

Pluton bore her off in his chariot.<sup>15</sup> The festival is referred to in numerous inscriptions of the third century.<sup>16</sup> One, from Sardis, seems to indicate that it was inaugurated by Septimius Severus, i.e. after A.D. 195, though that is uncertain since the reference may only be to a characteristic elevation of the rank of the festival by the Emperor.<sup>17</sup> The festival is perhaps

<sup>15</sup> Various deities have been claimed for the *Χρυσάνθηνα*. Demeter was clearly an important deity of Sardis in Imperial times, as the passage quoted in n. 14 shows; and Demeter appears on the Imperial bronze coinage of Sardis in the act of searching for Kore: see *BMC, Lydia* 257 no. 138, and pl. xxvi, 10; cf. 265 no. 70. Kore, too, is represented on the coinage (*ibid.* 249 no. 89, and pl. xxvi, 1—her ravishment by Pluton), and there was a festival of the *Κόρη* also: see *JÖAI* xxx (1937) Beibl. col. 214. 16, *Κόρη ἐν Σάρδεσιν*; cf. L. Robert, *RevArch* 1934 59 n. 6 (= *Op. Min. Sel.* ii 1023 n. 6); id. *R Phil* (1958) 20 n. 3; Moretti 221. Head's explanation (*BMC, Lydia* cx) that 'these games were named after the golden flowers which Kore was picking when Hades ravished her' has then much to commend it, whether we refer the festival to Demeter or to Kore. It is further possible, with Guarducci, *Epigr. Gr.* ii (1969) 681, to see a reference in the festival to *Χρυσανθίς*, the Argive maiden who, according to Pausanias i 14. 2 informed Demeter of the rape of her daughter: λέγεται οὖν ὡς Δήμητρα ἐς Ἄργος ἐλθοῦσαν Πελασγὸς δέξαιτο οἴκῳ καὶ ὡς Χρυσανθίς τὴν ἀρπαγὴν ἐπισταμένη τῆς Κόρης διηγῆσαι. The case, then, for the festival being one of Demeter and/or Kore seems strong. However, in publishing a fourth century B.C. dedication from the Latmiac Gulf, *IDid.* 125 (*Berl. Abh.* 1911, Anh. I, *Siebert. Vorber. Milet* 65), Παρωὺ Ἀθηναίου γυνὴ εὐχὴν, ἢ ὑπὲρ Ἐστυαίης Χρυσάνθη, Wiegand said that the epiklesis *Χρυσάνθη* 'deutet offenbar auf einen Aphroditekult der auch in Sardis existierte', clearly referring to the *Χρυσάνθηνα*. (Rehm, in republishing the inscription, *loc. cit.*, said that the reference to Aphrodite 'scheint mir nicht ganz gesichert', with which one can only agree.) Buckler and Robinson, *ISardis* 82–3, maintained that the festival was named 'either after the marigold (*χρυσανθές*), sacred to Artemis, or more probably, after *Χρυσάνθη*, a cult-name of the goddess (with reference to Wiegand's dedication, *BMI* 615 [not 614], etc.)'. But here again, as with Aphrodite, there is no specific link with Sardis, and the identification by way of the *χρυσανθές* or *ἐλίχρυσον* seems very thin: the word is found only in *Nic. fr.* 74.69, and there the *χρυσανθές* appears in the company of *Λείρια*, which 'fade upon the tombstones of the dead', which seems more appropriate to Demeter than to Artemis. P. Herrmann, *Wien. Denk.* lxxx (1962) 17 no. 13, publishing a dedication from Saittai by *Χρυσάνθηνοι φίλοι* also expresses doubts as to the link with Artemis (cf. also *Bull.* 1963 169 no. 234 on no. 13). For *Χρυσάνθη* as a proper name see e.g. Peek, *GVI* 1778 of the first half of the 4th century B.C. (Attica).

