origin ultimately in epigram. Commemorative epigrams inscribed on statue bases and buildings, as well as epigrams on statues and great structures, were a popular form in the Hellenistic period. We look forward to the publication of the section on sculpture in the new papyrus of Posidippus for further enlightenment on this subject. It is worth noting that Strabo (14.2.5), drawing in all likelihood on some intermediate source, takes his figure of a height of 70 cubits for the Colossus from a Hellenistic epigram recorded in the *Garland of Meleager* (Gow and Page, *HE* 3616f). Pliny, who gives the same height, also has a story about the sale of the equipment abandoned by Demetrius Poliorcetes realizing 300 talents and

the Colossus. It is as likely, if not more likely, that large stones were used to stabilize the Colossus of Rhodes. I personally doubt whether Pliny's evocation is based on his having seen the Colossus.

⁴⁵ Cf. Philo's τὸ γὰρ ἕνος τῆς βάσεως ἤδη τοὺς ἄλλους ἀνδριάντας ὑπερέκυπτεν (p.32 Hercher) with Pliny's *maiores sunt digiti quam pleraeque statuae* (*HN* 34.41). J. Isager, *Pliny on Art and Society* (Odense 1991) 186–95, argues, following H. Schott, *De septem orbis spectaculis quaestiones* (Ansbach 1891), that Pliny's account of the Colossus of Rhodes derives from a Hellenistic essay on the Seven Wonders of the World, individual portions of which Pliny distributes throughout the *HN* to suit the organization of his work. For a general account of this sub-class of paradoxography, see J. Lanowsky, "Weltwunder," *RE* Suppl. 10 (1965) 1020–30.

being used to finance the building of the statue.⁴⁶ The source of the story, perhaps an anonymous Hellenistic epigram on the Colossus of Rhodes from the *Garland of Meleager*, speaks of the inhabitants of Rhodes crowning their fatherland with spoils taken from the enemy (Gow and Page 3911=*Anth. Pal.* 6.171.4). What the epigrammatist has in mind is the construction of the Colossus. There is a fair chance that the epigram comes from the base of the statue.

Besides the existence or non-existence of Hellenistic technical treatises on fallen masterpieces and the probability of Philo's use (however far removed) of such a treatise, other factors may help assess Philo's account of the construction of the Colossos of Rhodes. First, if he did use a technical treatise or some remnant of it embedded in a work of paradoxography, he would appear to have done so for the Colossus of Rhodes alone and for no other monument. Second, his account of the Colossus has much in common with his descriptions and modes of presentation of several of his other Wonders. The larger the number of common points between Philo on the Colossos and on the other six Wonders, the greater becomes the likelihood of a standard ephrastic exercise without real information deriving from a technical treatise. I shall now rehearse some of the obvious points in common.

The idea that the τεχνίτης of the Colossus expended so much bronze that the mines of the world ran dry (τοσοῦτον δ' ὁ τεχνίτης ἐδαπάνησεν χαλκόν, ὅσος σπανίζειν ἤμελλεν τὰ μέταλλα· τὸ γὰρ χώνευμα τοῦ κατασκευάσματος ἐγένετο χαλκούργημα τοῦ κόσμου, p.30 Hercher) has its counterpart in the τεχνίτης of the Artemisium at Ephesus who built such deep foundations that he had to expend quarries consisting in whole mountains on the part of the building that lay hidden below the surface (ὀρῶν λατομίας δαπανήσας εἰς τὰ κατὰ γῆν καλυπτόμενα τῶν ἔργων, p.36 Hercher).⁴⁷ The author of the *De septem orbis spectaculis* might have been surprised and perhaps a little amused to see that this pleasant conceit had led learned men to engage in elaborate calculations on the productivity of

⁴⁶ *HN* 34.41: *duodecim annis tradunt effectum CCC talentis, quae contigerant ex apparatu regis Demetrii relicto morae taedio obsessa Rhodo.*

⁴⁷ Pliny (*HN* 36.95) is also interested in the foundations of the Artemisium, but follows an entirely different tradition: as the temple was built on marshy ground, a substratum of broken-up charcoal with the fleeces of sheep on top of it were laid down, so that the structure would not be affected by earthquakes and develop cracks.

the copper mines of the Eastern Mediterranean and of Roman Spain.⁴⁸

Philo goes on to ask whether Zeus had not poured heavenly wealth on the Rhodians, so that they might spend it in honoring *Helios* by raising a statue of the god from earth to heaven (μήποτε δὲ διὰ τοῦτο ὁ Ζεὺς Ῥοδίοις θεσπέσιον κατέχευε πλοῦτον, ἵνα τοῦτον εἰς τὴν Ἥλιου δαπανήσωσι τιμὴν, p.30 Hercher). The θεσπέσιος πλοῦτος that Zeus pours on Rhodes is, as George Huxley has reminded me, an echo of the final line of the short excursus on Rhodian history that occurs in the *Catalogue of Ships*: καὶ σφιν θεσπέσιον πλοῦτον κατέχευε Κρονίων (Il. 2.670; cf. Pind. Ol. 7.49f with Σ in Il. 2.670). The conceit that wealth has been bestowed, so that it may be used in honoring a god also occurs in Philo's account of Phidias' statue of Olympian Zeus: he asserts that nature produced elephants, so that Phidias might cut off their tusks to provide the material for the construction of his work (διὰ τοῦθ' ἡ φύσις ἠνεγκεν ἐλέφαντας, ἵνα Φειδίας τεμῶν τοὺς τῶν θηρίων ὀδόντας χορηγήσῃ τὴν εἰς τὸ κατασκευαζόμενον ὕλην, p.28 Hercher). Philo's next topic is the iron armature and the square blocks of stones tied to each other by clamps that lay within the statue to give it stability. Of the internal structure he says that this hidden part of the task was greater than the visible (καὶ τὸ κεκρυμμένον τοῦ πόνου τῶν βλεπομένων μεῖζόν ἐστιν, p.30 Hercher). The parallels for the idea that what is invisible in a work is at least as great as the visible part or are at any rate huge are to be sought in the description of the Pyramids at Memphis, the square blocks of whose foundation go down to the same depth that the blocks above the surface rise towards heaven (p.26 Hercher) and in the unfathomable depths to which the foundations of the Artemesium at Ephesus descended (p.36 Hercher). The massive metalwork involved leads into the next topic: the bewilderment that the amazed spectator feels at how such monstrous structures were cast, what sort of tools can have been used and what sort of helpers must have been at hand (ἐπαπορεῖ γὰρ ὁ θαυμαστῆς τῶν θεωρούντων ποίαις πυράγραις ἢ πηλίκαις ὑποστάσεσιν ἀκμόνων ἢ ποταπαῖς ὑπηρετῶν ῥώμαις τὰ τηλικαῦτα βάρη τῶν ὀβελίσκων ἐχαλκεύθη, p.30 Hercher). It is again Philo's account of the construction of the Pyramids that

