

ARTFUL CRAFTS: THE INFLUENCE OF METALWORK ON ATHENIAN PAINTED POTTERY

(PLATES IV–VI)

Riche, on voudra paraître ce qu'on est, et même un peu au delà; pauvre, on voudra paraître ce qu'on n'est pas, c'est à dire riche, du moins dans une certaine mesure: cela n'est pas impossible, car si la richesse ne s'emprunte pas, les signes de la richesse s'empruntent et peuvent être imités.

H. BAUDRILLART, *Histoire du luxe privé et public depuis l'antiquité à nos jours* i (Paris 1878) 5

WHY did Athenian vase-painters choose the colours they did for the vases they decorated? Why did they choose black figures on red, or red figures on black; why were *lekythoi* often decorated on white ground? These are basic questions, but have rarely been asked. Many books and articles deal with the technical aspects of *how* these effects were achieved,¹ but never seem to ask *why*. A few minutes' conversation with a modern potter will dispel any illusion that the colours so familiar from Attic pottery were the only ones compatible with the local clay. Even the orange of that clay was made more intense by the addition of a thin reddish slip, and white-ground can scarcely be accidental. It is legitimate to enquire why a particular range of colour schemes was adopted.

I. THE COLOURS OF CLASSICAL FICTILE VASES

The colour scheme of fine Attic pottery vases can be explained if we assume that the colours involved were for the most part meant to imitate those of a limited number of metals, and of ivory. While this suggestion may be novel, there is nothing new in the general proposition that the forms of some, at least, of the vases made by artisans who produced painted pottery are closely related to metallic forms.² It is not at all unusual to find that both the form and

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¹ E.g. R. Hampe and A. Winter, *Bei Töpfern und Töpferinnen in Kreta, Messenien und Zypern* (Mainz 1962); *id.*, *Bei Töpfern und Ziegeln in Süditalien, Sizilien und Griechenland* (Mainz 1965); M. Farnsworth and I.

Simmons, 'Coloring agents for Greek glazes', *AJA* lxxvii (1963) 389–96, pls 87–8; J. V. Noble, *The technique of Attic painted pottery* (New York 1965); A. Winter, *Die antike Glanztonkeramik: Praktische Versuche* (Mainz 1978).

² E.g. L. D. Caskey, *Geometry of Greek vases* (Boston 1922) 160; P. N. Ure, *CVA Reading* i (1954) text to pl. 35: '... for one of the silver vases of which these little black mugs were a cheap imitation . . .'; W. Züchner, 'Von Toreuten und Töpfern', *Jdl* lxx–lxxi (1950–1) 175; J. D. Beazley, 'An amphora by the Berlin Painter', *AK* iv (1961) 53: 'Our kantharos is doubtless of metal, and the shape had probably a metallic origin'; B. F. Cook, 'Aristaios', *BullMMA* xxi (1962–3) 31–6; H. Hoffmann, 'The Persian origin of Attic rhyta', *AK* iv (1961) 21–6, pls 8–12; J. R. Green, 'The Caputi hydria', *JHS* lxxxii (1961) 73–5, pls 6–7; F. Mellinghoff, 'Materialkopie bei den Griechen', *Museum Folkwang Essen Mitteilungen* ii (1968) 56–65; B. B. Shefton, 'Persian gold and black-glaze. Achaemenid influences on Attic pottery of the 5th and 4th centuries B.C.', *AArchSyr* xxi (1971) 109–11, pls 20–2; J. R. Green, 'Oinochoe', *BICS* xix (1972) 1–16, pls 1–5; C. M. Stibbe, *Lakonische Vasenmaler des sechsten Jhdts v. Chr.* (Amsterdam 1972) 116, 145; D. C. Kurtz, *Athenian white lekythoi* (Oxford 1975) 38, 70, 91, 117; S. R. Roberts, *The Attic pyxis* (Chicago 1978) 87; W. G.

decoration of relief vases made from c. 400 BC onwards are compared to those of metal vessels,³ and it has been well observed by G. Kopcke that the modern concept of *Materialgerechtigkeit*—of a craftsman being faithful to the aesthetic of the medium in which he works—was not shared by the Greeks.⁴ It is, moreover, a commonplace in discussion of fourth-century and later wares that metal vessels in gold, silver and bronze were for the prosperous; their ceramic equivalents were for the poor.⁵

Another commonplace in the archaeological literature is the adverse comment levelled at the quality of the black-glaze pottery made at Athens and elsewhere in the fourth century and later,⁶ distinguished by a metallic sheen which is sometimes bluish and sometimes grey. This attribute of later black-glaze is rarely admired but is usually contrasted to its discredit with the 'high quality lustrous black glaze'⁷ of some fifth-century Attic pottery. The 'metallic look' was not, I suggest, a degenerate feature, but instead marked a technological advance: more potters were able to achieve the appearance of silver, tarnished silver.

'Silver is black' the pre-Socratic philosopher Thrasyalces is reported as saying in a new papyrus fragment,⁸ and it is well known that silver will tarnish rapidly if allowed to do so, and especially rapidly if it is pure and near the sea.⁹ That the Greeks did indeed possess well into the Hellenistic period what R. M. Cook has described in another context as 'a perverted taste for tarnish'¹⁰ emerges both from ancient texts and from the archaeological evidence. For Theocritus the theft of the tarnish from a silver vessel represented the depths of petty thievery.¹¹ Athenaeus quotes extensively from a monograph, *The Cup of Nestor*, by the Hellenistic encyclopaedist Asclepiades of Myrleae, in which the writer takes Homer's reference to the presence of gold studs on the legendary cup to allude to stars in the night sky: 'by setting the golden studs side by side with the silver substance of the cup, he has brought out by contrast the true character of the stars and the sky in accordance with the outward appearance of their colours. For the sky is like unto silver, whereas the stars resemble gold in their fiery nature'.¹² His description recalls the cloaks of Demetrius Poliorcetes, said to be of 'a lustrous dark grey colour (*orphnion*), and the

Moon, *Greek vase-painting in Midwestern Collections* (Chicago 1979) 45; K. Hitzl, *Die Entstehung des Volutenkraters* (Frankfurt/Bern 1982); T. Weber, *Bronzekannen* (Frankfurt/Bern 1983) 149–50; D. Williams, 'Sophilos in the British Museum', *Occasional Papers on Antiquities* i (1983) 11. H. A. G. Brijder, *Siana Cups* i (Amsterdam 1983) 35–7. The opposite view has been maintained by D. K. Hill, 'The technique of Greek metal vases and its bearing on vase forms in metal and pottery', *AJA* li (1947) 248–56—unaccountably called a 'scrupulous analysis' by B. A. Sparkes and L. Talcott, *Agora* xii: *Black and plain pottery of the 5th, 6th and 4th centuries B.C.* (Princeton 1970) 15.

³ E.g. C. Robert, 'Homerische Becher', 50. *Berl. W.P.* (1890) 5: '... die Modelle Originalarbeiten griechischer Toreuten aus Silber waren'; F. Courby, *Les vases grecs à reliefs* (Paris 1922) 169 ff.; G. Kopcke 'Golddekorierte attische Schwarzfirniskeramik des vierten Jahrhunderts v. Chr.' *AthMitt* lxxix (1964) 25; G. Siebert, 'Les bols à relief. Une industrie d'art de l'époque hellénistique', *Céramiques hellénistiques et romaines* (Besançon 1980) 55, 74; F. Chamoux, *La civilisation hellénistique* (Paris 1981) 397–8; J. W. Salmonson, 'Der hellenistische Töpfer als Toreut', *BABesch* lvii (1982) 164–73; S. I. Rotroff, *Agora* xxii: *Hellenistic pottery. Athenian and imported moldmade bowls* (Princeton 1982) 6: '... there is no doubt that bowls of precious metal served as models for the first moldmade relief bowls'; B. Barr-Sharrar, 'Macedonian metal vases in perspective: some observations on context and tradition', *Studies in the History of Art* xx (1982) 123; M. Moltesen, 'Sølvtoj i ler', *Meddelelser fra Ny Carlsberg*

Glyptotek xxxix (1983) 32–53.

⁴ Kopcke (n. 3) *loc. cit.* Cf. M. Platnauer, *CQ* xv (1921) 153: '... a natural and on the whole commendable diffidence prevents our attributing to the Greeks anything that seems in the least derogatory from an artistic point of view'.

⁵ E.g. J. Ebert, 'Ein Homerischer Ilias-Aithiopis-Becher im Robertinum zu Halle en der Saale', *Wiss.-Zeits. U.Halle* xxvii (1978) 126; cf. Rotroff (n. 3) 13.

⁶ E.g. Noble (n. 1) 42; R. M. Cook, *Greek painted pottery*² (London 1972) 212. The tone was set many years ago by E. Pottier, *Douris et les peintres de vases grecs* (Paris n.d.) 43, who refers to 'une decadence profonde'; cf. G. M. A. Richter, *BullMMA* xi (1916) 64.

⁷ Noble (n. 1) 61.

⁸ D. Hughes and P. J. Parsons, *POxy* lii (1984) 3659. 5–8: *καίτοι τί γένοιτ' ἄν ἀργύρου λευκότερον;—ἀλλ' ὁμῶς τοῦτον ὁ Θραυσάλκης φησὶν εἶναι μέλανα.* Thanks are due to Mr Parsons for bringing this reference to my attention.

⁹ G. Olson and B. Thordemann, 'The cleaning of silver objects', *MusJ* l (1951) 250–2; V. R. Evans, *The corrosion and oxidation of metals. Scientific principles and practical applications* (New York 1960).

¹⁰ Cook (n. 6) 153.

¹¹ Theoc. *Id.* 16.16–17.

¹² Ath. xi 489c: *περιπτώσις δὲ καὶ τοῦτ' ἔφρασεν ὁ ποιητής, τοὺς χρυσοῦς ἤλους παρατιθείς τῇ τοῦ ἀργυροῦ ἐκπώματος φύσει, τὴν τῶν ἀστέρων καὶ τοῦ οὐρανοῦ ἐκτυπῶν κατὰ τὴν ιδέαν τῆς χρῶας οὐσίαν. ὁ μὲν γὰρ οὐρανὸς ἀργύρῳ προσείκειν, οἱ δὲ ἀστέρες χρυσῷ διὰ τὸ πυρῶδες.*

universe with its golden stars . . . was woven in it'.¹³ Archaeological evidence is supplied by the decoration of a bronze chariot found in Macedonia on which certain details—tigers' stripes, leopards' spots and a horse's eye—were set off by means of silver inlays.¹⁴ In real life such features are usually dark in colour, and to use silver to represent them suggests that the chariot left the workshop with some details deliberately tarnished. It was perhaps a mistake to clean the Ashmolean's silver vessels from Dalboki in Bulgaria soon after they were acquired in 1947.¹⁵ PLATE IVa shows them before cleaning, together with a black-glaze stemless cup of the kind I suggest was made to imitate silver vessels, tarnish and all.

Although some scholars believe that silverware imitated black-glaze pottery,¹⁶ such a view does not stand up to either the archaeological or socio-economic facts. That the influence was from metal to pottery is indicated not least by the class of black-glaze cups—Arethusa cups—with tondo ornaments cast from silver decadrachms of Syracuse. The metallic-looking black-glaze extends over both the tondo and the rest of the cup and, as Sir Arthur Evans observed a hundred years ago,¹⁷ shows what a silver vessel might be expected to look like. The manufacture of silver lookalike pottery has in fact never ceased; witness, for example, the grey-lustre English stoneware in PLATE IVb, made to imitate silver.¹⁸

Although it is frequently possible to distinguish fourth-century black-glaze from fifth-, there is no stage at which one can point to a qualitative change in the nature of the glaze. Likewise, no distinction can be drawn between the glaze on decorated and undecorated pots. The black glaze on figured pots is identical with that on unfigured ones.¹⁹ But what of the decoration itself? If there is a metallic explanation for the black colour of Attic—and other—fictile vases, may there not also be one for the others: the orange-red, the purple? Might not the commonest colour of all after black, *viz.* the orange-red of red-figure, be intended to evoke gold? There are sufficient surviving Attic silver vessels with gold-foil decoration²⁰ to support this view. A good example is provided by the seated Nike on a fifth-century silver cup from Tumulus 4 at Seven Brothers in the Crimea (PLATE IVc).²¹ The technique involved has

¹³ Ath. xii 535f: αἱ δὲ χλαμύδες αὐτοῦ ἦσαν ὀρφνινον ἔχουσαι τὸ φέγγος τῆς χρῶας, τὸ δὲ πᾶν ἐνύφαντο χρυσοῦς ἀστέρας ἔχον καὶ τὰ δώδεκα ζώδια.

¹⁴ G. Seure, 'Un char thraco-macédonien', *BCH* xxviii (1904) 224–5. Prof. Robertson kindly notes that support for the view that silver may have been dark may be found in the frescoes illustrated in M. Pallottino, *Etruscan painting* (Geneva 1952) 45, 97, and in A. Maiuri, *Roman painting* (New York n.d.) 19, 21. Dr Paul Craddock draws attention to Pliny *NH* xxxiii 10.56, who speaks of the Egyptians darkening their silver so as to see Anubis.

¹⁵ For bibliography, see British Museum, *Thracian treasures from Bulgaria* (London 1976) 93–5.

¹⁶ E.g. B. A. Sparkes, 'Quintain and the Talcott class', *AK* xx (1977) 24; Sparkes–Talcott (n. 2) 15; A. Oliver Jr, *Silver for the gods: 800 years of Greek and Roman silver* (Toledo, Ohio 1977) 29, 31.

¹⁷ A. J. Evans, 'Syracusan "medallions" and their engravers', *NC* 3 xi (1891) 319–20; further bibliography, *CVAS* Schwerin, p. 38. See too, D. B. Thompson's allusion to 'silvered Italian pottery' in the context of the closely related cups adorned with casts of coins of Heraclea: 'Mater caelaturae; impressions from ancient Metalwork', *Hesperia* viii (1939) 315.

¹⁸ G. E. Pazaurek, *Guter und schlechter Geschmack im Kunstgewerbe* (Stuttgart-Berlin 1912) 127, fig. 108 (whence PLATE IVb).

¹⁹ Cf. Rotroff (n. 3) 14: 'The bowls of the third century B.C. are covered with the black glaze familiar from Attic pottery of earlier periods.'

