The Representation of Greek Hoplite Body-Armour in the art of the fifth and fourth centuries B.C.

A thesis submitted to the University of Oxford
for the degree of Doctor of Philosophy

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Volume 1

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ABSTRACT

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The thesis presents a detailed, comparative analysis of the representations of the body-armour associated with the Greek hoplite, the heavily-armed foot-soldier, as depicted in art, ca. 500-300 B.C.

The Introduction defines the topic and its aims and explains the approach adopted. Chapter 1 deals with the representations of the different types of helmet, namely the Corinthian, Attic, Chalcidian, Illyrian and Thracian and the pilos. Chapter 2 discusses the armour worn on the torso, i.e. the improved bell-corselet, the muscle-corselet and the linen-corselet, and the frequent absence of these. In Chapter 3 the greaves (leg-guards) are considered. Each section looks at the literary evidence for the item, the originals, if any survive, and the artistic representations, primarily on Attic red-figure and white-ground vases, but also in sculpture, minor works of art, gems, rings, and coinage. The Conclusion summarises the findings and suggests some ways in which the theme might be extended in the future.

Three Appendices review the evidence for helmet crests, the origin of the Thracian helmet, and an unusual form of pilos (i.e. with a bend in the side-edge). A Catalogue of the Attic vases follows. The Figures present drawings of the surviving Corinthian helmets and most of the armour portrayed in the vase-paintings, while the Plates illustrate a representative sample of the material studied.

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Acknowledgements

In 1976-7 I was fortunate to be a member of a team employed in cataloguing the collection of the Greek Museum of the University of Newcastle-upon-Tyne. The booklet which the team produced under the direction of Prof. Brian Shefton had as its theme the ancient arms and armour and their artistic representations in the collection. The germ of an idea was sown, and I returned to Oxford in October 1977 to begin this thesis.

Since then, I have been helped by many friends and colleagues throughout the world. My visits to sites and museums to study their collections first-hand, especially in Europe, and my written requests for information or photographs have been well and patiently received. I must thank the following in particular: the staff of the Ashmolean Museum, Oxford, the Fitzwilliam Museum, Cambridge, the British Museum, London and the Armouries of the Tower of London; in Greece, the National Museum and Agora Museum in Athens; the Archaeological Museums in Corinth, Delphi, Eleusis, Isthmia, Olympia, Thebes and Thessaloniki; in Italy, the Vatican Museums, the Museo Nazionale Etrusco di Villa Giulia, Rome, and the national/archaeological/civic museums in Agrigento, Bari, Bologna, Ferrara, Florence, Naples, Palermo, Syracuse and Tarquinia, as well as the photographic archive of the German Archaeological Institute in Rome; the Kunsthistorisches Museum and University Museum, Vienna; the Antikensammlungen, Munich; the Staatliche Museen and Antikenmuseum, Berlin; the Badisches Landesmuseum, Karlsruhe; the Martin von Wagner Museum, Würzburg; the Musées Royaux d'Art et d'Histoire and the Bibliothèque Royale Albert 1er, Brussels; the Allard Pierson Museum, Amsterdam; the Louvre and the

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INTRODUCTION

> ὁπόσοι δ'ἂν αὐτῶν παῖδας καταλίπωσιν, ὅταν ἐς τὴν ἡλικίην ἀφίκωνται, διδότωσαν αὐτοῖς οἱ πολέμαρχοι, ἅμ μὲν ἄρσενες ἔωσιν, ἑκάστωι κνημῖδας, θώρηκα, ἐγχειρίδιον, κράνος, ἀσπίδα, δόρυ, μὴ ἐλάσσονος ἄξια [τ]ριῶν μνῶν...
>
> for all of those [who have died in battle] who have left children, when they come of age, let the polemarchs give each of them, if they are male, greaves, a corselet, a sword, a helmet, a shield and a spear, worth not less than 300 drachmai.[1]

The subject of this thesis is the artistic representation of the body-armour associated with the Classical Greek hoplite.

Our basic material for study is to be found in a variety of media, and our primary source will be the Attic red-figure and white-ground vases on the 5th and, to a small extent, the 4th century B.C. Alongside these we can set contemporary sculpture, wall-paintings, gems and rings, coinage and other minor works of art, from a wider range of sites. In order to have some form of check on these representations, we will also look at the original examples which have survived, and the literary evidence from the ancient authors.