<sup>16</sup> See Moretti nos 75.2, 7; 79.33; 81.20; (82.17); 84.16; 87.17; 90.23 (all, except perhaps no. 75, of the third century: see n. 17); *ISard.* 77–9 (79=Moretti no. 84); *BMI* 615.15; *CIG* 3208.16; *FD* iii.1 550 line 20.

reflected in the name of Chrysanthios, the noble pagan Sardinian who was the teacher of Eunapius, and was eulogised by him.<sup>18</sup>

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<sup>17</sup> The *Χρυσάνθηνα* are named on some Sardinian issues from Septimius Severus onwards: see *BMC, Lydia* cix, and 260 no. 150; 271 no. 192; *SNG Von Aulock, Lydien* 3156, 3159; *Inv. Waddington* 5267; cf. L. Robert, *RevArch* 1934 59–61. The issues show a prize crown standing on a base inscribed *Χρυσάνθηνα*, or a wreath so inscribed (*BMC* 271, no. 196). On the identification of the object as a crown, and not as a prize-urn see Robert, *RPhil* 1958 20 n.3 (who in this connection suggests that the festival derived its name from the prize of a crown of golden flowers: 'c'est de leur prix particulier qui devaient tirer leur nom l'ἀγὼν περιπόρφυρος de Sidon . . . et les chrysanthina de Sardis, en l'honneur de Koré, qui fut enlevée par Plouton alors qu'elle cueillait des fleurs.'). See also *ISard.* 77, in honour of an *agonothetes* [τῶν πρώτων ἀγῶνων Χρυσανθίνων ἐρωτῶν εἰσε]λασ[τ]ικῶν [τῶν εἰς τὴν οἴκο]υμένην, κ.τ.λ.), referring to the Emperor Septimius Severus. It is, however, possible that Septimius had simply elevated an already existing festival. Moretti on no. 75 (*Ephesos* ii no. 72) argues that that inscription is earlier than Commodus and Septimius because there is no mention of *Κομμόδεια* or *Σεουήρεια*. If that argument is sound, then Severus must have elevated an already existing festival, since the *Χρυσάνθηνα* appear in 75 lines 2 and 7.

<sup>18</sup> This point was already made by Hicks in his commentary on *BMI* 615. For Chrysanthios's eulogy see Eunap. *VS* 500–5. For a Christian instance see *IG* xii.1 674: *Χρυσάνθιος ἀναγνώστης* (Rhodes).

### The Technique of the Erbach Griffin-Protomai

In his publication of the six griffin-protomai formerly in the Erbach collection U. Jantzen<sup>1</sup> notes how closely they agree in height not only among themselves but also with three other protomai of identical type, two in Munich<sup>2</sup> and one from the Samian Heraion.<sup>3</sup> By the kindness of their present owner I have recently had an opportunity of taking detailed measurements of the Erbach set; and Dr Michael Maas, to whom I am greatly indebted, has supplied me with the corresponding dimensions of the Munich pair. The results are compared in the table.

<sup>1</sup> *Arch. Anz.* 1966 129.

<sup>2</sup> Staatliche Antikensammlungen Inv. nos 35, 36; U. Jantzen, *Griechische Greifenkessel* (Berlin 1955) pl. 21.

<sup>3</sup> Samos B 440; Jantzen (n. 2) pl. 22, 1; *AthMitt* lxxiii (1958) Beil. 34, 1.2.

Measurements (in cm)	ERBACH						MUNICH	
	I	II	III	IV	V	VI	35	36
Max. h. as preserved*	19.9	19.5	20.4	19.5	19.2	19.5	20.0	20.0
W. across back of beak	3.5	3.4	3.4	3.4	3.4	3.4	3.5	3.5
W. between globular ear-bases	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.7
Max. w. of neck	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Tip of beak to base of neck	9.5	9.5	9.5	9.5	9.5	9.3	9.4	9.7
Top of head behind knob to palate	3.4	3.1	3.4	3.1	3.2	3.1	3.15	3.4
Diam. of r. spiral	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Diam. of l. spiral	1.6	1.9	1.7	1.8	1.8	1.8	1.9	1.55
Inside w. of r. eye	1.4	1.9	1.6	1.9	1.6	1.7	1.8	1.6
Inside w. of l. eye	1.5	2.0	1.7	1.9	1.5	1.6	1.8	1.7
H. of knob	2.1	1.9	2.1	1.85	2.1	1.9	2.2†	2.3

\* The variations in overall height are of course due to the differing states of preservation of the protomai.