²⁰ The bibliography is substantial, but the best illustrations and earlier references can be found in: B. D. Filow, *Die Grabhügelnekropole bei Duvanlij in Südbulgarien* (Sofia 1934) 63, pl. 4 (*phiale*), 106 ff., pl. 7 (*kantharos*) (pictures after conservation: I. Venedikov and T. Gerassimov, *Thrakische Kunst* [Vienna/Munich 1973] pls 163–9); K. S. Gorbunova, 'Engraved silver kylikes from the Semibratny Barrows', *Kultura e iskusstvo antichnogo mira* (Leningrad 1971) 18–38, 123; O. Lordkipanidze, 'La civilisation de l'ancienne Colchide aux Ve–IVe siècles (à la lumière des plus récentes découvertes archéologiques)', *RA* 1971, 281–2. E. D. Reeder, *Clay impressions from Attic metalwork* (Diss. Princeton 1974) 212–14 has an extremely useful list of engraved silver vessels. There is general unanimity that the silver vases in question are Attic: e.g. 'Attisch sind auch die schönsten Funde, die Silbergefäße mit Gravierungen' (K. Schefold, in a review of Filow, *Gnomon* xii [1936] 576); 'The analysis of the engraved and gilt decoration on the vessels has shown that they are stylistically related to the work of Attic vase painters. This fact is important for establishing their . . . provenance which is defined as Attic' (Gorbunova 121); 'Coupes attiques en argent doré' (Lordkipanidze 282).

²¹ Gorbunova (n. 20) 20, fig. 1 (profile), 23, fig. 5 (interior); L. Byvanck–Quarles van Ufford, *Zilveren en gouden Vaatwerk uit de Griekse und Romeinse Oudheid* (1973) 60, pl. 20. My thanks are due to Mme Irene Saverkina for allowing me to study this and other gilded silver vessels in the Hermitage and for supplying the photograph in PLATE IVc.

been known for some time: the design is engraved in the surface of the silver, then figures in gold-leaf are applied and impressed into the incisions with a burnishing tool.²² Needless to say, such decoration will have been quite fragile and the vessels will scarcely have been subjected to cleaning with the abrasive metal cleaners described by Pliny,²³ and thus will have retained the contrast between the bright gold and the dark silver which potters tried to emulate. There are references to gilded silver vessels in temple inventories of the classical period. In the first Parthenon inventory (of 434/3), for example, there is a gold cup—a *karchesion*—with a silver-gilt tondo (*ὑπάργυρον*);²⁴ and other vessels, probably *rhyta*, in the form of a horse, griffins, a lion, a 'dragon' and a dog are all said to be gilded, *ἐπίχρυσσα*,²⁵ presumably gilded silver. From 374/3 the inventories include a silver crater with gold decoration (*κρατήρ ἐπίτηκτος ἐπίχρυσος ὑπάργυρος*):²⁶ a technique which recalls that of the Nike cup.

Not all silver, even in fifth-century Greece, was intentionally tarnished. The silver teeth of the Delphi Charioteer and of one of the Riace bronzes are enough to demonstrate this fact.²⁷ The evidence we have, however, suggests that such statues were meant to be cleaned regularly, if only to preserve the golden colour of the bronze.²⁸ It is instructive to note that while modern restorers willingly remove silver sulphide from the surface of silver they will in no circumstances remove the patina from a bronze, as logically they should. Logic, however, does not always prevail in matters of taste and fashion, and our perverse preference for retaining a green patina on bronze is comparable with the widespread ancient practice of allowing silver, and especially gilded silver, to tarnish.

Purple also appears frequently in both Attic black- and red-figure. It was probably intended to recreate the effect of copper inlay. This can be briefly illustrated by a detail on the handle palmette on an *oinochoe* in Oxford.²⁹ The added purple heart (a feature which occurs quite often on black-figure palmettes) will have been a reference to a copper rivet employed to fasten the end of the handle to the body on the kind of silver jug being imitated (a jug of a type which also seems to have had an inlaid copper rim).³⁰ Likewise the 'purple and gold' on Nicias' shield, still preserved at Syracuse in Plutarch's day, were probably *copper* and gold.³¹

White, whether in the form of added white, or of white-ground, emulates another non-ceramic medium. In most cases it is an ivory surrogate. We hear in the literary sources of ivory used as an inlay material (with gold) on shields;³² it is found on furniture³³ and would have been the logical material to use for such details as shield blazons or other inlays on vases

²² H. Blümner, *Technologie und Terminologie der Gewerbe und Künste bei Griechen und Römern* iv (Leipzig 1887) 311.

²³ Pliny *NH* xxxv 199; xvii 45. Cf. Olson-Thordemann (n. 9) 250: 'Frequent cleaning and polishing of silver must inevitably wear down the surface and gradually destroy any engraved ornamentation.'

²⁴ *IG* i³ p. 331.

²⁵ *Ibid.*

²⁶ *IG* ii^{2.2} 1425.70.

²⁷ C. Houser, 'The Riace Marina bronze statues, classical or classicizing?', *Source, Notes in the History of Art* i.3 (1982) 8. If a shining, non-tarnishable, effect was desired, tin might be used: M. Vickers, *JHS* xciv (1974) 177 n. 3; cf. Hom. *Il.* xviii 565, 574.

²⁸ Cf. *SIG* 284.15 (Chios iv BC) ὅπως καθαρὸς ἰὸς ἔσται ὁ ἀνδρίας, cited LSJ s.v. ἰὸς B.

²⁹ The detail (though not its purpose) has been discussed by A. J. Clark, 'The earliest known chous by the Amasis Painter', *MetrMusJ* xv (1981) 45. See further M. Vickers, 'Silver, copper and ceramics in ancient Athens', in *Pots and Pans, Proceedings of the Colloquium on Precious Metals and Ceramics in the Islamic, Chinese and Greco-Roman Worlds, Oxford 1985* (= *Oxford Studies in Islamic Art* ii [1986]). Note that a rivet on an archaic

hydria handle in the Ashmolean (1965.288) has been shown to contain 98% copper: P. T. Craddock, 'The composition of the copper alloys used by the Greek, Etruscan and Roman civilisations 2. The archaic, classical and Hellenistic Greeks', *J. Archaeol. Science* iv (1977) 118.

³⁰ Attic silver was exceptionally pure (c. 98% compared with 92.5% of sterling; cf. the praise implied at *Plb.* xxi 32.8 and 43.19). 'Unalloyed silver is very soft... and would wear very quickly in use' (P. Craddock, *AntJ* lxiii [1983] 132); hence the apparent presence of copper for rivets and rims.

³¹ *Plut. Nic.* 28.6.

³² Cf. Alcibiades' ἀσπίδα... ἐκ χρυσοῦ καὶ ἐλέφαντος πεπομένην, *Ath.* xii 534c; and the χρυσελεφαντηλέκτρος ἀσπίδας of Phocian mercenaries; *Plut. Tim.* 31.

³³ R. D. Barnett, *Ancient ivories in the Middle East*, Qedem, Monographs of the Inst. of Archaeology, Hebrew University of Jerusalem xiv (1982) 64. At Acragas there were even solid ivory couches: *Ael. VH* xii 29; for inlaid furniture see e.g. *IG* ii² 1415.26-7; 1421.112. In general see Daremberg-Saglio ii (1892) 2359 ff. s.v. 'Ebur'.

made in precious metals. The very shapes of white-ground *lekythoi* indicate their close dependence on vessels made from ivory tusks (PLATE IVd).³⁴ A *lekythos* of the kind envisaged will have consisted of an ivory cylinder and a separately turned ivory shoulder both rivetted together, hence the regular palmette decoration to hide the rivets. This is a feature which occurs on *lekythoi* even when they are not white-ground, and in PLATE IVe the function of the palmettes is very clear. Jacobsthal saw that palmettes at the handles of pottery vessels were probably meant to refer to a means of disguising rivets on metal prototypes,³⁵ but his observation has not, to my knowledge, been applied until recently in the context of *lekythoi*.³⁶ Both cylinder and shoulder of the kind of ivory *lekythos* I envisage would have been mounted in a silver setting. *Lekythoi* were oil containers, and the oil they held doubtless had a preservative effect: one way to prevent an ivory statue from cracking was to pour oil through a hole in the top of its head.³⁷ Support for a connection between ivory and white-ground *lekythoi* may be found in the fact that the closest parallels for the paintings on white-ground *lekythoi* of the second half of the fifth century are to be found on some ivory plaques from graves in the Crimea.³⁸

II. GOLD AND SILVER IN CLASSICAL ATHENS

Although little enough in the way of objects made in precious metal survives from antiquity, it is clear from ancient literary and epigraphic sources both how much gold and silver there was in Greece at certain times, and also how that silver could disappear.³⁹ The Laurium silver mines were worked from very early times. In the historical period they first come to our notice in c. 483,⁴⁰ when a particularly rich strike of silver was put to good use by Themistocles.

³⁴ I owe this observation to my colleague Dr Oliver Impey of the Department of Eastern Art, Ashmolean Museum. Ivory is a substance which is laminated concentrically, T. K. Penniman, *Pictures of ivory and other animal teeth, bone and antler* (Oxford 1952) 15, so that a single section of tusk might provide the material for several *lekythoi*, rather on the principle of 'Chinese boxes'. It was always a relatively precious commodity, and little was allowed to go to waste; even the tip of the tusk was put to use if white-ground 'Columbus' *alabastra* are any indication (PLATE IVa). Plates of ivory up to 'thirty inches square' have been achieved by softening ivory cylinders in phosphoric acid: 'The ivory is then subjected to hydraulic pressure, and when washed and dried, it regains its former consistency', G. C. Williamson, *The book of ivory* (London 1938) 12. This is of interest in the context of 'ivory softeners' in Periclean Athens (Plut. *Per.* 12.6; cf. Paus. v 12.2; Plut. *Mor.* 499c; Sen. *Ep.* 90.33. I owe the last two references to Prof. P. Stadter who is preparing a commentary on Plut. *Per.*), and may well be relevant to such vessels as white-ground cups and craters.

³⁵ P. Jacobsthal, *Ornamente griechische Vasen* (Berlin 1927) 39, 144.

³⁶ M. Vickers, 'Les vases peints: image ou mirage?', in F. Lissarague and F. Thelamon, eds, *Image et céramique grecque: Actes du colloque de Rouen 25-26 novembre 1982* (Rouen 1983) 29-41; *id.*, 'The influence of exotic materials on Attic white-ground pottery', in *Proceedings of the Symposium 'Ancient Greek and related pottery'*, Amsterdam 1984 (Allard Pierson Series V) 88-97.

³⁷ Pliny *NH* xv 33.

³⁸ A. A. Perdolskaya, 'Les dessins sur ivoire du Tumulus Koul-Oba', *Trudy OIKAM* i (1945) 69-83, pls 1-6; colour: M. Artomonov, *Richesses des tombeaux scythes* (Prague/Leningrad 1966) pls 258, 261. For the regular use of ivory at upper-class Greek funerals, see

Plut. *Pel.* 34.1; *Aem.* 39.4; *Amsterdam* (n. 36). The colours actually found on white-ground *lekythoi* correspond closely to the palette (red, blue, violet, green, yellow, black) employed by Chinese ivory sculptors in recent times. For an account of the relatively simple materials used, e.g. cinnabar (a by-product of silver smelting) for red, see W. E. Cox, *Chinese ivory sculptures* (New York 1946) 110.

³⁹ Cf. A. H. M. Jones, *Athenian democracy* (Oxford 1957) 93-4: 'Among industrial products Attic pottery is of course famous, and has, perhaps, owing to its durability, unduly overshadowed other high-grade products, such as silver plate and furniture.'

⁴⁰ *Ath. Pol.* 22.7. As J. F. Healy has observed, there is no reason to believe in Pisistratean interest in the Laurium mines (*Mining and metallurgy in the Greek and Roman world* [London 1978] 102), and W. P. Wallace's dismissal of the explicit statement in *Ath. Pol.* that the big strike was made in c. 483 is based on untenable judgements regarding the chronology of Athenian coinage: 'The early coinages of Athens and Euboea', *NC*⁷ ii (1962) 25-30; cf. C. M. Kraay, 'The archaic owls of Athens', *NC*⁶ xvi (1956) 57-8; *id.*, 'The early coinage of Athens: a reply', *NC*⁷ ii (1962) 418; M. Vickers, 'Early Greek coinage, a reassessment', *NC* 1985 1-44. For information concerning recent research on and in Laurium itself, see N. H. Gale, W. Gentner and G. A. Wagner, 'Mineralogical and geographical sources of archaic Greek coinage', *Metallurgy in Numismatics* i (1980) 3-49; J. Ellis Jones, 'Another Eleusinian kernos from Laureion', *BSA* lxxvii (1982) 191-9, esp. 194 ff.; G. Weisgerber and G. Heinrich, 'Laurion—und kein Ende? Kritische Bemerkungen zum Forschungsstand über eines der bedeutendsten antiken Bergreviere', *Der Anschnitt, Zeits. für Kunst und Kultur im Bergbau* xxxv (1983) 190-200.

Instead of being shared out among the citizenry, the fraction of the profits accruing to the state was spent on the fleet which saved Athens at Salamis.⁴¹ It is difficult to establish with any certainty the amount of silver actually mined in c. 483. Even if, very conservatively, we assume that only 100 talents of silver were mined, this would have been more than two and a half tons of silver. It has, though, been argued that the rate of tax was one twenty-fourth,⁴² and some sources give the impression that the state received 200 talents,⁴³ which, at nearly 26 kilos to the talent,⁴⁴ would give the extraordinary figure of 124 tons. Whatever the real figure, Queen Atossa's informant in the *Persae* represents fact when he declares that Athens possessed 'a fountain of silver buried beneath her soil',⁴⁵ and we may safely assume that possession of the Athenian silver mines was high among the Persians' war aims.⁴⁶

Immense fortunes were made by the owners of mining contracts: Callias Laccoplutus, for instance, is said to have been worth 'the enormous but nevertheless credible figure of 200 talents',⁴⁷ and we know that part, at least, of his wealth came from his mining interests. These resources were obtained from within Attica itself; think how much more wealth was acquired by the Athenians, either individually or collectively, as a consequence of the booty won from the Persians at Marathon, Salamis, Plataea, and especially the Eurymedon.⁴⁸ It has been estimated that there were about 300 families of consequence at Athens,⁴⁹ and presumably most of the precious metal in private hands was in theirs.