The body-armour with which we are concerned, consists of various types of helmet, corselets and greaves, that is, very specifically the armour which was worn on the body. The study was originally extended also to the shield which was carried on the left arm of the hoplite and which may be considered his first line of defence. A complete chapter was prepared along the same lines as the rest, but this has, unfortunately, had to be

omitted because of a lack of space in the final work, the omission of this part being less serious than that of another to the overall theme.

This armour is further restricted in time and type: in time, to the Classical period between ca. 480 and ca. 325 B.C. with some extension at each end back to the beginning of the fifth century and forward to the end of the fourth, with the aim of setting the material into its wider chronological context; in type, specifically to the armour worn by the hoplite, the heavily-armed infantryman of ancient Greece, who is so-called after all the arms and armour, τὰ ὅπλα, which he carried, not just his shield, the Classical Greek word for which is ἡ ἀσπίς, -ίδος . As will be quickly apparent, however, the representations are in no way restricted solely to figures whom we may call real hoplites, and a major area of the text is, in fact, concerned with the representations of this type of equipment on heroic/mythological/divine figures and their relationship to the ordinary figure. Accordingly, it must be understood that the topic is not concerned with the representations of hoplites and their iconography, but with the representations of hoplite armour which frequently, therefore, is studied on the persons of gods and goddesses, Amazons, Lapiths, heroes, even peltasts, riders and slingers.

This, then, is my definition of the topic. The primary aim is an in-depth analysis of the artistic representations, largely, it may be admitted, for its own sake. A very great proportion of the text will be readily seen to be descriptive. This is quite deliberate. It has been my experience that, when it comes to details of armour, the average classical archaeologist, in his study of a sculptor's or painter's style or the iconography of a scene, does not look, and, if he does look, he does not know how to interpret what he sees.[2] Considerable effort has, therefore, been put into a

full and precise description of each representation. No excuse is made for this, for none is thought necessary. The reader is invited to observe each object in the same depth to appreciate fully the extraordinary variety which quickly becomes apparent in the different media. To call a helmet simply a helmet, is to deny the artist credit for his careful choice of type, design and decoration.

Thus, the second major aim of the thesis is to detect and study the choices made by the artists in their presentation of the material. As we shall see, this becomes, to a great extent, a question of individual style. But, how accurate are the artists being, one may ask. Can we trust these artistic portrayals? Do they really show us Classical Greek armour as it was worn in reality, or are the artists embroidering the essential elements with fanciful decorative features? These questions are important, and the search for answers to them will be a recurring theme throughout the study.

So, we have a third objective. If we can see the details and we can detect an individual's style, can we also suggest the factor(s) influencing the artist's choice? Does a painter adhere to a formulaic tradition from which he deviates only rarely and with good cause? Are Amazons characterised as barbarians by their armour? Is a particular hero treated to a particular type of helmet or corselet by which, where we require an inscription, the ancient viewer would have at once recognised him or at least set him apart from ordinary mortals? Does the medium itself dictate or influence the representation? Are items portrayed on coins or gems any the less exact or detailed because of the small scale and limited field within which the engraver had to work?

A fourth aim takes us back to the question of reality. In our attempt to learn as much as possible by comparing all the information available

from each source, what more can we learn about contemporary practice and regional variety? Is there a recognisable difference, for example, between the evidence from South Italy and that from Greece, or between Greece and Asia Minor or Thrace? And what changes take place over the period in question? Can we define the point at which one object or feature makes its appearance and another falls out of the pictorial tradition and/or use? Are the last two, in fact, the same thing or different?

These, then, are some of the main aims behind the thesis. A few words of explanation follow on the actual approach adopted.

The chapters are divided simply into head-, body- (i.e. torso-) and leg-armour. The first on the helmets is by far the longest because of the variety of types represented in this period. Each type is considered separately, and the format employed is essentially the same for chapters 2 and 3. Thus, we begin with whatever literary evidence may be available and then turn to the originals and artistic representations. The last two sections vary in order according to the best method for presenting them in each case. Hence, at one point the originals may come first, at another last, or, in the case of the Attic helmet and linen-corselet, not appear at all. A brief conclusion in each section or chapter summarises the findings and ties the material together by comparing all the information gained from the different media.