⁴⁸ Cf. Stewart (*supra* n.39: 200) explaining Philo: "This cut costs in a period when not only had the flood of Persian silver doubled prices but also when the Colossus of Rhodes ... was using so much bronze 'that it nearly caused a dearth in the mines'."

provides the parallel: the massive blocks that make up the Pyramids and the difficulties involved in raising them into place causes everyone to be puzzled and makes them ask what sort of force was needed to lever such a weight into place (ἐκάστου διαποροῦντος τίσι βίαις τὰ τηλικαῦτα βάρη τῶν ἔργων ἐμοχλεύθη, p.26 Hercher).

The safe and unswaying basis that the internal clamps, the armature, and the weight of the stone set within provide (καὶ τῶν ἐντιθεμένων πετρῶν ἡσφαλίζετο τὸ σήκωμα, ἵνα διὰ τῆς ἐργασίας τηρήσῃ τὴν ἐπίνοιαν ἀσάλευτον, p.32 Hercher) are matched by the secure foundation and base that the architect of the Artemisium provided for the stones that were to be laid above (ἐρείσας δὲ τὴν ἀσφάλειαν ἀσάλευτον καὶ προυποθεὶς τὸν ἄτλαντα τοῖς βάρεσι τῶν μελλόντων ἐπαπερείδασθαι, p.36 Hercher). The sculptor's gradually raising the work until his conception is fulfilled (ἐκ δὲ τοῦ κατ' ὀλίγον ἀναβάς ἐπὶ τὸ τέρμα τῆς ἐλπίδος, p.32 Hercher) is matched by the gradual growth of the pyramid (καὶ κατ' ὀλίγον συνάγεται τὸ πᾶν ἔργον εἰς πυραμίδα καὶ γνώμονος σχῆμα, p.26 Hercher).

The number of parallels to ephrastic topics found in the description of the other Wonders does not encourage supposition that Philo's picture of the Colossus of Rhodes represents the careful reworking of a technical thesis. It is proper to acknowledge that Philo does provide information about the building of the Colossus unparalleled in the other six Wonders, but the same could be said in greater or lesser degree about his description of each of them. It is inevitable that this should be so. We should allow for the possibility that the imagination of the writer has played some part in the composition of the *De septem orbis spectaculis* and that it is not a purely mechanical rhetorical exercise. We should also concede that some sort of reality is represented in its descriptions. The question that has to be asked is whether it is a reality based on the author's particular knowledge or on general knowledge. The latter seems the more plausible answer.

Had Lucian not confused the issue by presenting himself—in a feigned or genuine exercise in autobiography—as a man who had deserted an apprenticeship as a sculptor in stone to pursue a career in higher culture (*Somn.* 2–17), it would have been possible without more ado to bring up his evocation of the interior of a *kolossos* as an example of a literary man displaying some knowledge of the hidden elements that held such statues

together (*Gall.* 24f).⁴⁹ It nonetheless likely that Lucian's knowledge of the bars, pins, nails, timbers, wedges, pitch, and clay—not to speak of the hosts of weasels and mice—to be found in the interior of chryselephantine *kolossoi* is not the sort of information possessed only by sculptors, but was more generally available.

It is important to emphasize that although Philo's account of the construction of the Colossus of Rhodes is suspect, it does not follow that the great statue was not cast in sections. Haynes has explained how it could have been made in that way. Maryon has shown how it could have been constructed from sheets of beaten bronze like the Statue of Liberty. On present evidence there is no real way of deciding how the Colossus was constructed.

To conclude, the testimony of Theocritus and Sopater suggest that in the Hellenistic period some greater-than-life-size statues were made from sheets of beaten-out bronze, but their testimony is by no means conclusive. We cannot be certain that they are talking about contemporary practices. What Philo of Byzantium has to say about the construction of the Colossus of Rhodes is almost certainly worthless, although it may say something about the way in which colossal bronze statues were erected in the Roman Imperial period.⁵⁰

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⁴⁹ On this, see C. Jones, *Culture and Society in Lucian* (Cambridge [Mass.] 1968) 8ff.

⁵⁰ I am indebted for various forms of help to a number of scholars: Nancy Bookidis, Kenneth Lapatin, and Ola Palagia have corrected various misapprehensions about the making of metal statuary and have directed me to the secondary literature; I have received assistance of a more philological nature from George Huxley and W. J. Slater; Katherine Dunbabin persuaded me that my points could be made without polemic; and finally, Hermann Kienast drew my attention to his discussion of the recutting of the base of the Geneleos group in the Heraeum of Samos.