Riches gained an individual prominent position in Athenian society as, indeed, in most. Thucydides in Thrace, for example, 'had the right of working gold mines . . . and was consequently one of the leading men of the country'.⁵⁰ Taste in most societies is created by a wealthy élite,⁵¹ and as often as not by a small group or even an individual within that élite. Madame de Pompadour, for example, is credited with having virtually singlehandedly created the *dix-huitième* style which is still in vogue in many parts of the world.⁵² Speculation as to who may have been behind the parallel phenomenon at Athens may be left to another occasion, but irrespective of personalities, we can be sure that the abundant native supplies of silver were frequently worked up into silverware by fashionable silversmiths.

It has, however, been claimed that 'for much of the fifth century no plate was manufactured for private domestic use in Greece',⁵³ and while it is true that the archaeological record is scanty, and that the epigraphic and literary sources refer in the main to plate in purely religious or mythological contexts, there is some evidence to suggest that the great wealth of some Athenians was converted into plate. Even if we allow that the lists of gold and silver objects recorded in the Acropolis inscriptions from 434 BC onwards⁵⁴ consisted solely of either Persian booty or of objects made specifically for devotional purposes, or that whenever Aeschylus or Pindar refer to divine or mortal wealth in terms of 'gold-wrought and silver cups'⁵⁵ or a 'solid gold bowl, the peak of possessions'⁵⁶ they are making poetical flights of fancy, there are

⁴¹ For a detailed discussion of the problems involved, see A. J. Podlecki, *The Life of Themistocles* (Montreal 1975) 201-4.

⁴² Cf. Suda and Zonaras s.v. ἀγράφου μετάλλου δίκη.

⁴³ See Podlecki (n. 41) *loc. cit.*

⁴⁴ 25.86 kg; *OCD*² 1138.

⁴⁵ Aesch. *Pers.* 240.

⁴⁶ On the relative shortage of silver in the Achaemenid empire at the time, see M. J. Price and N. Waggoner, *Archaic Greek silver coinage, the 'Asyut' hoard* (London 1975) 139 n. 246.

⁴⁷ J. K. Davies, *Athenian propertied families 600-300 B.C.* (Oxford 1971) 260-1; cf. Nepos *Cim.* 1.3, *magnas pecunias ex metallis fecerat*. For other massive fortunes made from the Laurium mines, albeit in the fourth century, see Jones (n. 39) 87, 90.

⁴⁸ The only comprehensive account is to be found in

the chapter on 'Booty' in W. K. Pritchett, *Ancient Greek military practices i* (= *The Greek art of war i*) (Berkeley/L.A. 1971) 53-84.

⁴⁹ Jones (n. 39) 87: ' . . . it does . . . seem to have been true that there was a heavy concentration of wealth at the extreme top of Athenian society, in a small group of approximately 300 families'.

⁵⁰ Thuc. iv 105.

⁵¹ Cf. F. Haskell, *Patrons and painters: a study in the relations between Italian art and society in the age of the Baroque* (London 1963).

⁵² G. Reitlinger, *The economics of taste ii* (London 1963) 20-1.

⁵³ D. E. Strong, *Greek and Roman gold and silver plate* (London 1966) 74.

⁵⁴ *IG* i³ pp. 292-332.

⁵⁵ Aesch. *fr.* 184.

⁵⁶ Pind. *Ol.* 7.1-4.

nevertheless sufficient indications that wealthy Greeks behaved as most wealthy élites have done through the ages and commissioned gold and silver plate whenever their resources allowed. There can, for example, be nothing other than an accurate reflection of reality in Pindar *fr.* 221: 'One man is gladdened by honours and crowns won by wind-swift steeds; other men by living in chambers rich with gold.'⁵⁷

It would seem that Athens' most luxurious age, at least for the city's rich, was that following the Persian wars.⁵⁸ For the most part we hear little of the trappings of wealth, apart from the golden grasshoppers with which men-about-town adorned themselves;⁵⁹ occasionally, however, we are granted insights into the luxurious manner in which Athenian dinner-parties might be conducted in the middle decades of the century. Alcibiades' raid on the house of his would-be lover Anytus is instructive. Anytus had inherited a fortune from his father who was in the leather trade.⁶⁰ On the occasion of Alcibiades' attack, Anytus' tables, we are told, were 'full of silver and gold cups'.⁶¹ We may legitimately infer that such would have been the case in the household of anyone of the financial standing of a wealthy tanner and upwards and, for all we know, some way downwards, too. With the Archidamian war, however, Athens' period of greatest wealth was over, and private riches gradually diminished as those who could afford to were called upon to pay towards the conduct of the war. 'The Athenians', Demosthenes told a fourth-century jury, 'once possessed greater wealth than any of the Greeks, but to win renown they expended it all, and contributing out of their private means, they never shrank from any peril in pursuit of glory.'⁶² They did not shrink from any peril in pursuit of further riches either; witness the Sicilian adventure.

In 415 there were still one hundred citizens who had not only paid the burdensome trierarchy tax but at the ceremony for the departure of the fleet poured libations 'on every deck from gold and silver cups';⁶³ 'the whole circumference of the Piraeus', moreover, 'was filled with incense burners and silver craters'.⁶⁴ In describing the preparations for what was to prove to be Athens' last imperial fling, Thucydides observed that 'if anyone had reckoned up the whole expenditure (1) of the state, (2) of individual soldiers and others . . . he would have found that an immense sum amounting to many talents was withdrawn from the city'.⁶⁵ The intention was, of course, to bring this treasure back augmented, but in the event the Sicilian expedition represented nothing other than the transfer of a vast amount of both public and private Athenian capital to the west. D. A. Amyx has noted in the context of events at Athens of precisely this period that 'fine silver table ware . . . must have served . . . as an easily portable reserve of wealth';⁶⁶ we can be sure that great quantities of domestic plate were taken to Sicily never to return to a greatly impoverished Athens.

⁵⁷ Pind. *fr.* 221.1–3 Snell–Maehler; *cf.* Bacchyl. *Encomia* 20A.13–16; the ἀργυρίδες to be won at the games at Marathon in 468 BC (Pind. *Ol.* 9.90) and the ἀργυρέαι φιάλαι at Sicyon (Pind. *Nem.* 9.51). On the perennial connection between the horse-racing set and silver plate, see D. Udy, 'Piranesi's "Vasi", the English silversmith and his patrons', *BurlMag* cxx (1978) 820–37.

⁵⁸ E.g. Ar. *Equ.* 814; Diod. xii 3–4; Ath. xii 512b–c, 553e; [Arist.] *Ath.Pol.* 24.1; Aristid. *Panath.* 143–4; *cf.* M. Vickers, 'Attic symposia after the Persian wars' in O. Murray, ed., *Symptica* (Oxford 1985).

⁵⁹ Thuc. i 6.3. Pace A. W. Gomme, *HCT* i 103, Thucydides will actually have seen older men who favoured τέττιγες and κρωβύλοι. B. Jowett's note *ad loc.* is much more satisfactory; for him, as for Aristophanes (*Equ.* 1331 [performed 424]; *Nub.* 984 [revision of a play performed 423]) τέττιγες 'are the signs of old-fashioned gentility'.

⁶⁰ Davies (n. 47) 41.

⁶¹ Plut. *Alc.* 4. Elsewhere, Alcibiades used, illegally, the gold plate belonging to the Athenian state delegation to the Olympic games of 416: [Andoc.] *in Alc.* 29, Plut. *Alc.* 13. That Athenians in the circles in which Alcibiades moved were extremely wealthy is indicated by the value of 8 talents (Diod. xiii 74.3) placed on a team of chariot horses which Alcibiades purloined, probably in the same year.

⁶² Dem. xxiv 184; *cf.* xx 10, xxii 76.

⁶³ Thuc. vi 32.1. *Cf.* the 200 dr. *kotylos* mentioned in Aristophanes' *Babylonians* of 426 (Pollux x 85).

⁶⁴ Diod. xiii 3.2.

⁶⁵ Thuc. vi 32.5–6. Whether or not W. M. Calder III is correct in his preference for the view that the gold shield set up by the Selinuntines in 'Temple G' was paid for from the proceeds of the Athenian disaster (*The inscription from Temple G at Selinus* [Durham, N.C. 1963]), pp. 61–3 make instructive reading.

⁶⁶ D. A. Amyx, 'The Attic stelai III', *Hesperia* xxvii (1958) 208. Amyx is surely correct, as D. M. Lewis saw

The Spartan occupation of Decelea between 414 and 404 was another serious blow to the Athenian economy, and by extension to the manufacturers of gold- and silverware. In 404 Athens was not actually sacked, but she was squeezed hard. Internal rather than external plunder was the order of the day. The reign of terror conducted by the Thirty Tyrants and their 300 stormtroopers⁶⁷ was directed against wealthy resident aliens. We are tolerably well informed regarding the financial circumstances of one of these: Lysias, 'the richest metic in Athens'.⁶⁸ As K. J. Dover observes, the three talents of silver, the 400 Cyzicene staters, the 100 Darics, and the four silver *phialai*⁶⁹ found in Lysias' house when it was searched on behalf of the Thirty 'would be unlikely to represent the major part of his capital'.⁷⁰ This will scarcely have been an isolated instance, but must have been typical of the further deprivations made on the estates of once wealthy Athenians.

It is unfortunate that our principal written sources relating to private life in the fifth century—Aristophanes and Plato—refer to the period when Athenian wealth was in sharp decline.⁷¹ Nevertheless, enough evidence exists from other sources to show not only that the decades between the Persian and the Peloponnesian Wars were an age of great prosperity for Athens, but that one manifestation of such prosperity was the possession of domestic gold and silver plate. Even so, the age of austerity which lasted from the Peloponnesian War well into the fourth century seems, rather like the Utility Period in Britain, to have left its mark, and it was presumably the dining practices of a relatively impoverished Greece which impressed themselves upon the Hellenistic world. This in turn might explain how Juba of Mauretania writing in the first century AD could claim that pottery was regularly used for dining 'down to the Macedonian period'.⁷² Athens' silver age had clearly been forgotten.

The finds of fifth-century Attic silverware from Bulgaria and the Crimea are sufficient to show that the technique of laying gold figures on engraved silver existed, and the sources suggest that for some decades in the fifth century at least, the Athenian moneyed classes enjoyed a high standard of living. It is proper to ask, however, why so little Attic silver, decorated or not, has survived. One reason is that apart from those infrequent periods when there was antiquarian interest in the work of earlier silversmiths, silver was regularly melted down and refashioned.⁷³ This was even the case with silver dedicated in sanctuaries, as inscriptions from the Athenian Acropolis⁷⁴ and Oropus⁷⁵ show. It has nearly always been thus, at least until the later nineteenth century. In eighteenth-century France, for instance, 'objects in precious materials simply reverted to their bullion value or less, once they became unfashionable or worn'.⁷⁶ It was as bullion, indeed, that gold and silver plate were listed in Greek temple inventories, and some extant pieces even have their weight inscribed on them.⁷⁷ Two points immediately arise from

(*Ancient society and institutions: studies presented to V. Ehrenberg* [Oxford 1966] 183 n. 37) in regarding the ποτή[ριον]|τορ[ευτόν] (ποτέ[ριον ἀργυρόν]|τορ[ευτόν]: Lewis) as a piece which its unlucky owner was unable to secrete before it was confiscated: 'The reason why such precious objects are not found elsewhere in the Stelai can only be that they had been successfully removed by the convicted persons, or stolen by others'. See too, D. B. Thompson's wise observation (n. 17) 316 that 'our ignorance of the quality and quantity of [lost masterpieces in precious metals] has perhaps warped our judgement as to their position in the history of [the] artistic tradition'.

⁶⁷ The term employed by V. Ehrenberg, *From Solon to Socrates*² (London 1973) 353.

⁶⁸ POxy xiii 1606.153–5; cf. Davies (n. 47) 589.

⁶⁹ Lys. xiii 11.

⁷⁰ K. J. Dover, *Lysias and the Corpus Lysiacum* (Berkeley/L.A. 1968) 30.

⁷¹ We might note, however, that Socrates at Plato's *Symposium* drank from a large silver cup: Pl. *Symp.*

223c; Ath. v 192a.

⁷² Ath. vi 229c. For the tendency to see earlier periods, even classical Athens, as possessing wholesome simplicity, see R. Vischer, *Das einfache Leben* (Göttingen 1965) (a reference I owe to Mr E. L. Bowie).

⁷³ Antiquarian interest: e.g. Pliny's account of the prices paid for antique silver (*NH* xxxiii 147), C. Verres' rapacious collecting activities (*Verr.* iv 23–4), and the intimation that M. Antonius might have 'set a value on some curious pieces of ancient workmanship' (Plut. *Ant.* 28.7). Cf. Juv. *Sat.* 8.104 and Mayor *ad loc.* Old silver melted down: J. Stone, *English silver of the eighteenth century* (London 1965) 2.

⁷⁴ E.g. IG ii² 1469.3–17. Cf. Dem. xxii 69 (where Androtion is accused of melting down crowns and *phialai* and having new ones made for which he took the credit).

⁷⁵ IG vii 303.

⁷⁶ Reitlinger (n. 52) 14.

⁷⁷ E.g. Oliver (n. 16) 79; cf. W. Grünhagen, *Der Schatzfund von Gross Bodungen* (Berlin 1954) 65–7.

this: the kind of decoration we have been discussing, thin sheets of gold laid over silver, would have been particularly susceptible to wear and tear, a characteristic which would have meant a relatively short life for most pieces in any case. The other point concerns the relative values of gold, silver and pottery in ancient Athens. Gold was worth about fourteen times the value of silver during the Archidamian War, falling to less than eleven in 402, but rising again in the fourth century.⁷⁸ The gap between the values of equivalent vessels in silver and pottery, however, is almost of astronomic proportions.

The highest recorded price for painted vases in antiquity is three drachmas for large (48 cm and 47 cm high) red-figure *hydriai* in Syracuse (23912) and Leningrad (St. 1206).⁷⁹ If the series of twenty-seven silver *hydriai* each weighing around 1000 drachmas recorded in Acropolis inventories from 398/7 onwards⁸⁰ were as tall, then the ratio of painted pottery to silver would be 1:333. In fact, calculations based on the comparisons of the weights of vessels known in both silver and pottery suggest that the Acropolis *hydriai* were rather smaller and that the ratio was 1:775 or even 1:1000.⁸¹ To put the matter another way: a small silver *hydria* in Oxford which weighs exactly 6 drachmas 4 obols (PLATE VIb)⁸² will have been worth more than twice as much as a large red-figure *hydria*.