The literary references are self-explanatory. They are not at all exhaustive - indeed, it must be understood from the start that the examples cited throughout the thesis are not intended to be, nor could be, complete - so great is the body of material available for this topic. Thus, the originals of each item are presented through a representative sample listed in catalogue form. A detailed commentary then follows, and this catalogue-

commentary approach is adopted throughout for most of the art as well. Frequently, the two elements are combined together for easier reading (but even so the parts which amount to descriptive catalogue are considered to be outside the word count).

This system does not apply, however, to the sections dealing with the vase-paintings. Here, because of the enormous number of examples involved a separate catalogue has been compiled in which each vase is given a simple number. This number enables the reader, should he so wish, to return to an original illustration of the vase in question: it avoids the necessity of repetitive references to the details of museum etc. which are irrelevant here. But, for the majority of examples, it is hoped that the sketches provided in the figures and the few photographic plates will be sufficient.

A variety of approaches has been adopted with regard to the vase evidence, some more heavily statistical than others. The statistical approach was found to be necessary where the quantity of the material studied prevented the detailed discussion of each example. The alternative, more individualistic approach proved more satisfactory, when only a small number of examples was involved, for example, for the Illyrian helmet. Despite these differences, I have aimed at the same order in the discussion each time, working through the various elements of which the piece of armour is composed towards a consideration of the contexts and finally a list of the painters (and the vase catalogue numbers) involved. A brief outline is then given of the respective styles of those who supply us with enough examples to make this viable. The conclusions are regularly presented in tables (which are also excluded from the word count), and all the conclusions must be understood to be valid only for the material included in the sample. I am well aware of the fact that additional material could well alter these conclusions,

especially, for example, in a discussion of a painter's style, when I am not dealing with all his surviving attributed vases, let alone all those he ever decorated. It is for the reader to test alternative examples against the results I have obtained from my study, and it is my hope and expectation that the differences will be few and insignificant.

With regard to the figures, the drawings based on the vase-paintings do not purport to be exact replicas of the originals. This would be impossible to achieve for the quantity required. However, accuracy has been the aim throughout, and, where details are particularly questionable, this is stated. The source has, where possible, been the original vase itself - hence, the sample is largely restricted to the European collections I personally have visited. The sketch is in those cases based either on my own drawing made with the vase in front of me, or on my own photographs and notes. The photographs are specifically detailed shots of the relevant armour with no attempt necessarily to include even the whole scene, let alone the shape of the whole vase. In some cases, however, this ideal was unattainable, and I have then fallen back on published or purchased illustrations which, unfortunately, allow distortions and inaccuracies to creep in. In a few instances, for example, the contraction of a helmet painted on the shoulder of a vase as seen on a photograph will be detectable in the figures. Once this is taken into account, the result, however, is still satisfactory for our purpose.

Further, different methods of presentation were tested in the figures. The Attic helmets are presented in broken-down form, the aim here being to concentrate only on the particular area under study at the time, for example, the frontlet or the neck-guard. The same approach was adopted for the Chalcidian helmet, but, because of the very great number of these in the

study, the drawings have not been included individually in the figures. (There were 475 Chalcidian helmets as opposed to 168 Attic!) The method employed for the Corinthian helmet, that is, one of individual drawings of the whole helmet, was found to be the most successful where the number of examples permitted, and, accordingly, it is used also for the Illyrian and Thracian helmets and the pilos. Corselets again amount to so large a total that only the metal-corselets are treated individually, while the linen-variety is presented in summary form according to the elements of which it is composed. Finally, greaves, being essentially identical with the shape of the leg and numerous, are not illustrated at all in the figures. A few will, of course, be seen on the plates.

The photographic illustrations are intentionally few in number, since the drawings serve better to highlight the particular items or elements of an item. The choice, therefore, has been primarily based on the aim of providing a representative sample of the objects studied in the thesis. Hence, we have some originals, vase-paintings, sculptures and minor works of art which feature armour on them. As far as the vases are concerned, the aim has been to include some which remain unpublished and some for which illustrations are not readily accessible, and only secondly those which recur frequently in the discussion. A wide timespan has also been aimed at, but, because of the difficulties involved in capturing the details on fourth century vases only one of these is included - a number which actually reflects the proportion of Attic vases from this century in the whole thesis.