† Incomplete.

The eight protomai, it will be seen from the table, are remarkably consistent with one another not merely in height but in all their main dimensions—too consistent, surely, to allow us to suppose that they were cast by the direct lost-wax process, for which a casting-model would have had to be fashioned by hand for each protome separately. At the same time, however, there are considerable differences in detail, notably in the size of the eyes and the height and shape of the knobs; and these rule out the possibility that the protomai were cast, as some griffin-protomai certainly were,<sup>4</sup> in a refractory piece-mould taken from a single prototype. In the indirect lost-wax process, however, the only other technique to come into question, such a combination of superficial variety with underlying uniformity would be perfectly possible, indeed probable.

Using this process the bronze-caster would have begun by making in any suitable medium (wax, clay, wood) a simplified model or pattern of a protome, omitting the knob and perhaps the ears and neck-spirals also. From this pattern he would have taken a piece-mould in plaster or clay and used it to produce as many casting-models as he needed, each being formed by lining the mould with a thin layer of wax and filling the remaining void with refractory material (probably a mixture of plaster and pottery-dust) in a liquid state. At this stage all the casting-models would thus have been virtually identical. But before investing them for casting the bronze-caster would have worked on each individually by hand, removing the mould-webs, adding the knob and any other missing details in solid wax and putting the finishing touches to the whole. Not only would unintentional deviations from the common pattern inevitably have crept in during these operations, but the bronze-caster would of course have been free to vary the modelling of the protomai as he wished: to give four of them, for example, simple globular knobs<sup>5</sup> and four compound knobs with a small domical finial above the globe.<sup>6</sup> On one of the Erbach griffins<sup>7</sup> the neck-spiral partially obliterates some of the small stamped crescents composing the scale-pattern, from which it follows that the crescents were impressed in the wax, not punched in the metal,<sup>8</sup> and that the spiral was added to the casting-model, or at least extensively reshaped, subsequently. The sockets for the inlaid eyes would probably have been formed by pressing into the wax the actual pieces of ivory or other material intended for the inlay: such a procedure would account for the relatively large differences in their size.

Neither the Erbach nor the Munich protomai have a certain provenance;<sup>9</sup> but as it was at Rome that both the

<sup>4</sup> Jantzen (n. 2) 57–9, nos 47, 48; G. Kopcke, *AthMitt* lxxxiii (1968) 285, no. 101.

<sup>5</sup> Jantzen (n. 1) 124, figs 3 and 4; 125, figs 5 and 6; 126, figs 9 and 10; Jantzen (n. 2) pl. 21.1.

<sup>6</sup> Jantzen (n. 1) 124, figs 1 and 2; 125, figs 7 and 8; 126, figs 11 and 12; Jantzen (n. 2) pl. 21.2.

<sup>7</sup> Jantzen (n. 1) 126, fig. 12.

<sup>8</sup> As the distribution of the crescents varies from protome to protome, they cannot have been impressed in the original pattern.

<sup>9</sup> On the provenance of the Erbach protomai see Jantzen (n. 1) 123, 127. On that of the Munich pair Frau Ursula Höckmann has very kindly sent me the following information: 'Die beiden Münchner Greifenköpfe stammen aus der Sammlung Dodwell und nach der Angabe im Münchner Inventar aus San Mariano bei Perugia. Während meiner Arbeit über die Bronzen von San Mariano stiess ich auf eine Liste, die Martin von Wagner für den Kronprinzen Ludwig

six and the two made their first appearance, and as they did so at about the same time (1812–20), it seems likely that all eight came from an Etruscan tomb and originally decorated either a single cauldron or a matching pair.<sup>10</sup> But if detailed measurement of the protome found in the Samian Heraion were to confirm that it was cast from the same model as the eight, this would show that protomai were duplicated mechanically with a view to being used in quite unrelated contexts; and we should have to admit that mass production, or something approaching it, was not so alien to Greek art as is often supposed.<sup>11</sup>