Vases in precious metals are conspicuously absent from Attic burials, not however for reasons of general poverty but because in Greece, as with us, capital wealth of this nature was customarily passed on to surviving heirs rather than interred. A comparison with contemporary Achaemenid Persian practice may help us to understand this phenomenon more clearly. It is a curious but significant fact that in the Achaemenid empire jewellery and plate were granted on an *ad hominem* basis, and were only given to those who had shown themselves worthy of the Great King's trust.⁸³ A corollary of such centralised control of precious metals was that objects made from them could not be passed from one generation to another, even by inheritance; they had to be buried with the dead official.⁸⁴ This state of affairs did not prevail in Greece, and we know for a fact that gold and silver was passed on from father to son in Athens.⁸⁵ D. C. Kurtz has wisely said in the context of Athenian burial practice: 'large metal vases were probably prized in the rites of death as they were in the service of the living, and if few have been found in excavated Athenian graves it is probably because the living felt their need was greater'.⁸⁶

If, therefore, most fifth-century Attic gold and silver plate remained above ground, it is easy to understand why so little of it has come down to us. For in addition to the practice alluded to above of owners of silver having their outmoded or worn plate melted down and remade, we have to take account of the fact that even those pieces which were not legitimately reworked found their way into the melting pot sooner or later as a result of the looting of cities and sanctuaries. There is no shortage of material relating to the history of booty and plunder in the ancient sources.⁸⁷ It was the Romans above all who despoiled Greece and indeed Greek lands in

⁷⁸ D. M. Lewis, 'New evidence for the gold-silver ratio', in C. M. Kraay and G. K. Jenkins, eds., *Essays in Greek coinage presented to Stanley Robinson* (Oxford 1968) 109.

⁷⁹ A. W. Johnston, *Trademarks on Greek vases* (Warminster 1979) 33, 113, 165. Mme Irene Saverkina kindly sent me the height of the Leningrad pot.

⁸⁰ IG ii² 1400.23-32. Naturally 1 dr. weight of silver = 1 dr. value.

⁸¹ For details, see *Amsterdam* (n. 36) n. 26.

⁸² Oxford, Ashmolean Museum 1971.894, formerly Bomford collection. One is reminded of the scale of values expressed by the Tyanean: 'When I enter a temple, I would prefer to find an image of gold and ivory in a small shrine, than a big shrine and nothing but a rubbishy terracotta thing in it' (Philostr. *VA* v 22).

⁸³ Xen. *Cyr.* viii 2. 8. The practice evidently continued into the sixth century AD: cf. Procop. *Bell.* i 17.28. We might compare the fact that the use of plate

in France, prior to the mid-seventeenth century, was confined to the royal family and the most aristocratic circles: C. Hernmarck, *The art of the European silversmith 1430-1830* (London 1977) 6.

⁸⁴ Most of the plate that has survived from our period has apparently come from Asia Minor. No one would disagree with such a provenance for e.g. many of the 255 gold and silver objects acquired since 1966 by the Metropolitan Museum: D. von Bothmer, 'Les trésors de l'orfèvrerie de la Grèce orientale au Metropolitan Museum de New York', *CRAI* 1981, 194-207; *id.*, 'A Greek and Roman treasury', *BullMMA* xlii/1 (1984) 24-45.

⁸⁵ Cf. the *ἐκτώματα καὶ χρυσία* which formed part of Demosthenes' inheritance: Dem. xxvii 10.

⁸⁶ Kurtz (n. 2) 70.

⁸⁷ There are useful studies by Pritchett (n. 48) *loc. cit.* and M. Pape, *Griechische Kunstwerke aus Kriegsbeute und ihre öffentliche Aufstellung in Rom* (Diss. Hamburg 1975).

general. Syracuse was looted in 211, Capua in 210, Tarentum in 209, Eretria in 198, Macedon in 194, Aetolia and Ambracia in 187, Asia in 186, Macedon once more in 168, Corinth in 146, Athens, Olympia and Epidaurus in 87–85. Accounts of Roman triumphs are instructive for they often give details of the actual weight of precious metals won during a campaign.⁸⁸

Sicily, it was suggested above, was the determination of a great deal of Athenian portable wealth at the time of the ill-fated expedition against Syracuse. The Carthaginians in 409–405 very nearly achieved what the Athenians had failed to do, and conquered most of Sicily. In doing so, they sacked such important cities as Selinus and Himera, Acragas⁸⁹ and Gela. Syracuse alone escaped, though at great cost. This city would have been the sole repository for any fifth-century Athenian silver in the island that still remained intact. Not many pieces will have escaped 'modernisation' during the reign of Dionysius I (405–367), a tyrant whose court was noted for its wealth and luxury.⁹⁰ Later Sicily witnessed the Punic Wars; Syracuse was sacked in 211 and the spoils carried in triumphal procession in Rome.⁹¹ In 73–70 the island was systematically combed for *objets d'art* by the rapacious propraetor C. Verres. His special interest was in *emblemata* which he had removed from their original silver vessels and reset in gold.⁹² A factor which greatly aided his collecting activities was the widespread custom of displaying silver plate on sideboards at symposia.⁹³ The whereabouts of existing collections of plate were thus well known, and once more few pieces of antique silver will have escaped.

These are but a few of the vicissitudes which will have beset plate in antiquity. They are, however, no different from those which have afflicted objects made from precious metals in any period. To take an example from another age and culture: 'Ex-votos in gold and silver, like other forms of goldsmith's work, are always imperilled, even more than other works of art, by the intrinsic value of the precious metal, which has again and again brought destruction on them from a variety of causes—not least from religious conviction, as at the Reformation, or from ideological conviction, as at the French Revolution, not to mention theft, pillage, or seizure by the state in moments of desperate financial crisis.'⁹⁴ Little classical plate will have survived the centuries in which Christianity became the predominant religion of the Mediterranean world.⁹⁵ Nor will the onslaught of Islam⁹⁶ or the fanaticism of iconoclasts have aided its preservation in its original form. It is only thanks to the unhellenic burial customs of Thrace and Scythia that we possess clues both to the nature of silver plate in fifth-century Athens and also perhaps to the elucidation of the decoration of the pottery made for those unable to afford precious metal.

See too G. Finlay, *Greece under the Romans* (London 1856) ch. 1; O. Vessberg, *Studien zur Kunstgeschichte der römischen Republik* (Lund/Leipzig 1941) 26–114; J. Griffin, 'Augustan poetry and the life of luxury', *JRS* lxxvi (1976) 91.

⁸⁸ E.g. those of T. Quinctius Flamininus (194 BC): Livy xxxiv 52.4–5; and L. Scipio Asiagenus (188 BC): Livy xxxvii 59.3–5.

⁸⁹ Cf. the Acragantines' proverbial taste for luxury (e.g. Ael. *VH* xii 29: silver *lekythoi* and solid ivory couches).

⁹⁰ K. F. Stroheker, *Dionysios I. Gestalt und Geschichte des Tyrannen von Syrakus* (Wiesbaden 1958) 159 ff.

⁹¹ Livy xxv 40.1–3; Plut. *Marc.* 21.

⁹² Cic. *Verr.* iv 23–4.

⁹³ Cic. *Verr.* iv 16, 20, 25, 27. Cf. Russian court practice in the sixteenth century: '... for goodly and rich plate we never saw the like or so much before. There dined that day in the Emperor's presence above 500 strangers and 200 Russians, and all they were served in vessels of gold, and that as much as could stand by one upon the tables. Besides this there were four cupboards garnished with goodly plate, both of gold and silver', R.

Hakluyt, *The discovery of Muscovy* (London 1904) 134. At the Field of the Cloth of Gold in 1519, there was a cupboard of seven stages 'covered with plate of gold, and no gilt plate', J. H. Pollen, *Gold and silver* (London 1879) 136.

⁹⁴ R. W. Lightbown, 'Ex-votos in gold and silver: a forgotten art', *BurlMag* cxxi (1979) 353. My colleague P. D. C. Brown kindly draws my attention to C. R. Dodwell, *Anglo-Saxon art, a new perspective* (Manchester 1982) 12: 'If the survival pattern of the various crafts of the Anglo-Saxons has distorted our knowledge of their arts, it has also falsified our understanding of their tastes.' Their favourite materials, it seems, were silver and gold.

⁹⁵ E.g. E. C. Dodd, *Byzantine silver stamps* (Washington, D.C. 1961); Catalogue, *Spätantike und früh-byzantinische Silbergefäße aus der Staatlichen Ermitage Leningrad* (Berlin 1978).

⁹⁶ E.g. when Syracuse was taken by the Saracens in 846, 'the plate of the cathedral weighed five thousand pounds of silver', E. Gibbon, *Decline and fall* ch. 52 (dependent on Abulfeda, *Annal. Moslem.* 271–3; Muratori, *Script. Rer. Ital.* i).

III. THE INFLUENCE OF GOLD, SILVER AND BRONZE ON BLACK- AND RED-FIGURE

Many readers will still be sceptical about an argument that Athenian potters copied the colours of metal or ivory vases. The case can, however, be supported by two kinds of circumstantial evidence. The first concerns the introduction of the red-figure technique on Attic pottery and the second its sudden disappearance from the scene towards the end of the fourth century. Although early black-figure, as we shall see, probably reflected the employment by metalworkers of silver figures on bronze, the transition to red-figure reflects metalworking practices introduced when gold began to be used for the backgrounds of black-figure and for the figures of red-. The traditional explanation of the change from black-figure to red-figure will be as familiar as it is far-fetched: 'Black-figure technique, consisting of figures silhouetted against a light background with any details incised, had its limitations. Artists interested in the problems of a more natural anatomy and the expression of mood needed a freer medium which they found . . . in the red-figure technique. . . . In general, only the more progressive artists . . . adopted red-figure.'⁹⁷ Another commonplace is to note how very much more difficult it was to draw certain details in red-figure: tendrils, palmettes, or branches of trees, for instance, could be drawn in black-figure with just a few simple strokes; in red-figure they had to be painstakingly outlined with thin bands of paint alongside or around a very limited 'reserved' area.⁹⁸ This point can be well illustrated by the trees on a 'bilingual' amphora in Boston (PLATE Va, b).⁹⁹

In the real world it usually takes more than an interest in 'the problems of a more natural anatomy and the expression of mood' to make an artisan adopt working practices that are far more difficult than those to which he is accustomed. The only thing that might persuade him is some kind of financial incentive, and a considerable one at that. The change from black-figure to red-figure can in fact be explained in straightforward economic terms. Let us image the Boston amphora in metal: the black parts in silver, the orange in gold. The 'black-figure' scene would thus consist of a silver Heracles, bull and olive tree against a background of gold leaf; the 'red-figure' of gold leaf figures laid on a silver background within a gold frame. If this were so, it is clear that a clever and inventive silversmith has realised that by using the cut-out gold-figures left over from the manufacture of 'silver-figure' he could economise on both time and effort. Fewer figures would of course lead to a saving in gold. A related phenomenon is the proliferation of horses in 'black-figure' pottery made after the introduction of 'red-figure'.¹⁰⁰ If, on a metal vase, these figures were of silver and their backgrounds of gold, it would clearly be in the craftsman's financial interest to economise by causing the horses and their human or divine companions to occupy increasingly larger black spaces. Remember Xenophon: '. . . a horseman obstructs the view far more than a foot soldier'.¹⁰¹ Silver vessels of the kind envisaged here would have been made by silversmiths working to meet the requirements of a wealthy élite. The techniques employed in 'silver-figure' or 'gold-figure' would have been very similar; certainly, there would not have been the great difference in the degree of difficulty between them which prevailed in the potter's world between 'black-figure' and 'red-figure'. Potters, and the artisans employed to decorate pots, simply had to follow as best they could the standards created in another medium if they were to do business at all.¹⁰² Thus, the craftsman who decorated the 'bilingual' cup Palermo V 650 on which the 'black-figure' part actually spills over into the

⁹⁷ M. Vickers, *Greek vases* (Oxford 1978), comm. on figs 23-5.

⁹⁸ Even letters of inscriptions might occasionally be 'reserved' (M. Robertson, 'Euphronios at the Getty', *J. Paul Getty Mus. J.* ix [1981] 23-5, figs 1 and 4), a practice which recalls the χρυσότευκτα γράμματα at Aesch. *Septem* 660; cf. *ibid.* 434; Plut. *Dem.* 20; Ath. xi 466e (the latter gold letters on a silver cup).

⁹⁹ Boston 99.538. I am grateful to Ms F. Wolsky for

permission to publish the photographs.

¹⁰⁰ Good bibliography in M. B. Moore, *Horses on black-figure vases of the archaic period, ca. 620-480 B.C.* (Diss. New York Univ. 1971).

¹⁰¹ Xen. *Hipparch.* v 14.

¹⁰² Relevant, perhaps, that when clay *qua* clay is shown in red-figure vase-painting it is shown in a different colour from the usual orange-red: e.g. on the *oinochoe* Berlin 2415.

'red-figure' side was not only employing 'a different set of aesthetics . . . on each half',¹⁰³ but those of 'silver-figure' and 'gold-figure' respectively.

The reason for the sudden end of 'red-figure' at Athens around 320 'is not obvious' according to R. M. Cook.¹⁰⁴ If, however, ceramic decoration depended for its inspiration on that of silverware, then there is a possible explanation. The characteristic forms of pottery made at Athens and elsewhere after Alexander's conquests were rather different from those that had existed before. Mould-made handle-less bowls decorated in relief became the norm, doubtless under the influence of near-eastern dining practices adopted after the incorporation of the Achaemenid empire into the Greek world (*Persia capta* . . .). At Athens, the characteristic colour of locally made mould-made pottery continued to be black,¹⁰⁵ but in wealthier centres elsewhere in the Hellenistic world immense quantities of orange-red mould-made pottery were produced. That this reflects the profusion of gold vessels now owned by rich Greeks¹⁰⁶ is suggested by the change in the character of temple inventories after the third quarter of the fourth century. Before this time, most objects were of silver or silver gilt; thereafter they are mostly of solid gold.¹⁰⁷ At an earlier period we can observe the related phenomenon that Attic pots become smaller at precisely the time when we may assume that a good deal of silver was being used to pay the expenses of the Peloponnesian War.¹⁰⁸ In both these cases we can once more argue for the dependence of the pottery industry on fashions in metalworking.