We come, then, to a consideration of the basis on which the catalogued material was chosen. For the minor works and coinage, my sources have been largely the popular works on these which have provided generally ample comparative material for this study. More emphasis has been put on the

sculpture and, most of all, the vase-paintings. With the sculpture again I have not searched for new, unpublished evidence, but in the main restricted myself to the numerous examples readily available in museums and publications. Just because a work is well-known and often photographed, does not make the armour on it any the less useful or interesting. Copies of Classical sculptures have not on the whole been included, for I have found the treatment of the armour suspect in several cases, and a study of the development of the Classical pieces in Roman copies would constitute a major work in itself.

The major body of evidence, then, has been the vases. I have not included black-figure (except on a few white-ground vases), because generally the detail required is not present on the fifth century examples. Nor have I looked at vases from outside Athens, despite the fact that some very fine and interesting martial scenes are represented, for example, on Boiotian vases. A further comparative study remains to be done there. A major omission has also been vases (and wall-paintings) from South Italy. It may be objected that since I have incorporated other artistic material and even originals from that quarter, the vases too should have been considered. This, unfortunately, would have extended the topic beyond reasonable bounds, and here research is already being undertaken by others.

I have, therefore, concentrated heavily on the Athenian vase-paintings in both the red-figure and the white-ground techniques. The choice of material has, where possible, been a random one dependent on what and how much time was available at each museum when I visited it. I have deliberately not looked for the unusual, exotic, highly decorated example at the expense of the ordinary, simple, undecorated one, or vice versa. In an equally random fashion a few vases (about 2% of the total) have found their way

into the catalogue, although they are housed in collections I have not seen. I have, in general, ignored the huge corpus of evidence which exists outside Europe, especially in the United States, but where I became aware of a vase from another area early on in my collecting, I have not subsequently edited it out, for that would have been to exercise a deliberate choice on the sample.

The catalogue contains 676 vases in all. Some have only one item of interest on them,others many. (Some, indeed, were originally included for a shield only, and, since the subsequent editing of this chapter, these are not referred to in the text as it now stands: the number concerned is small, and has no significance, for the results obtained are never dependent on the figure of 676.) Not every piece of armour on every vase has been considered in detail. Damage has frequently carried away the useful elements of an object which we may still recognise as, for example, a helmet-crest or pteryges, but we can say nothing more about it. Or the position of an item in a scene may mean that it is partially obscured and for our purposes effectively rendered useless. Full information has sometimes been unavailable to me, or in a few cases an object may be so unusual as to defy classification in the system adopted here. Where possible, however, everything which could be included in the text, has been.

The order in the catalogue follows firstly an iconographical one (based on Beazley's identifications of the contexts) in alphabetical order and within that a chronological one divided roughly into the periods of Late Archaic, Early Classical, Classical, Late 5th century and 4th century. Each vase then appears in alphabetical order of location and numerical order of inventory number. Details of shape, area of the vase concerned, painter, ARV, Para and CVA references and my plate reference (if any) are

also added. Finally, I give a reference to any illustration(s) I have found particularly useful for the depiction of the armour and sometimes reference to the latest illustration from the last decade when this is known to me. It is by no means intended as a complete and up-to-date bibliography, but a guide to the reader interested in the armour. A few vases appear two or even three times in this list with the letters, a,b or c after the number, when the context of the scene on another area of the vase comes in a different iconographical category - the single number for the vase as a whole is thereby maintained. An index to the catalogue numbers according to the museum numbers is appended.

Finally, a few minor points:

1. measurements are in centimetres, unless stated otherwise;
2. percentages are always approximate only;
3. the spelling of Latin and Greek names and site names follows no consistent rules, although, once one spelling has been adopted, I have tried to maintain that one;
4. abbreviations are standard ones or self-explanatory;
5. superscript numbers in the tables and text cannot be confused with note references for they always accompany a vase catalogue number - they indicate the number of times the item or feature in question occurs on that vase;
6. a dagger in front of a catalogue number means that that vase is illustrated in the plates, and, since the vases are there arranged in catalogue order also, no difficulty should be found in quickly identifying the picture of the vase referred to.