Although only one example was found on Samos itself, Jantzen<sup>12</sup> has convincingly attributed the nine protomai to a Samian workshop. Thus indirect lost-wax casting must have been practised on the island as early as the second quarter of the seventh century B.C., the date to which he assigns the type.<sup>13</sup> Whether the process was invented on Samos or imported from the East, is a question beyond the scope of this note; but there is some evidence for its use in seventh-century Urartu.<sup>14</sup> That Samian bronze-casters should have been familiar with it at so early a date is particularly interesting in view of the Greek tradition that the Samians Rhoikos and Theodoros were the first to cast bronze statues.<sup>15</sup> The difficulty of casting increases steeply with the amount of metal which must be poured at one time and the complexity of the mould it must fill; and to cast a statue of life size or over in one piece is a *tour de force* only rarely attempted at any period of history<sup>16</sup> and almost certainly beyond the capability of

verfasst hat und auf der die Dodwell'schen Bronzen, die um 1820 gekauft wurden, verzeichnet sind. Die Funde von San Mariano sind gesondert ausgeführt; die Greifenköpfe werden nicht namentlich genannt. Dodwell hat sie jedoch zwischen 1812 und 1820 erworben, da er sie selbst gezeichnet hat (abgebildet in seinem Album im Department of Manuscripts im Britischen Museum). Leider hat er aber bei den Greifenprotomen keine Herkunft angegeben.

Die frühesten Funde aus dem Fürstengrab von San Mariano sind um 560 zu datieren. Alteres konnte ich nicht ermitteln. Die Protomen werden von Jantzen ins 7. Jh. datiert. Deshalb nehme ich an, dass—wie auch bei anderen Stücken aus San Mariano—eine Verwechselung beim Inventarisieren erfolgte. Sicher ist, dass die Münchner und die ehemals Erbacher Greifenköpfe um 1812 bzw. zwischen 1812 und spätestens 1820 in Rom "auftauchten". Da sie in Details so sehr übereinstimmen, halte ich es für sehr gut möglich, dass sie in dieser Zeit zusammen gefunden wurden und dann in verschiedene Hände gerieten.'

<sup>10</sup> An exceptionally large cauldron, fragments of which were found at Olympia (Inv. Br. 13540; A. Furtwängler, *Olympia* iv 123 f., no. 809) appears to be the only surviving example ornamented with eight protomai. The normal number is six: Jantzen (n. 1) 127 with n. 4.

<sup>11</sup> See now the important article by V. N. Strocka 'Variante, Wiederholung und Serie in der griechischen Bildhauerei', *JdI* xciv (1979) 143–73.

<sup>12</sup> Jantzen (n. 1) 126 f.

<sup>13</sup> Jantzen (n. 1) 129; (n. 2) 84.

<sup>14</sup> G. M. A. Hanfmann, *Anatol. Stud.* vi (1956) 205–13, a reference I owe to Herr Maas.

<sup>15</sup> For a convenient summary of the evidence see C. M. Robertson, *A History of Greek Art* (London 1975) 180 f., 646 n. 41.

<sup>16</sup> 'Mr Raphael Maklouf, a 24-year-old teacher at Camberwell School of Arts and Crafts, has succeeded in casting in one piece a life-size bronze figure of a man. This was a sculptural feat quite common to the Romans, Greeks, and artists of the Renaissance. Modern sculptors favour the easier though administratively more complicated method of using workmen to cast their figures in pieces and then weld them together again. The principal of the school, Mr L. J. Daniels, describes the casting operation as "most spectacular"