The representation of narrative scenes in multicoloured inlaid (or overlaid) metal had a long tradition in Greece. The Shield of Heracles described in the Hesiodic *Scutum*, a work which has been associated in time with the François vase,¹⁰⁹ is among the most familiar. Little enough 'gold-figure' has survived, and even less 'silver-figure'. Only the ornamental cheekpieces of some archaic bronze helmets serve to illustrate the metallic prototypes of the earlier stage of 'black-figure' in which the figures were silver on bronze.¹¹⁰ The principle of the hierarchy of metals, whereby silver might be adorned with gold, and bronze with silver, but rarely the other way about,¹¹¹ suggests that much black-figure, and certainly black-figure on an unframed free field, was made in imitation of silver figures on bronze. The relatively light ground colour of, for example, the François vase in Florence¹¹² suggests that of a tin-rich bronze,¹¹³ and figure decoration of a metal original would have been made in silver, enhanced with inlaid copper and ivory. It is well known that in earlier Attic black-figure there is a tendency for there to be extraneous figures,¹¹⁴ but they are dropped with the passage of time. If on a metal vase these figures were of silver against a bronze background, the fewer the figures the less the expenditure

¹⁰³ B. Cohen, *Attic bilingual vases and their painters* (New York 1978) 55–60 (esp. 59), pls 46–7.

¹⁰⁴ Cook (n. 6) 186.

¹⁰⁵ Cf. Rotroff (n. 3).

¹⁰⁶ Cf. the many thousands of talents of gold and silver taken by Alexander from Susa, Ecbatana, Pasargadae, and Persepolis: bibl. in G. C. Cameron, *Persepolis Treasury Tablets* (Chicago 1948) 10–11.

¹⁰⁷ Contrast e.g. the fifth- and fourth-century Acropolis inventories with Delian treasury accounts of the third century BC: *Inscriptions de Délos* 298, 313, 320. Comparable too is the transition from black to red sigillata that can be observed in the west in the mid-first century BC (e.g. M. Schindler, *Die 'schwarze Sigillata' des Magdalensberges* [Klagenfurt 1967] 64–6), soon after Lucullus and Pompey's eastern victories. Lucullus 'was the first to introduce luxury to Rome': Ath. vi 274f; cf. xii 543a.

¹⁰⁸ I am grateful to Dr Adrienne Lezzi-Hafter (who is currently studying Attic fictile vases of this period) for this observation.

¹⁰⁹ R. M. Cook, 'The date of the Hesiodic *Shield*,

CQ xxxi (1937) 204–5. 'Silver-figure' is described at *Scut.* 183, 188, 212, 224–5, 295, 299. For an evocative discussion of the inlaid metal on the comparable Shield of Achilles and House of Alcinoos, see W. Pater, *Greek studies* (London 1895) 193 ff.

¹¹⁰ (1) *AA* 1930, 285 f., fig. 11; Kunze, *Ol. Ber.* vi (1958) 149–9, fig. 108 (from Trebenische); (2) Kunze fig. 107, pls 51–2; *100 Jahre deutsche Ausgrabung in Olympia* (Munich 1972) pl. 2.3 (from Olympia); cf. the ἀργυρόπαστα ὄπλα at Polyaeen. iv 16.

¹¹¹ I have greatly benefited from conversations on this topic with my colleague Mr Gerald Taylor.

¹¹² Illustrated in colour in *Materiali per servire alla storia del vaso François* (*Bollettino d'Arte*, serie speciale i, 1977 [1981]) pls 2–8.

¹¹³ For good colour photographs of tin-rich bronzes, see G. Fehervari and Y. H. Safadi, *1400 years of Islamic art, a descriptive catalogue* (London 1981) 88–91, nos 34, 36.

¹¹⁴ Called by J. D. Beazley 'Rosincrantz and Guldenstern', 'Amasea', *JHS* li (1931) 258–9; and 'our Danish friends', *ibid.* 261.

of time and precious metal, and the greater the craftsman's profit.¹¹⁵ This is a reversal of what occurred after gold backgrounds were introduced, but the underlying profit motive is the same. The reason why we do not have any of the vessels concerned is simple: there would have been enough silver in the necks, feet and handles to ensure both their remaining above ground and their being melted down when fashions changed or they were looted.¹¹⁶

IV. BRONZE AND GOLD

If black pottery can be regarded as poor man's silver, then bronze would seem to be poor man's gold.¹¹⁷ Bronze *qua* bronze might be improved with the addition of silver decoration, and silver by means of gold; gold, or bronze imitating gold is characteristically allowed to speak for itself, and any surface decoration is in relief.¹¹⁸ There can be no doubt, for example, that the shield of Phidias' Athena Parthenos was made from solid gold¹¹⁹ and that it was decorated in relief.¹²⁰ It was doubtless for reasons such as this that the decoration of vessels such as the Vix crater¹²¹ is in relief: in its original state it will not only have shone like gold, but will have been intended to shine like gold.¹²² The surface decoration—the relief spirals, the fluted tongues, and the three-dimensional figured ornament on the handles and on the frieze—owes its treatment to the application of a gold aesthetic. Similar considerations probably underlie the relief decoration on other bronze vessels such as *hydriai*¹²³ or *oinochoai*.¹²⁴ They too will have owed their frequently ornate separately cast handles, rims and feet to the norms of gold-working, a fact which will go some way towards explaining the obvious differences between most surviving Greek bronze vessels and Attic pottery.¹²⁵ The intrinsic value of bronze vessels, however, will have been so low as to allow them, like pottery, to be used for grave goods.¹²⁶

The dialectic between metal and pottery was not peculiar to Athens. Similar reasons underlie the colour schemes—and the forms—of other fabrics, of Etruscan *bucchero*,¹²⁷ of

¹¹⁵ Profit, moreover, will have been the motive behind the introduction of large white figures on fourth-century red-figure pots: the makers of the metal prototypes could make a figure in ivory for rather less than its equivalent in gold; cf. *Amsterdam* (n. 36) 92.

¹¹⁶ Cf. the heavy orange-yellow handles on large Etruscan red-figure vessels of the fourth century: e.g. J. D. Beazley, *Etruscan vase-painting* (Oxford 1947) pls 13a, 14, 20.1, 30.1–2, 35.5, 36.3, which were probably made in imitation of gold (Etruria was noted in the fifth century for its production of gold vessels: Ath. i 28b).

¹¹⁷ The figures certainly suggest as much. M. J. Price has estimated that a talent of bronze with an alloy of 15% tin would cost 64.25 dr., 'a ratio of bronze to silver of about 93:1. The greatest quantity of tin yet found in a Greek coin is 14.74%, and therefore we may expect that this valuation of 93:1 is the highest possible for coined bronze. In all probability it should be lower, 100:1 or 120:1': 'Early Greek bronze coinage', in Kraay–Jenkins (n. 78) 103.

¹¹⁸ This general rule can be observed in goldwork of any period, and is borne out by the regulation of the Worshipful Company of Goldsmiths that gold cannot be hallmarked when it is combined with other materials.

¹¹⁹ For otherwise there would have been no point in the weighing operation described at Plut. *Per.* 31.

¹²⁰ See e.g. E. B. Harrison, 'Motifs of the city-siege on the shield of Athena Parthenos', *AJA* lxxxv (1981) 281–317.

¹²¹ R. Joffroy, *Le trésor de Vix (Côte d'Or)* (Paris 1954); for an account of subsequent Vix scholarship, see

M. Robertson, *A history of Greek art* (Cambridge 1975) 144–5, 640–1, n. 150.

¹²² Cf. the 'beautiful golden colour of the bronze' on the unpatinated parts of the Monteleone chariot in New York: G. M. A. Richter, *Greek, Etruscan and Roman bronzes* (New York 1915) 29, and the 'golden appearance' of the Dherveni crater 'due to a high content of tin [nearly 15%]': G. F. Varoufakis, 'Metallurgical investigation of the bronze crater of Dherveni', in W. A. Oddy, ed., *Aspects of early metallurgy* (London 1977) 71–86. The tin content of the Vix crater (approx. 10%) was fairly high: that of the archaic and classical bronzes in the Ashmolean averages just over 8%, and most have a substantial amount of lead (average approx. 5%) as well: see Craddock (n. 29) 118, 120.

¹²³ E. Diehl, *Die Hydria: Formgeschichte und Verwendung im Kult des Altertums* (Mainz 1964).

¹²⁴ Weber (n. 2); D. von Bothmer, 'A bronze oinochoe in New York', in *Studies in Classical art and archaeology, a tribute to P. H. von Blanckenhagen* (Locust Valley, N.Y. 1979) 63–7, pls 17–22.

¹²⁵ Cf. B. B. Shefton in *Rouen* (n. 36) 172–3.

¹²⁶ The value of the metal in the Vix crater (which weighs almost exactly 8 Attic talents) would have been only 435 dr. The slightly heavier (8 talents 42 minas) gold crater presented by Croesus to Delphi (*Hdt.* i 51) would have been worth nearly 1700 times as much.

¹²⁷ Pace Cook (n. 6) 153. Scholars seem to agree that *bucchero* imitates metal (e.g. G. Camporeale, 'Brocchetta cipriota dalla Tomba del Duce di Vetulonia', *Arch. Class.* xiv (1962) 65; T. B. Rasmussen, *Bucchero pottery from Southern Etruria* [Cambridge 1979] *passim*;

Middle Minoan pottery¹²⁸ and many others.¹²⁹ The characteristically dark brown glaze of Corinthian pottery evokes the colour of copper-rich bronze,¹³⁰ while the lighter tones suggest tin-rich bronze.¹³¹ The purple will, of course, have been applied in imitation of copper. The prevalence of orange and red pottery in the Hellenistic and Roman periods reflects, as we have seen, the increase in the amount of gold available in the west after the conquests of Alexander and of Lucullus and Pompey. The late Hellenistic glazed vessels which have green glaze without and yellow within will surely have been made in imitation of bronze vessels, as has often been suggested.¹³² The phenomenon of potters following metalworkers is not restricted to the classical world; it also occurs in the Islamic world and China¹³³ and doubtless elsewhere.

M. Schmidt, in H. Bloesch, ed., *Greek vases from the Hirschmann Collection* [Zurich 1982] 40), but the relevant metal prototypes are for the most part absent. Could it be that the Etruscans of the classical period, like the Athenians, like us, preferred not to bury heritable wealth with the dead? The presence of gold jewellery in some burials 'rich' in pottery and bronze should not be regarded as an impediment to such a hypothesis. Such jewellery usually belongs to females and is part of their personal adornment. There is never more than one set per person, and yet in any élite of which we have detailed knowledge, the woman who possesses one parure possesses several (e.g. an inventory of Queen Elizabeth I's jewellery dated 1587 lists 627 items [B.L. Royal App. 68]; see too D. Scarisbrick, 'Queen of the dressing-table: the jewellery of Madame de Pompadour', *Handbook to the Grosvenor House Antique Fair* [1983]; *ead.*, 'Blazing like the Sun: the Marchioness of Londonderry's jewellery', *Country Life* [June 14 1984] 1728–31. I am also grateful to Mrs Scarisbrick for a quotation from *A Lady of Fashion* by Mrs Gore [1856]: 'I cannot always be sparkling in diamonds, I must have emeralds for one style of dress, and sapphires for another—no leader of bon ton can get on without all sorts and sizes of pretty gems.'). What happened to the rest? Perhaps they, like the family silver, were passed on to the living whose 'need was greater'.

¹²⁸ Cf. A. J. Evans, 'Silver vessels and clay imitations', *Palace of Minos* i (London 1921) 191–3.

¹²⁹ Grey and yellow Minyan pottery, for example, may owe their respective colours to a desire on the part of potters to evoke, as best they could, silver and gold. '[Grey Minyan] was once thought to be a product manufactured from a special kind of clay at a centre from which it was widely distributed. Now it is known that almost any kind of clay will do': C. Blegen, *Troy and the Trojans* (London 1963) 141. The uniform appearance of wares with 'distinctive, largely angular shapes' (Blegen 140) throughout the Aegean world is surely due to an external factor, and recent work on silver metallurgy in the area in the Bronze Age (e.g. N. H. Gale and Z. Stos-Gale, 'Lead and silver in the ancient Aegean', *Scientific American* cciv [1981] 176–92; *id.*, 'Cycladic lead and silver metallurgy', *BSA* lxxvi [1981] 169–224, pls 33–40) which shows how widespread silver extraction was, suggests what that factor might have been. The highly burnished yellow-slipped 'Early Helladic sauceboats' of which S. S. Weinberg speaks in 'A gold sauceboat in the Israel Museum', *AK* xii (1969) 3–8 were clearly made in imitation of precious metal. A. H. Sayce's note *ad Hdt.* i 14 may explain the existence of many black and grey wares in

Anatolia: 'Silver seems to have had a special attraction for the Hittites, whose monuments in Asia Minor are usually met with in the neighbourhood of old silver mines, and their fancy for the metal may have been communicated to the Lydians.' An anonymous referee notes the existence of 'test sherds' for black-glaze Protogeometric pottery at Athens; we may suppose that the intention to evoke silver vessels was already present.

¹³⁰ 'Situla ware' from Tell Defenneh provides a link here, as A. S. Murray saw, *Handbook of Greek Archaeology* (London 1894) 37; not only, however, is the shape 'derived from an Egyptian bronze pitcher', but the colour as well.

¹³¹ Prof. Shefton has drawn my attention to a contrast between dark copper-rich and light tin-rich bronze on an extant metal vessel: B. B. Shefton, *Die "Rhodischen" Bronzekannen* (Mainz 1979) 72–3, pls 6.3, 7.1.

¹³² 'Gelbglänzende und grünpatinierte Bronzevasen waren die Vorbilder': S. Loeschke, *Mitteilungen der Altertumskommission für Westfalen* v (1909) 190 n. 1; cf. *id.*, 'Römische Gefässe aus Bronze, Glas und Ton im Provinzialmuseum Trier', *Trierer Zeits.* iii (1928) 75. In view of this and more recent literature, it is surprising to find the following statement made by an acknowledged expert in the field of ancient metalwork: 'Nobody has been foolish enough to suggest that green vitreous glaze outside and yellow within, as it occurs on Roman cups of Cicero's time, was imitation of dirty and clean bronze, so let me not start here on such a false scent!', D. K. Hill, 'Bronze working', in C. Roebuck, ed., *The Muses at work: arts, crafts and professions in Ancient Greece and Rome* (Cambridge, Mass. 1969) 83. Contrast: 'Fast ausschliesslich grün und (oder) gelb glasiert, sollen die Gefässe augenscheinlich glänzende oder patinierte Bronzegefässe nachahmen', D. Pinkwart, *Hellenistisch-römische Bleiglasurkeramik aus Pergamon*, Pergamen. Forsch. i (1972) 140; and 'die grüne Bleiglasurkeramik in der Farbe Bronze imitiert', H. Gabelmann, 'Zur hellenistisch-römischen Bleiglasurkeramik in Kleinasien', *JdI* lxxxix (1974) 266. Gabelmann, *Gnomon* li (1979) 679, rightly criticises the odd view expressed by A. Hochuli-Gysel, *Kleinasiathe glasierte Reliefkeramik (50 v. Chr.—50 n. Chr.) und ihre oberitalischen Nachahmungen* (Bern 1977) *passim*, that such vessels imitate silver.