CHAPTER 1 - HELMETS

a. THE LITERARY EVIDENCE

The Homeric words for helmet include ἡ κόρυς , -υθος,[1] ἡ πήληξ, -ηκος,[2] ἡ τρυφάλεια ,[3] and ἡ κυνέη .[4] All of these appear occasionally later, especially in lyric passages, but the common Attic term is τὸ κράνος .

Herodotus believed that the Greeks' helmet and shield originated in Egypt.[5] Helmets made of bronze are recorded by Xenophon,[6] and in the Athenian Treasury Lists.[7] According to Plutarch[8] Alexander wore an iron helmet at Gaugamela; it shone like polished silver and had been made by one Theophilos. An iron neck-piece, set with precious stones, was fitted to it somehow.[9] Other highly decorated helmets are described by Euripides,[10] and Pausanias;[11] the former mentions sphinxes on the gold helmet of Achilles, the latter a Sphinx between two griffins on the helmet of the Athena Parthenos. The Theban cavalry whitened their helmets on the orders of Epaminondas,[12] but the method used is, unfortunately, not explained. Aristotle records that sponges were used to line helmets (and greaves);[13] he adds that they served to make the noise of the blow less. Presumably they also helped to cushion the shock.

The diminutive, τὸ κρανίδιον, is found in the Athenian Treasury Lists, once with reference to a "small helmet from the pedestal with gold cheek-pieces and an ivory crest",[14] and once regarding "little wings (? or flaps) from little helmets".[15] The verb, κρανοποιέω , appears in Aristophanes' Frogs (1018), used metaphorically of one who talks big

and warlike. A κρανοποιός is mentioned in an inscription,[16] and another bemoans his redundancy in the Peace (1255).[17] Aeneas Tacticus employs the periphrastic αἱ περικεφαλαίαι for ordinary helmets.[18]

The Homeric use of a crest on the helmet continued in the Classical period. Herodotus again attributed it to foreigners, this time Carians, and Alcaeus seems to support him.[19] The Greek word is ὁ λόφος , and Sophocles uses the adjective, εὔλοφος.[20] The material seems to have been horsehair,[21] usually white.[22] Triple crests are mentioned by Aeschylus[23] and Aristophanes;[24] the latter also refers to a case for a triple crest, and white, ostrich feathers.[25] Just how common such elaborate crests and feathers were is difficult to tell. Aristophanes makes fun of Lamachos' throughout the Acharnians.[26] Plutarch[27] says that Alexander was distinguished (διαπρεπής) by his crest, which had on either side a very large white feather; the crest and one feather were later broken off the helmet by a blow from a battle-axe in the course of the battle of Granikos.

One problem associated with the use of the term, ἡ κυνέη , is that it can equally mean a skin hat and not a helmet. Sometimes the presence of an adjective may make it clear which is which; for example, Alcaeus refers to crested, shining (λάμπραισιν) helmets,[28] and in the Treasury Lists one is bronze and gold-plated,[29] some bronze and smooth,[30] one iron,[31] and others large and bronze.[32]

A similar confusing situation exists with the word, ὁ πίλος, which generally means a soft, felt cap in Herodotus and Thucydides.[33] Once, however, in Aristophanes it is said to be bronze,[34] and Pollux includes the πιλοποιός among his makers of arms and armour.[35] There was, of course, nothing to prevent a hoplite from wearing a felt cap into battle

instead of a metal helmet. The Macedonian πίλος , called a καυσία ,[36] is described as providing shelter in a snowstorm, and yet as being a helmet in war, in an epigram by Antipater of Thessalonica.[37] As the rest of the poem makes clear, the felt variety is intended. The broad-brimmed πέτασος which was usually of felt, came to be the badge of the ephebes.[38]