the early Greek bronze-caster. At any rate, all the large Greek bronze statues that have come down to us, from the Piraeus Apollo onwards, were in fact cast in parts. Thus the rise of monumental bronze statuary is in all probability to be connected with the discovery of a method of doing this. To cast a bronze in parts by the direct lost-wax process is virtually impossible, for it would be necessary to dissect the casting-model: to cut up, that is to say, a friable mass of baked clay incorporating a ramifying armature of iron and covered with a vulnerable wax envelope. No bronze-caster in his senses would venture on such a risky procedure. But in the indirect process sectional casting presents no difficulty whatsoever. All the bronze-caster need do is to make a self-contained piece-mould for each of the parts he wishes to cast separately instead of including the whole of the figure in a single mould.<sup>17</sup> Might it not have been the Samian bronze-casters with their previous experience in using the indirect process on a small scale who first recognized the possibility of exploiting it for the production of large-scale statuary, and might this not have been the 'invention' traditionally associated with the names of Rhoikos and Theodoros?

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though he personally found it a little nerve-racking. Camberwell students dug a thirteen-foot pit for the mould with a smaller pit nearby for the furnace. Four crucibles were used to pour in 300 lbs of molten bronze—a hazardous operation which took one and a half hours. "I certainly would not recommend it as a method to be generally used", he said. "As an experiment to see if it could be done, it was fascinating". (*The Guardian*, 7th July, 1962).

I know of no large Greek or Roman statue cast in one piece: casting in parts was certainly the normal practice throughout antiquity (cf. Philo Byz., *Septem Mirac.* 4 p. 14; Quintilian ii 1 12; vii 2). As for the Renaissance, Cellini (*Trattato*, ed. Rusconi and Valeri, 755) says of his Perseus, which was notoriously cast in one, that because of its size it was the most difficult casting ever attempted, thereby strongly implying that in his day figures on this scale were normally cast in parts. The great French equestrian statues—Girardon's *Louis XIV*, Bouchardon's *Louis XV*, Falconet's *Peter the Great*—were cast, as their descriptions boast, *d'un seul jet*, but in these royal command performances great technical difficulty was deliberately courted in order to be triumphantly overcome. The preparations for the casting of Bouchardon's statue took eight years.

<sup>17</sup> Cf. *Arch. Anz.* 1962 806 f; 1970 452; *RevArch* 1968 107.

### Thucydides and Oracles

'Thucydides does not himself speak the language of religion.' Thus K. J. Dover summarizes the *communis opinio*<sup>1</sup> about Thucydides' attitude towards religion. He is supposed to have been sceptical of oracles and to have rejected them as a form of superstition.<sup>2</sup> This view is

<sup>1</sup> K. J. Dover, *Thucydides*, G&R New Surveys vii (Oxford 1973) 42.

<sup>2</sup> Bockshammer, *Die sittlich-religiöse Anschauung des Thukydides* (Tübingen 1862) 19; J. Classen-J. Steup, *Thukydides* i<sup>5</sup> (Berlin 1919) lxi-lxii; E. Zeller, *Die Philosophie der Griechen* ii. 1 (Berlin 1888) 24; H. Meuss, 'Thukydides und die religiöse Aufklärung', *Neue Jb. f. kl. Phil.* cxlv (1892) 226-7; Alfred and Maurice Croiset, *Histoire de la littérature grecque* iv (Paris 1900) 110-11; Th. Gomperz, *Greek Thinkers*, trans. L. Magnus, (London 1901) 510; J. B. Bury, *The Ancient Greek Historians* (New York 1909) 129; W. Nestle, 'Thukydides und die Sophistik', *Neue Jb. f. kl. Phil.* xxxiii (1914) = *Griechische Studien* (Stuttgart 1948) 335; W. Schmid-R. Stählin, *Geschichte der griechischen Literatur* i

not, in my opinion, warranted by the evidence. The object of this paper will be to show that Thucydides accepted oracles, like his pious contemporaries Herodotus and Sophocles, and indeed that he exhibited a consistent interest in oracular puzzles and their correct interpretation.