¹³³ Cf. J. W. Allen in *Kunst des Orients* xi (1976–7) 5–21; M. Medley, *Metalwork and Chinese ceramics* (London 1972); J. Rawson, 'Song silver and its connexions with ceramics', *Apollo* July 1984, and many of the contributors to the Oxford *Pots and Pans* colloquium (n. 29).

V. THE INTELLECTUAL HISTORY OF THE KERAMIKPROBLEM

The really interesting question, however, is why such relationships have remained unnoticed for so long. In the case of Greek pottery the answer has much to do with its reception in post-medieval times. The earliest indisputable post-classical reference to a Greek pottery vessel is in the soft porn merchant Fausto Andrelini's poem of the 1480s,¹³⁴ where the ceramic, and frangible, nature of the fabric is emphasised; the author upbraids his mistress for having broken a fictile vase decorated with a cast of figures drawn from what must have been quite an array of painted pots. Indeed, it is the 'painted' aspect of such wares which seem to have appealed most to collectors and scholars ever since.¹³⁵ Thus, in the nineteenth century it is as representatives of Painting that Greek vases are being held aloft by two of the *Künstler und Gelehrte* in one of the frescoes with which Ludwig I of Bavaria's Neue Pinakothek was adorned.¹³⁶ Painting was to remain a major element in the study of Greek vases, but it gradually ceased to be the only one. In the second half of the nineteenth century there was a growing antiquarian interest in ceramics of all kinds,¹³⁷ and Greek pottery, hitherto prized for its antique associations and painterly qualities, gained a chapter to itself in numerous popular handbooks on ceramics.¹³⁸ Pottery had also during the previous century or so come to replace silver or pewter in polite society as the normal material for drinking vessels, largely as a result of the widespread adoption of the practice of drinking *hot* liquids such as tea, coffee or cocoa (drunk from metal they would burn the mouth).¹³⁹ It was thus quite reasonable at the end of the nineteenth century to believe that 'fine ceramics could only come from the labours of independent artists using new technical knowledge with the pure objective of making beautiful things'.¹⁴⁰ This sentence was written in the context of the Arts and Crafts movement, but the sentiments were readily applied to ancient Greece. The German Romantics' search for Truth and Beauty in Art added elements to criticism which were for the most part absent in classical antiquity. The belief that the best kind of art was the repository of Truth, coupled with the belief that Greek art was the best kind of Art, meant that critics could be blind to the possibility that the fictile vases we have were made to evoke vessels made in another material.

As if this were not enough, the widespread adoption of Utopian ideals among the intellectual élite to which most students of art during the past century have belonged, has meant that the status of pottery in antiquity has been inflated. Thomas More's Utopians were

¹³⁴ F. Andrelini, 'Liviam vehementer increpat quod cyathum variis hystoriis depictum fregerit. Deinde eam solatur', in *Livia* (Paris, F. Baligault c. 1495–6) n.p.

¹³⁵ E.g. we might compare the sixteenth-century references in Vendramin inventories to 'Un vaso di terra lavorato . . . un vaso di terra miniado . . . un altro vaso di terra figurado depento, un altro vaso di terra istoriado, un altro vaso grande istoriado con do manegi . . .': A. Ravà, 'Il "camerino delle antigaglie" di Gabriele Vendramin', *Nuovo archivio veneto* xxxix (1920) 161; or that in a Grimani inventory to 'Tre vasi di terracotta antiqui lavorati': C. A. Levi, *Collezioni veneziane d'arte e antichità* (Venice 1900) 6, a reference I owe to the kindness of Prof. L. Beschi.

¹³⁶ The full title of the work (of which Wilhelm von Kaulbach's original study is still extant in the Bayerische Staatsgemäldesammlungen, Munich) is: *König Ludwig, umgeben von Künstlern und Gelehrten, steigt über die Stufen des Thrones herab, um die aus früheren Jahrhunderten stammenden und ihm darbrachten Werke Plastik und Malerei näher zu besehen*; discussed most recently by W. Mittlmeier, *Die Neue Pinakothek in München 1843–1854, Planung, Baugeschichte und Fresken* (Munich 1977) 53, fig. 57.

¹³⁷ E.g. the great majority of titles in the bibliogra-

phy to C. D. Fortnum, *A descriptive catalogue of the maiolica in the South Kensington Museum* (London 1872) 657–65 were published after 1850.

¹³⁸ The most influential work of this kind was A. Jacquemart's *Histoire de la céramique* (Paris 1875) where (219) it was stated: 'il devient incontestable aujourd'hui qu'on doit étudier la céramique grecque avec les mêmes méthodes, disons plus avec la même impartialité qu'on apporterait à l'examen des produits indous, égyptien ou chinois'. Both F. Jaenicke, *Grundriss der Keramik* (Stuttgart 1879) and J. J. Young, *The ceramic art* (London 1879) depend heavily on Jacquemart's work.

¹³⁹ R. Charles, *Continental porcelain of the eighteenth century* (London 1964) 18; J. Hatcher and T. C. Barker, *A history of British pewter* (London 1974) 280–1. According to P. Mathias, *The brewing industry in England* (Cambridge 1959) 375, per annum consumption of tea in England had grown from 1 oz per head to 2.3 lbs between 1722 and 1833; the change in drinking habits 'favoured the potter . . . and having sold the cups [he] also supplied the matching saucers, plates and other dishes as well' (Hatcher–Barker 281).

¹⁴⁰ A. Caiger-Smith, *Tin-glaze pottery in Europe and the Islamic World* (London 1973) 191.

systematically conditioned to despise precious metals: 'inasmuch as they eat and drink from vessels fashioned out of clay and glass which, though handsomely shaped, are nevertheless of the cheapest kinds they . . . make night jars and all kinds of squalid receptacles out of gold and silver'.¹⁴¹ There had of course been a long classical moralising tradition in which precious metals were attacked, but More's 'provisional blue-print for a perfect society'¹⁴² was in the long term far more influential on both the ethical and aesthetic planes. A typically adverse reaction to the Utopian philosophy is provided by Alciati's emblem *Adversus naturam peccantes* of a naked man emptying his bowels into a golden vessel while close by him stand an earthenware pitcher and a glass goblet. Thuilius commented: ' . . . does a more scandalous abuse exist than to commit one's own excrements to gold, while drinking from simple glass and earthenware?'¹⁴³ Others took a more favourable view, and none more so than William Morris, the inhabitants of whose Utopian paradise described in *News from Nowhere* enjoyed the use of 'Banded workshops' in which 'folk collect to do handwork in which working together is necessary or convenient; such work is often very pleasant. In there, for instance, they make pottery and glass . . . there are a good many such places, as it would be ridiculous if a man had a liking for pot-making or glass-blowing that he should have to live in one place or be obliged to forgo the work he liked. . . . As to the crafts, throwing the clay must be jolly work: the glass-blowing is rather a sweltering job; but some folk like it very much indeed. . . .'¹⁴⁴ Gold and silver in this society were the distinctive signs of the lower orders: a waterman, a weaver, a dustman, roadmenders.¹⁴⁵

This was the intellectual climate in which J. D. Beazley grew up. 'He learnt much about arts and crafts from his father', who was not only an interior decorator but went to Brussels in 1897 'to learn glassmaking techniques'.¹⁴⁶ It is not difficult to find in Beazley's later writings echoes of Morris's attitudes towards craftsmanship. For example, in speaking of a couple of red-figure fictile vases which appeared to him to have had a long life above ground before being placed in an Etruscan tomb, Beazley says that they 'must have been treasured for many years before they were placed in the grave. Treasured, it may be, by more than one owner—father and son, father and daughter's husband. Treasured as wonders, not of minor art or industrial art (in the shoddy jargon of today or yesterday), but of art pure and simple: not *πάγχρυσα* . . . but peak of possessions, *κορυφὰ κτεάνων*'.¹⁴⁷ Not only do we see here Beazley's abhorrence of industrialism—a viewpoint which has its roots in Ruskin's philosophy as much as Morris's¹⁴⁸—but also his belief that in antiquity pottery could be regarded in the same light as a golden *phiale*.¹⁴⁹ Pindar, for whom 'gold gleameth more brightly than all other lordly wealth',¹⁵⁰ would not have understood; nor would anyone else outside the intellectual tradition to which Beazley belonged.

It is not my intention to question the sincerity of Beazley's attitude to potters and painters in ancient Athens, or even to take exception to the widespread view that honest craftsmanship in simple materials is inherently more worthy than work in precious metal. It should, though, be emphasised that the aesthetic and material values which prevailed in antiquity were identical

¹⁴¹ Trans. W. S. Heckscher, in 'Pearls from a Dungheap: Andrea Alciati's "Offensive" emblem, "Adversus naturam peccantes"', *Art the Ape of Nature, H. W. Janson Festschrift* (New York 1981) 297. While there may be echoes of the Persian chamberpots at Ar. *Ach.* 82, the immediate origins of More's image lie in the New World, early reports of which held that there were societies there which 'held as nothing the wealth that we enjoy in this our Europe such as gold and jewels, pearls and other riches': A. Vespucci, *The first four voyages* (Florence 1505/6, London 1893) fol. 4v. The influence such reports had on More has been well described by A. J. Slavin, 'The American principle from More to Locke', in F. Chiappelli, ed., *First images of America* (Berkeley etc. 1976) 139–64.

¹⁴² P. Turner, *Thomas More, Utopia* (Harmondsworth 1965) 13.

¹⁴³ Cited by W. S. Heckscher (n. 141) 296.

¹⁴⁴ W. Morris, *News from Nowhere* (1890), in A. Briggs, ed., *William Morris, selected writings and designs* (Harmondsworth 1962) 221–2.

¹⁴⁵ *Ibid.* 190–1, 200, 222.

¹⁴⁶ B. Ashmole, 'Sir John Beazley, 1885–1970', *PBA* lvi (1972) 443.

¹⁴⁷ J. D. Beazley, *AJA* xlix (1945) 158.

¹⁴⁸ A. Briggs, 'The appeal of William Morris', The Design Council, *William Morris and Kelmscott* (London 1981) 19.

¹⁴⁹ Cf. Pind. *Ol.* 7.1–4.

¹⁵⁰ Pind. *Ol.* 1.1 f.

with those against which Beazley and many others actively rebelled at the end of the nineteenth century.¹⁵¹ It was as amusing then, as it is now, to *épater le bourgeois* with ideas which questioned fundamental values, especially material and moral values. This would be harmless enough were it not for the fact that the notions which emerged from the Arts and Crafts movement in both Europe and America¹⁵² were imposed on the material culture of Greek antiquity in such a way that the world of the contemporary artist and craftsman was perceived to have existed in classical Athens—and often not even the real world, but something approaching the Utopian ideal.

This idealised Athens was a world of the simple life, and contrasts sharply with the primitive, and hence forgivable luxury of Homeric Greece and the decadent, and decidedly unforgivable luxury of Hellenistic Greece and Rome. It is a world in which it is believed that no silver plate was manufactured for domestic use¹⁵³ and whose wealthiest citizens ate and drank from fine pottery decorated by highly creative artists,¹⁵⁴ some of whom had an entrée to the best houses.¹⁵⁵ The private life of Athens, on this view, was firmly on a pottery rather than a gold or silver standard, but it is a view for which it is difficult to find support in the evidence we have from antiquity.

Of course it is true that pottery was a material which was put to good use,¹⁵⁶ and some potters may have made a respectable living. The proverbial dismissal of the 'wealth of a potter' as something 'cracked, unsound and easily broken'¹⁵⁷ may well have had its origin at a period in Greek history later than the fifth century, but it is not enough to point, with A. W. Johnston, to 'some of the elaborate dedications made by potters on the Akropolis' in order 'to judge how many potters may have grown wealthy in their profession'.¹⁵⁸ The fact is that even the most socially prominent citizens of the Ceramicus deme could be described as *Kerameus* on inscriptions, and it is arguable that in the crucial texts the word designates deme, not trade. Leagros, son of Glaukon, was a member of the Athenian aristocracy,¹⁵⁹ but is described as *Kerameus* on an ostrakon.¹⁶⁰ Again, a certain Protonikos is described in separate inscriptions as *ek*

¹⁵¹ The best account of Beazley's golden youth is to be found in the early chapters of J. Sherwood, *No Golden Journey, a biography of James Elroy Flecker* (London 1973). His life-long admiration for Maynard Keynes and Lytton Strachey (Ashmole [n. 146] 446) may not be without significance. On their intellectual background, see P. Levy, *Moore: G. E. Moore and the Cambridge Apostles* (London 1979). Beazley's friendship with the silversmith C. R. Ashbee (they travelled round Sicily together in 1910) will scarcely have given him reliable insights into the traditions of working in precious metals. Ashbee (who in 1898 bought up the printing machines of the Kelmscott Press) prided himself on not employing silversmiths 'with trade experience; such experience was, in the eighties when we began our work, regarded rightly as rather a detriment': C. R. Ashbee, *Modern English silverwork* (London 1909) 5. I am grateful to Prof. W. G. Moon and Mr R. S. Sennott for information about Ashbee.

¹⁵² G. Naylor, *The Arts and Crafts Movement, a study of its sources, ideals and influence on design theory* (London 1971); R. J. Clark, *The Arts and Crafts movement in America 1876–1916* (Princeton 1972) esp. 119–20: 'It was in Cincinnati that the American art pottery movement began.' In 1872 there was 'instituted a class in china painting for socially prominent women at the Cincinnati School of Art; . . . enthusiasm for this new medium spread quickly in the city, for not only did it satisfy the ambitions of an age bent on culture' but, in the words of a contemporary observer, 'tidings of the veritable renaissance in England under the leadership of William Morris and his associates had reached [the United States]'.
¹⁵³ Strong (n. 53) *loc. cit.*

¹⁵³ Strong (n. 53) *loc. cit.*

¹⁵⁴ Thus H. A. Shapiro claims that Attic pots were decorated by 'great artists encouraged by prosperous and appreciative patrons': 'Courtship scenes in Attic vase-painting', *AJA* lxxxv (1981) 137.