Particular types of helmets became associated with certain cities and areas, and we might hope to find ancient corroboration of the names we give the different types today. Unfortunately, things are not so simple. Rarely is any further description of the shape provided beside the adjective indicating its origin. We cannot even be sure that that adjective does imply a particular type, rather than that the helmet was simply made in the city or area in question. For example, an Illyrian helmet is listed among the treasures in the Parthenon, but if it came from Lesbos, as it seems it did, was it made in Illyria or elsewhere in the Illyrian style?[39] Would it, in fact, have looked like the helmets we now call "Illyrian"? A Corinthian helmet is mentioned by Herodotus, but surprisingly in a Libyan context where it is worn by local girls![40] Helmets of Boiotian make are better represented; Xenophon recommends them for cavalry, as providing protection above the corselet without obstructing the vision.[41] Pollux too says they were 'famous', with the implication of 'best'.[42] Demosthenes stated that the Plataians who fought at Marathon were recognisable in Mikon's painting in the Painted Stoa by their Boiotian κυνᾶς (acc. pl.).[43] Presumably here helmets are meant, not hats, but what of Theophrastus' comparison of the silver-fir tree to the Boiotian head-gear?[44] Is the hat or the helmet meant? Were they in fact both the same shape, so the distinction becomes irrelevant?

The piloi were associated with Laconians[45] and Arcadians,[46] at least in the second century A.D., and the καυσία was treated as the Macedonian equivalent.[47] The petasos instead of the pilos was associated with Thessaly.[48]

b. THE CORINTHIAN HELMET

INTRODUCTION

The Corinthian helmet, as a practical piece of hoplite armour, really dates to before the Classical period. The earliest examples of it are taken to represent a high point for the technological skill and native ingenuity of the Greeks, being apparently an independent creation of Greek bronzesmiths in the late eighth century B.C.[1] For more than two centuries after its invention, it remained one of the most characteristic items of the hoplite's panoply, and it continued to be represented in art for longer still.

The helmet was manufactured out of one sheet of bronze which was hammered over a peg into the required close-fitting shape;[2] the whole head was thus protected, and only the eyes, nostrils and mouth were left exposed.

The development of the Corinthian helmet throughout the seventh and sixth centuries B.C. has now been made clearer, since Kukahn's first study of the originals and the representations in 1936.[3] Numerous examples are still being found at Olympia, and a large part of the early material has been published in detail, in particular by Emil Kunze.[4] It was he too who first (in 1955) distinguished the two main Late Archaic variants,[5] and the discussion which follows is in large part a summary of his work. Since the publication of Olympia Bericht VIII in 1967, interest has moved away from the Corinthian helmet, and no subsequent work has yet appeared to supplement or alter drastically Kunze's conclusions.

The question of the accuracy of the term "Corinthian" has already been adequately discussed by Kukahn and Kunze.[6] The reference to a κυνέῃ... Κορινθίῃ in Herodotus (4.180), as Kunze rightly pointed out, is not as

decisive as it appears at first sight, given the lack of a fuller description, the context of a Libyan tribe and a fight between girls. Furthermore, if Herodotus were referring to a contemporary situation of ca. 440-430 B.C., when, it has been suggested,[7] the Corinthian helmet may have been out of use in Greece for perhaps 40 years, the value of the use of the adjective becomes even more questionable. Is it possible that Herodotus was intending to imply that this tribe was employing, in this non-Greek situation, an old-fashioned type of helmet? Or should the adjective be taken merely to mean "of Corinthian workmanship" and not "of Corinthian type"?[8] More weight, therefore, has been put on the first and frequent representation of the type in Protocorinthian vase-painting, and its persistent appearance on the coins of Corinth and her colonies later. It is on the basis of this evidence, rather than on that of the literary reference, that in general one accepts the terminology as it stands.

THE ORIGINALS

In 1955 Kunze stated,

> It may be enough therefore, to indicate the problem and at the same time to draw attention to the fact that up to now not a single Corinthian helmet preserved in the original can with certainty or even only some probability be set in the Classical period.[9]

Twenty-eight years later this statement still holds true.[10] However, since the Corinthian helmet is an important artistic type throughout the fifth and fourth centuries, it seems desirable to include at this point a brief discussion of the Late Archaic evidence as background material.[11]

Catalogue

TYPE 1 (Fig. 1-8)

1. Athens, National Museum, inv. no. 10085. Provenance unknown, but likely to have been Mainland Greece. H. 24 W. 16 D. 25 Weight 1163 gr. (Kukahn). Lipperheide, 45 no.486 and 155 no.487; Kukahn, 92 no.154. (Fig. 1)

2. Athens, National Museum, inv. no. 14332. From Hermione in the Argolid. H. 25.5 D. 27.5. Festschrift Weickert 14 figs.4 & 5 (with earlier refs.). (Fig. 2)