Of the references to oracles in the *History* some do not merit extensive discussion since they are neutral in tone, and it is evident that Thucydides reports these oracles without any intention of making a special point: no criticism is involved in any of these omitted passages.<sup>3</sup>

The oracles on which I will base my argument are united by having ambiguity as a common characteristic. Oracular ambiguity was 'an article of Delphic belief',<sup>4</sup> and was accepted as a fact by the ancients. Herodotus' history abounds in examples that show that responsibility for correct interpretation lay with the person who received the prophecy: cf. the oracle received by Croesus (Hdt. i 91.1), or Themistocles' interpretation of the 'wooden walls' on the eve of the Persian invasion (Hdt. vii 142-3). There are numerous other examples from fifth-century Greek literature which testify that when there was misinterpretation of prophecy, the blame was attached to the person who misunderstood it.<sup>5</sup> In fact, there is good evidence that ambiguity and riddles elicited from the ancients not scepticism but a

(München 1920) 115; K. Latte, 'Orakel', *RE* xviii. 1 (1939) 852; J. Notopoulos, 'Thucydides' *Prognosis* and the Oracles', *CW* (1945) 29-30; H. Strasburger, 'Die Entdeckung der politischen Geschichte durch Thukydides', *Saeculum* v (1954) = *Wege der Forschung*, *Thukydides*, ed. H. Herter, (Darmstadt 1968) 453 n. 85; H. W. Parke-D. F. W. Wormell, *The Delphic Oracle* i (Oxford 1956) 180; M. Finley, 'Thucydides the Moralizer', in *Aspects of Antiquity* (New York 1950) 49; J. de Romilly, *Thucydides and Athenian Imperialism* (Oxford 1972) 288. Exceptions are L. Strauss, 'Preliminary Observations on the Gods in Thucydides' Work', *Interpretation* iv (1974) 3 and S. I. Oost, 'Thucydides and the Irrational: Sundry Passages', *CPh* lxx (1975) 188 ff.

<sup>3</sup> The oracles not discussed are (1) i 25.1: The Epidamnians ask Delphi what to do, and (2) i 25.2 give their city to the Corinthians following the oracle's advice. (3) i 28.2: The Corcyreans and the Corinthians refer their dispute to Delphi. (4) i 103.2: The helots surrender to the Spartans who had received an oracle to let the suppliant of Zeus at Ithome go. One could argue that Thucydides implies that the oracle was fulfilled; at any rate there is no criticism. (5) i 134.4: Apollo orders the Spartans to make amends for the death of Pausanias. (6) iii 92.5: The Spartans ask Delphi about the colonization of Herakleia. Thucydides does not accuse Delphi for the failure of the colony but rather the harsh Spartan leadership. See also Strauss (n. 2) 4. (7) i 118.3: Apollo told the Spartans that if they put all their strength into war they would win. Although Nestle (n. 2) 335 and others assume that Thucydides is being critical of Delphi, there is no criticism in the wording of the passage. (8) v 16.2: The enemies of the Spartan king Pleistoanax accuse him of bribing the Pythia. Thucydides makes no comment. (9) iii 104.1: Thucydides relates how the Athenians purified Delos in compliance with 'a certain oracle'. The vagueness of the expression, especially when contrasted with 'by the god's command' (v 32.1) implies that Thucydides did not vouch for the genuineness of the oracle which ordered a sacrilegious purification. See W. Roscher, *Leben, Werk und Zeitalter des Thukydides* (Göttingen 1842) 219-20, and G. Klix, *Thukydides und die Volksreligion* (Zülichau 1854) 28.

<sup>4</sup> J. Fontenrose, *The Delphic Oracle* (Berkeley 1978) 236. Fontenrose argues that obscure oracles were not genuine but agrees that ambiguity was 'an article of Delphic belief'. Herodotus makes a big point because one particular oracle was clear (viii 77). The epithet *Loxias* may have been given to Apollo because of his 'crooked', that is ambiguous oracles. See LSJ.

<sup>5</sup> Hdt. iii 58, 65; Soph. *Trach.* 1145-78, etc.