¹⁵⁵ J. Boardman, *Athenian red-figure vases: the archaic period* (London 1975) 30. Contrast Hdt. ii 167: 'whether the Greeks borrowed from the Egyptians their notions of trade, like so many others, I cannot say for certain. I have remarked that the Thracians, the Scyths, the Persians, the Lydians, and almost all other barbarians, hold the citizens who practise trades, and their children, in less repute than the rest, while they esteem as noble those who keep aloof from handicrafts, and especially honour such as are given wholly to war. These ideals prevail throughout the whole of Greece, particularly among the Lacedaemonians. Corinth is the place where mechanics are least despised' (trans. Rawlinson). But see n. 176, to account for the comparative respectability of gold- and silversmiths in most societies.

¹⁵⁶ Cf. Ath. i 28c: . . . κέραμον, χρήσιμον οἰκονόμον.

¹⁵⁷ Diogenian. v 97, κερამέως πλοῦτος: ἐπὶ τῶν σαθρῶν καὶ ἀβεβαίων καὶ εὐθραύστων; cf. v 98, κερამεὺς ἄνθρωπος: ἐπὶ τοῦ σαθοῦ.

¹⁵⁸ Johnston (n. 79) 35; cf. I. Scheibler, *Griechische Töpferkunst, Herstellung, Handel und Gebrauch der antiken Tongefässe* (Munich 1983) 121–33.

¹⁵⁹ For what can be known of the *vita* of Leagros, see E. D. Francis and M. Vickers, 'Leagros kalos', *PCPS* xxvii (1981) 97–136, pl. 1.

¹⁶⁰ F. Willemsen, 'Die Ausgrabungen im Kerameikos 1966', *Arch. Delt.* xxiii (1968) Chron. 29.

Kerameon and *Kerameus*,¹⁶¹ and in both cases it is his demotic status which is in question, not his trade. Thus the famous Acropolis inscriptions, even those referring to the likes of Andokides or Euphronios,¹⁶² may not refer to potters. Another piece of evidence, the relief of an old man holding cups set up by the dedicant as a tithe,¹⁶³ in all probability represents a metalworker rather than a potter.

If we approach the literary sources¹⁶⁴ with the possibility in mind that the Greek plutocracy preferred to dine off silver and gold plate, and that craftsmen could gain fame and fortune by indulging their tastes, then many features of the derivative pottery begin to make more sense. Most of the places where Pindar sang for his supper score very low entries (or do not score at all) on the lists of findspots of attributed Attic black- and red-figure pottery.¹⁶⁵ It is not just that some places have been excavated more thoroughly than others; rather that Pindar's clients lived for the most part in communities where there was not a large bourgeoisie in a position to ape their richer neighbours. It is difficult to imagine Pindar attending any social function at which the drinks were served in ceramic containers, and the Theban neighbour appointed to look after Pindar's own possessions was probably the curator of a choice collection of plate.¹⁶⁶ Becker's *Charicles*, a work sadly neglected today, in fact gives an accurate picture in general terms of the level of luxury that could be achieved at an Athenian dinner party.¹⁶⁷ Everything is of plate, and no reference is made to pottery. The picture is slightly flawed in that Athenaeus is raided indiscriminately, but even if one restricts one's attention to information in Athenaeus relating to the fifth century alone, the impression of prevalent luxury we receive is the same. Athenaeus reports having himself seen a fifth-century metal cup of undoubted splendour, and his description of it, which has never to my knowledge been considered in the context of fictile

Thanks are due to Professor Willemsen for sending me a photograph of the ostrakon describing Leagros as *Κεραμεύς*, and to Dr D. M. Lewis for drawing attention to the original publication in this context.

¹⁶¹ *Πρωτόν[ικος] Κερ[αμει]ύς*, IG i³ 465.123–4. Dr Lewis kindly draws attention to *Πρωτόνικος ἐκ Κεραμείον Ἐπιχάρος*, IG i³ 278.1.

¹⁶² A. E. Raubitschek, *Dedications from the Athenian Akropolis* (Cambridge, Mass. 1949) nos 178, 225. Apart from Raubitschek's 'potters' there are, surprisingly, no dedications made by demesmen of Kerameis (see the topographical index pp. 552–3) some of whom we can be sure were engaged in trades other than pottery. The other 'banausic' inscriptions (discussed 464 f.) perhaps require reassessment. There is no difficulty in seeing an architect (no. 196), a shipbuilder (no. 376), or even a tanner (no. 58) as wealthy and successful businessmen. It is the presence of a *πλύντρια* (no. 380) and *κναφεῖς* (nos 49, 342) which is thought to lower the tone. This would be to underestimate the role of textiles at Athens. They constituted heritable wealth (Dem. xxvii 10); they might be held as security against a loan ([Dem.] xlix 22), and they are listed in temple inventories (e.g. in the Braurion: IG ii² 1514–29), none of which is true for pottery. The care of textiles will have been a serious and expensive matter. Philocleon *ap. Ar. Vesp.* 1127–8 spent 'a whole day's pay' on cleaning a rag fifty years old: 'how much worse it would be with a costlier garment' (Rogers *ad loc.*). Plutarch (*Mor.* 830e) includes *ἀναβάφους* among the characteristic signs of luxury. Prof. Raubitschek kindly reminds me that Acropolis inscriptions which read *ὁ κεραμεύς* cannot be demotic and must refer to craftsmen. The fact is, however, that this expression only exists in restorations made in the belief that the inscriptions in question concern 'potters'. No. 179 could easily be restored *Ἐλευθεριε[ύς] ἐφ*

example, and the *ὁ* in no. 225 is unwarranted.

¹⁶³ H. Payne and G. M. Young, *Archaic marble sculpture from the Acropolis* (London n.d.) pls 129–30; J. D. Beazley, 'Potter and painter in ancient Athens', *PBA xxx* (1944) pls 3.3 and 4.

¹⁶⁴ J. Bažant, in 'Homeric gold and Athenian pottery', *Studies on the use and decoration of Athenian vases* (Prague 1981) 4–12 has suggested that Xen. *oec.* ix 6–9 be added to the scanty corpus of texts relating to ancient pottery. He believes that painted vases possessed a symbolic value and were consequently kept with the family treasures. The Greek text does not, however, bear the weight which Bažant wishes to place on it; this notwithstanding his argument is important in that it represents the only possible alternative to the hypothesis put forward here.

¹⁶⁵ Thus Opous, Himera, Orchomenus and Aetna score 0, Cyrene 7, Syracuse and Thebes 29, and Aegina 32.

¹⁶⁶ Pind. *Pyth.* 8.58; a reference I owe to Dr N. J. Richardson. Cf. Artabazus' speech at Hdt. ix 41: 'Coined gold was plentiful in the camp, and uncoined gold too; they had silver moreover in great abundance, and drinking cups. Let them not spare to take of these, and distribute them among the Greeks, especially among the leaders in the various cities...' (trans. Rawlinson). The fact that the distribution was never made (at least until after Plataea) is not important; Artabazus accurately assessed the tastes of Greek plutocrats.

¹⁶⁷ W. A. Becker, *Charicles, or illustrations of the private life of the Ancient Greeks*⁴ (London 1874) 89–108. For a thoroughly misleading account (*pace* O. Murray, *Early Greece* [London 1980] 307), see M. Vickers, *Greek Symposia* (London n.d.).

vases, contains many helpful clues to the solution of some of the problems which currently beset the study of painted pottery.

VI. DESIGN, EXECUTION AND PATTERNS

Athenaeus says that he had himself seen an 'Heracleot cup' with 'an artistic engraving representing the sack of Troy' and an inscription: 'The design is by Parrhasius, the work by Mys. I am the representation of lofty Ilium which the sons of Aeacus captured.'¹⁶⁸ Elsewhere, we learn that the metalworker Mys and the artist Parrhasius often worked together in this way.¹⁶⁹ The inscription on the cup is extremely important in that it clearly indicates a division of labour between the two men involved: the one who made the original design, and the one who carried it out. The terms employed are recognisable poetical equivalents of ἔγραψεν and ἐποίησεν: γράμμα is obvious, and there is but a small difference between τέχνη and ποιήσις. This division of labour between an artist and a silversmith is well-known at other periods. Think, for example, of the drawings for the most elaborate plate by artists such as Holbein¹⁷⁰ or Giulio Romano.¹⁷¹ Such drawings made by court artists would be used by silversmiths as models for their work. Many, indeed, of Parrhasius' drawings—called, significantly, *graphides*—were still extant 'on wooden tablets and parchment' in Pliny's day, from which craftsmen were said to profit.¹⁷²

The application of such a distinction between design (*γραφή*) and manufacture (*ποιήσις*) to the well-known, but little understood, world of the Attic potter will do much to remove many of the inconsistencies inherent in present interpretations of the evidence and also raise interesting questions regarding the true nature of the images on the extant pots. The extremely rare ἔγραψεν signatures are universally assumed to be indications of the autograph hand of the artist who created his compositions as he worked directly on the vase. If, instead, we take them as being intended to refer to the artist who made the original design then we can perhaps explain such discrepancies as the existence of the cups bearing the name of Douris, but attributed to the hand of Beazley's 'Triptolemos Painter';¹⁷³ we can explain the existence of vases by no less than three hands and possibly four bearing the legend Πολύγνωτος ἔγραψεν.¹⁷⁴ It may now be possible to explain the perennial problem of Euphronios' career. At present the 'great artist' is supposed to have given up painting for potting or management (both explanations are given for ἐποίησεν).¹⁷⁵ If, however, Euphronios began as a silversmith's designer, it would be a step up

¹⁶⁸ Γράμμα Παρρασίοιο, τέχνα Μυός· ἐμμι δὲ ἔργον / Ἰλίου αἰπεινάς, ἂν ἔλον Αἰακίδαί, Ath. xi 782b. The date of Parrhasius' and Mys' collaboration is disputed, but, as D. L. Page observes, there is no reason to dismiss this epigram as a late forgery: *Further Greek epigrams* (Cambridge 1981) 495.

¹⁶⁹ Paus. i 28.2.

¹⁷⁰ E. His, *Dessins d'ornements de Hans Holbein* (Paris 1886).

¹⁷¹ J. F. Hayward, 'Ottavio Strada and the goldsmith's designs of Giulio Romano', *BurlMag* cxii (1970) 10–14; F. Hartt, *Giulio Romano* (New Haven 1958) figs 130–47.

¹⁷² Plin. *NH* xxxv 68: 'et alias multa graphidis vestigia exstant in tabulis ac membranis eius, ex quibus proficere dicuntur artifices'. Cf. Theoc. *Id.* 15.80–1, where Praxinoa is amazed at a carpet in the royal palace at Alexandria: ποῦνι Ἀθαναία, ποῖαί σφ' ἐπόνασαν ἔριθοι, / ποῖοι ζωογράφοι τὰκριβέα γράμματ' ἔγραψαν. The carpet makers are clearly *not* the designers. For parchment before Pergamum, cf. Hdt. v 58 and G. R. Driver, *Aramaic documents of the fifth century BC* (Oxford 1957) 1–3: 'ubiquitous but costly'.

¹⁷³ The vessels in question have recently been

discussed by J. R. Guy, 'A ram's head rhyton signed by Charinos', *Arts in Virginia* xxi.2 (Winter 1981) 14, n. 70.

¹⁷⁴ 'Polygnotos', the 'Lewis Painter', the 'Nausicaa Painter', and Beazley, *ARV²* 1057, no. 99 (on which see M. Robertson, *JHS* lxxxv [1965] 97).

¹⁷⁵ Beazley (n. 185) 25, but cf. M. Robertson's candid statements: 'The evidence is difficult to evaluate and appears contradictory', and 'The signing practice on Greek pottery seems to be totally haphazard' ('Epoiesen" on Greek vases: other considerations', *JHS* xcii [1972] 180, 182). For arguments in favour of a manager, see R. M. Cook, '"Epoiesen" on Greek vases', *JHS* xci (1971) 137–8; M. M. Eisman, 'A further note on *epoiesen* signatures', *JHS* xciv (1974) 172. Potter: Robertson 181. For a long and thoughtful study of the question, see R. Rosati, 'La nozione di "proprietà dell'officina" e l'*epoiesen* nei vasi attici', *Atti della Accademia delle Scienze dell'Istituto di Bologna, Classe di Scienze Morali* lxxv (1976–77) 45–73. Beazley claimed (n. 163) 26, that the norm for such inscriptions when they occur together is for them to read 'X *epoiesen*, Y *egrapsen*', and his unconscious prejudice in the matter caused him occasionally to invert the expressions so that such indeed appeared to be the case. An example is provided by a

the financial and social ladder if he eventually became a silversmith himself.¹⁷⁶ It may well be for this reason that we find him (and Andokides, who was probably in real life the silversmith who introduced gold-figure to Athens) making dedications on the Acropolis. The names of the designers would occasionally find their way onto the vessels decorated by the painters of down-market fictile vases, where a few have survived.¹⁷⁷ It has been argued that individual fictile vases have exerted an influence of their own, even beyond the frontiers of Attica.¹⁷⁸ It may make for a more economical argument to postulate the existence of patterns of the kind we know Parrhasius to have left behind him.

Designs on wood or parchment would have been a minimal charge on the cost of a vessel in silver and gold, but their prohibitively high cost in the context of pottery decoration alone has contributed much to the idea that vase-painters worked directly on the pots without any graphic models to hand.¹⁷⁹ The continuity of motifs and the repetition of designs—even if only of the kind to be seen on two roughly contemporary fictile vases in the Ashmolean (PLATES Vc, VIa)¹⁸⁰ can, however, best be interpreted against the background of silversmiths' drawings. When similar situations arise in the context of the transmission of manuscripts, it is normal practice to postulate a common archetype.¹⁸¹ This is a perfectly acceptable procedure in the field of textual criticism, but it is not one normally applied in the study of vase-painting. Only E. Hudeczek and M. Schmidt appear to have used it, and they simply postulate archetypal vases, not separate drawings.¹⁸² The possibility that there were silversmith's designs available for vase-painters to use may put a different complexion on the numerous errors,¹⁸³ variations in spelling,¹⁸⁴ garbled expressions¹⁸⁵ and nonsense inscriptions,¹⁸⁶ as well as on the elaborate distinctions which Beazley drew between a painter and a vase in manner, and between 'manner' and following, workshop, school, circle, group, influence, kinship and so on.¹⁸⁷ Many of these distinctions may prove to retain a certain value, but the phenomenon of the 'painter'—the creative artist—and his satellites of one kind or another is perhaps better seen as a system of

standlet in New York (31.11.4) which bears an inscription which can only be read, as G. M. A. Richter rightly saw (*BullMMA* xxvi [1931] 289–90) Κλέτιας : [ἔγρα]φσεν Ἐργότιμος : ἐποίησεν (there is a substantial gap between ἐποίησεν and Κλέτιας; Beazley, however, printed them the other way round (*ABV* 78 no. 12).