3. Berlin, West, Lipp. 24. Provenance unknown. AA 1905 16-17 fig.3 (Schröder); Kukahn, 92 no. 155 (Not drawn)

4. Caltanisetta Museum. From near Barrafranca in central Sicily. Kokalos 8 (1962) 84 pl.9.2 (Orlandini); Ol Ber VIII 101. (Fig. 3)

5. Corinth Museum. T3164. From Grave no.262 in the North Cemetery. H. 31.5 W. 23 Weight ca. 900gr. ILN 9-8-1930 247 fig.13; AJA 34 (1930) 424-425 fig.17 (Shear); Kukahn, 92 no.152; Corinth XIII (1964) 95, 215-216 no.262-1 pls.36 and 80 (Palmer); Mitten, Cl Br 49-50 n.6; Connolly, TGA 35 fig.12. Although the bf. vases also found in this grave were dated to the early 5th cent., the dates proposed for the helmet have ranged from ca. 520-510 (Kukahn), ca. 500 (Shear and Vierneisel, see below no.9) and early 5th cent. (Palmer) to first quarter of 5th cent. (Mitten). The problem, of course, is one of gauging how long the helmet was in use between the time of its manufacture and of its burial.[12] (Fig. 3)

6. Delphi Museum, inv. no. 5758. From Myonia in Ozolian Lokris. AE 1927-8 107-8 fig.65 (Keramopoullos); Kukahn, 92 no.153. (Fig. 3)

7. Geneva, M. de Schryver Coll. Provenance unknown, but the bed of the River Alpheios is suggested. H. 20 (incomplete) L. 16.5 D. 14.5 (Dörig). J. Dörig, Art Antique - Collection privées de Suisse Romande (Mayence, 1975) no.195, ca. 510 B.C. (Fig. 3)

8. London, British Museum, Walters no.2818. From Corinth. H. ca. 23 (Walters). Walters, Cat 348; Kukahn, 92 no.151 pl.4.1-2, H. 25.7. (Fig. 3)

9. Munich, Antikensammlungen, inv. no. 4330a. Said to be from Magna Graecia. H. 28.5 W. 18 D. 24. MJb XVI (1966) 231-3 figs.17-18, dated ca. 490 (Vierneisel); Ol Ber VIII 101, said to be from Sicily; Mitten, Cl Br 50 n.6. (Fig. 4; Pl. 1a)

10. Olympia, Museum, inv. no. Br.7006. From east of the Altis. Inscribed Δϝ , on right cheek-piece. Olympia IV 168 no.1018 pl.63; Kukahn, 93 no.157; Ol Ber III 111; Festschrift Weickert, 14 n.9; Ol Ber V 72 n.10; Ol Ber VIII 90 pl.33.1 & 3. (Fig. 5)

11. Olympia, Museum, inv. no. B.2600. From the south mound of the Stadium. H. 18.7 (incomplete) D. 28. Inscribed, Μιλτιάδες ἀνέ[θ]εκεν [:τ]ῶι Δϝ, along left cheek-piece and neck-guard. Ol Ber V 69-74 pls.34-5; Mus Helv 21 (1964) 185-6 pl. I.2 (Jucker); Mitten, Cl Br 49-50 n.7, made before 490 B.C.; Gk Mus 212-213 fig.28, ca. 490 B.C.; HHW Arch 313 (col.). (Fig. 5)

12. Olympia, Museum, inv. no. B.2773. From the 4th cent. filling in the northern third of the courtyard behind the Echo Colonnade. H. 26 (incomplete) D. ca. 28. Ol Ber V 72 pl.36; Mitten, Cl Br 50 n.7. (Fig. 6)

13. Olympia, Museum, inv. no. B.4413. From the north mound of the Stadium. H. ca. 26 D. ca. 29. Inscribed, Τõ]ι Διὶ Ἐρεγῖνοι Γελεαίον , on crown above offset-edge. Ol Ber VIII 100-1 pls.36.3-4 & 38 fig.34.4, dated ca. 495-490 by means of the inscription and probable historical context. (Fig. 6)

14. Olympia, Museum, inv. no. B.5168. From well 1 in the north mound of the Stadium. H. 21. Inscribed, ἱαρὸν τõ Διός on the left cheek-piece. Ol Ber VIII 88 pl.37 fig.28.9. (Fig. 7)