¹⁷⁶ Cf. H. Honour, writing in the context of medieval and later goldsmiths: 'The fact that they worked in the very materials of wealth set them apart from all other artists and craftsmen' and '... the goldsmith was the most highly honoured of all artists because he worked in the most precious materials' (*Goldsmiths and silversmiths* [London 1971] 20).

¹⁷⁷ G. M. A. Richter has observed the transmission of part at least of a silversmith's signature from metalwork to clay: 'It is noteworthy that on some terracotta quadrigae the word ἐποίη appears faintly in relief between the spokes of Dionysus' chariot wheels. Presumably it was part of the signature of the original silver bowl. . . .' ('A Greek silver phiale in the Metropolitan Museum, and the light it throws on Greek embossed metalwork (*torcutice*) of the fifth century B.C. and on the "Calene" phialai mesomphalai of the Hellenistic period', *AJA* lxx [1941] 388).

¹⁷⁸ E.g. the Boeotian vases discussed by J. H. Oakley, *The Phiale Painter* (Diss. Rutgers 1980) 16.

¹⁷⁹ Beazley (n. 163) 38; cf. Noble (n. 1) 50.

¹⁸⁰ 1890.22 (= *CVA* Oxford i, pl. 18.12) and 1916.68 (= *ibid.* pl. 29.1). Beazley compares with the latter a *stamnos* with 'the same subject . . . but from a different hand, in the Cabinet des Médailles (388)' (*ibid.* p. 24).

¹⁸¹ H. Erbse, 'Überlieferungsgeschichte der grie-

chischen klassischen und hellenistischen Literatur, methodische Vorbemerkungen', in *Geschichte der Textüberlieferung der antiken und mittelalterlichen Literatur* (Zurich 1961) 210.

¹⁸² E. Hudeczek, 'Theseus und die Tyrannenmörder', *ÖJh* 1 (1972–75) 134–49; M. Schmidt, 'Zu Amazonomachiedarstellungen des Berliner Malers und des Euphronios', *Taenia, Fests. R. Hampe* (Mainz 1980) 153–72, pls 37–41.

¹⁸³ E.g. Ἐπιλυκο[σεγρα]φσενκαλος in a series of pots inscribed Σκυθεςμεγραφσεν and Ἐπιλυκοςκαλος (Beazley, *ARV*² 82–6).

¹⁸⁴ E.g. the various spellings of Phintias: Φιντίας, Φιντις, Φιτίας, Φιλτίας (*ibid.* 23–4); Memnon: Μνεμενον, Μεμνον, Μεμμνον, Μεμνονο, Μεμνομος, Μεμον (*ibid.* 56–66); Pamphaios: Παμαφιος, Πανφαιος, Πανοαιος, Πανφανος, Πανθαιος (*ibid.* 71, 124).

¹⁸⁵ E.g. κοσθενεσπει 'complete aft, and probably fore', Beazley, *ibid.* 161 no. 1.

¹⁸⁶ On these see now Giudice, 'Osservazioni sul commercio dei vasi attici in Etruria e in Sicilia: su una lekythos del pittore della Gigantomachia con l'iscrizione "LASA SA"', *Cronache di Archeologia* xviii (1979) 6–7.

¹⁸⁷ For a recent exercise in exegesis, see M. Robertson in L. Burn and R. Glynn, *Beazley addenda* (Oxford 1983) xi–xvii. J. Boardman is less enthusiastic (n. 155) 9: 'not all students will be able to follow all these distinctions'. See too P. Bruneau: '... le souci de l'attribution stérilise depuis des décennies l'étude de la céramique attique' ('Situation méthodologique de l'histoire de l'art antique', *AC* xlv [1975] 451).

dependence on models made by genuinely creative artists for craftsmen working in another and more noble medium. This is not to say that there was no independent artistry amongst pot-painters: the existence of what have been termed *pentimenti*¹⁸⁸ on vases as well as the thousands of undeniably 'hack' pieces are enough to show that a silver design does not necessarily lie behind every decorated pot. All pot decoration, however, was done in a manner which consciously echoed the appearance of more precious objects whether of silver, gold, ivory or bronze. The only pots which will have borne any immediate resemblance to wall or panel painting will be those painted on white ground. The fact that major painters, e.g. Parrhasius and Polygnotus, also made designs for silverware may account for the existence of fictile vases with figures disposed up and down the field, but the possibility should not be overlooked that the originals may have been designed to get in more figures for less gold. Beazley's 'Berlin Painter', moreover, may have taken some of his best known motifs from the work of a silver designer who economically placed but a few gold figures on the vessels he conceived.¹⁸⁹

In summary, it has been argued that the fictile vases which have survived from classical antiquity should be regarded as owing not simply their shapes but the very nature of their decoration to metalworking procedures. The limited range of colours used on Attic pots—black, orange-red, purple and white—can be accounted for in terms of silver, gold, copper and ivory. That decorated pots were indeed intended for down-market consumption is clear from the fact that the prices of silver vessels were several hundred times greater than those of their ceramic equivalents. The archaeological record is not a trustworthy guide, for most of the vessels whose designs inspired the painters of pottery have gone into the melting pot—the fate of most objects made in precious metals throughout history—but enough evidence survives both to illustrate the techniques involved and to show that the indications of comparative luxury among the wealthier members of Athenian society which we find in the literary and epigraphic record are not exaggerated. The 'worthy potter' is a scholarly fiction, the sources of which are to be found in Utopian philosophies and their latter-day manifestation in the Arts and Crafts movement. It is not a concept which would have been recognised outside this intellectual tradition. Rather than being creative artists serving the upper echelons of Athenian society, potters and the decorators of pots had to follow fashions created for craftsmen working in a nobler and more costly medium than clay.

The artists who designed silverware are the individuals to whom the creativity, learning and social awareness hitherto attributed to the decorators of pots should be credited. It is they who created the imagery preserved on our vases—an imagery which from any standpoint reflects the interests in war, in the palaestra, at the hunt, at table, or in bed, of a leisured élite.¹⁹⁰ If we think now of potters and pot-painters as applying their undeniable skill and ingenuity to making their products recall vessels made in other materials for the wealthy, then many difficulties disappear. If the arguments put forward here are correct, then the rôle of Greek pottery in antiquity needs to be reassessed. For archaeologists to dwell on pottery for its own sake is bound to lead to misleading conclusions. If instead we use it to reconstruct and amplify the picture of ancient society we receive from the literary sources we shall be on surer ground; only when Attic pottery is replaced in its true position in the scale of traditional values can the genuine lessons it can teach us be learnt.

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Ashmolean Museum, Oxford

¹⁸⁸ P. E. Corbett, 'Preliminary sketches in Greek vase-painting', *JHS* lxxxv (1965) 25.

¹⁸⁹ For a rough idea of what these drawings may have been like, see D. C. Kurtz and J. D. Beazley, *The Berlin Painter* (Oxford 1983).

¹⁹⁰ Cf. A. M. Snodgrass, *Archaic Greece, the age of experiment* (London 1980) 193: '... vase-painters sought to divert their masses with the spectacle of the upper classes at play'.



(a) Grave goods from Dalboki, Bulgaria (l-r, silver, pottery, silver, silver). Oxford, Ashmolean Museum.



(b) English pottery imitating silver (after Pazaurek).



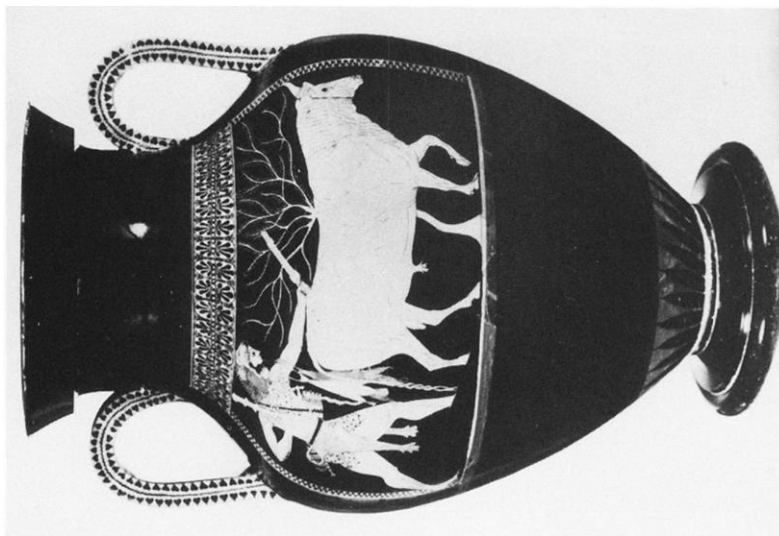
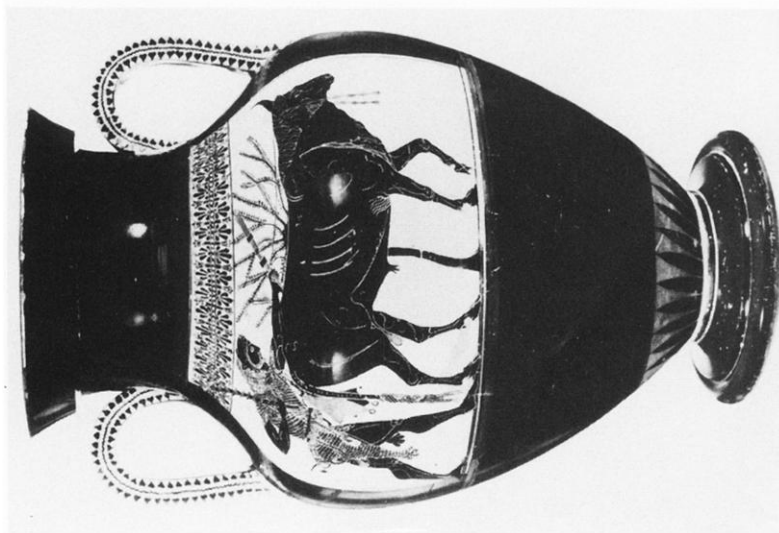
(c) Attic silver-gilt cup tondo from Seven Brothers. Leningrad, Hermitage Museum.



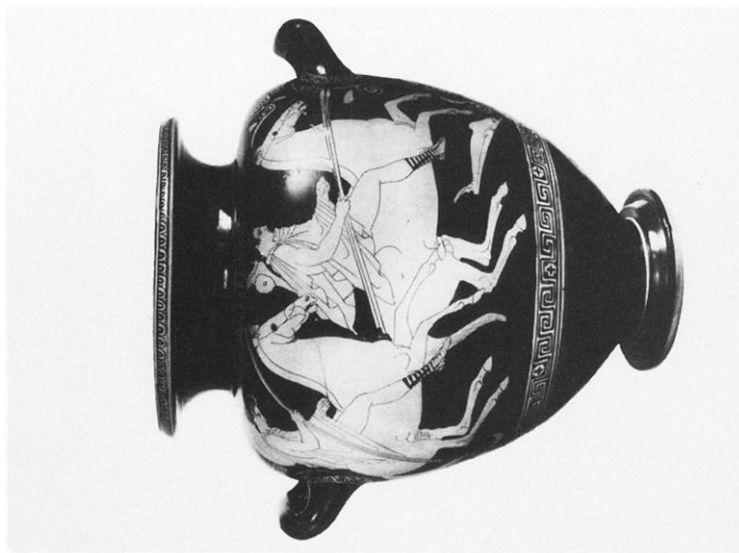
(d) Some white-ground Attic vases in the Ashmolean Museum, Oxford.



(e) Attic black-figure *lekythos*. Oxford, Ashmolean Museum.

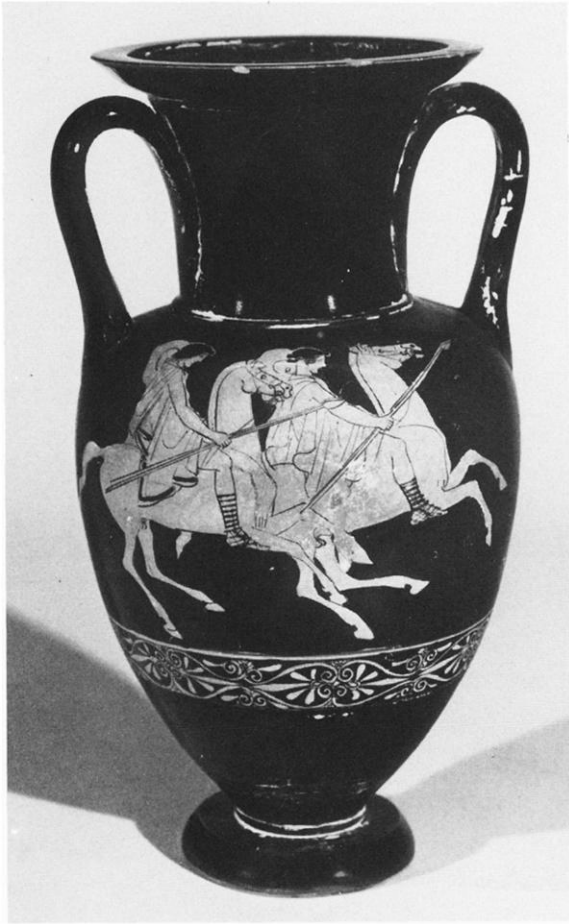


(a)-(b) Attic red-figure 'bilingual' amphora, Boston, Museum of Fine Arts.



(c) Attic red-figure *stamnos*. Oxford, Ashmolean Museum.

METALWORK AND ATHENIAN PAINTED POTTERY



(a) Attic red-figure 'Nolan' amphora. Oxford, Ashmolean Museum.



(b) Greek silver *hydria*. Oxford, Ashmolean Museum.



(c) Apse at east end of bridge.



(d) Breakwater from south.



(e) First phase vaults from west.

(a)–(b) METALWORK AND ATHENIAN PAINTED POTTERY
(c)–(e) THE SANGARIUS BRIDGE AND PROCOPIUS