15. Olympia, Museum, inv. no. B.5172. From the north mound of the Stadium. H. ca. 29 D. 23.5. Inscribed, Διὶ Ἐρεγῖνοι Λοκρõν on the left cheek-piece. Ol Ber VIII 101-3 pl.39. (Fig. 7)

16. Providence, Rhode Island School of Design, Museum of Art, acc. no. 43.185. Provenance unknown. H. 28.6 W. 17.5 D. 23.5. Mitten, Cl Br 49-50 no.14, dated ca. 500-470. (Fig. 8)

17. Sofia, Nat. Mus. of Military History, inv. no. 547/63. From Chelopechené in Bulgaria. H. 20.9. Thrac Treas Cat 49 no.184 & ill. on 51, end of 6th cent.; Fol & Marazov, 86; Nat Geog vol.158 no.1 (July 1980) 124, late 6th cent. (Renfrew). (Fig. 8)

TYPE 2a (i.e. with eyebrows in relief) (Figs. 8-12)

1. Adolphseck, Schloss Fasanerie. Possibly from Olympia. Inscribed on the left cheek-piece with same dedication as nos.2a.4 and 2b.5 below. Festschrift Weickert 15 n.14; F. Brommer, Antike Kleinkunst im Schloss Fasanerie (Adolphseck) (N.G. Elwert, Marburg-Lahn, 1955) 5-6 fig.7, early 5th cent.; Ol Ber VIII 91. (Fig. 8)

2. Athens, National Museum, inv. no. 7463. From Lamia on the Gulf of Malia. Lipperheide, 61 no.4; Kukahn, 93 no.160; Festschrift Weickert 14 figs.6-7; Ol Ber V 73 n.14; Edrich, 116 n.436, dated to ca. 480. (Fig. 9)

3. Athens, National Museum, inv. no. 15189. From Olympia. H. 22 W. 28. Inscribed on the right cheek-piece, Ἀθεναῖοι [τ]ὸν ἐγ Λέμν[ο(υ). AE 1939-41 Chron 17 no.3 fig.27 (Theophaneides); Ol Ber II 68 n.1; Festschrift Weickert, 18ff. figs. 1-3, ca. 500; Edrich, 116 n.436, ca. 480. (Fig. 10)

4. London, British Museum, Walters no.251. From the bed of the River Alpheios. H. ca. 25. Inscribed on the left cheek-piece, Τἀργ[εῖ]οι ἀνέθεν τõι Δι͜Fὶ τõν Ϙορινθόθεν . Lipperheide, 62 no.282; Walters, Cat 27 no. 251; G & R Life 73-74 no.211, dated probably to the late 6th cent. by the letter-forms; Kukahn, 93 no.161 pl.4.5-6; Ol Ber II 94, III 111, V 73; Jeffery, 162 no.18 pl.27; Ol Ber VIII 91; K. Branigan & M. Vickers, Hellas (New York, 1980) 195. (Fig. 10)

5. Olympia, Museum, inv. no. B.500. From the third south mound of the Stadium. Ol Ber II 94-95 fig.61, III 111, V 73 n.14. (Fig. 10)

6. Olympia, Museum, inv. no. B.2644. From the second south mound of the Stadium. H. 21 D. ca. 26.5. Ol Ber V 72 pl.37; Mitten, Cl Br 50 n.7. (Fig. 11)

7. Olympia,Museum, inv. no. B.4165. From the River Alpheios. H. ca. 25 (incomplete) W. 23 (incomplete). Inscribed, Μεσσένιοι Μυλαίον, on the left cheek-piece.[13] BCH 83 (1959) 655 (Daux); Ol Ber VIII 105-6 pls. 41 &42.1, dated to the 480s. (Fig. 11)

8. Olympia, Museum, inv. no. B.5085. (Fig. 11)

9. Würzburg, Martin von Wagner Museum, Loan from Prof. Wyss. No provenance. H. (front) 26.5 (back) 19.5 W. 18.7 D. 26-27. Decorated with restored bull's ears and horns (right modern; left ancient replacement). Engraved floral pattern at base of right, and phi, chi and delta incised a number of times. Tainia 136-138 pls.31-33 dated to beginning of 5th cent. (Lorenz). (Fig. 12)

TYPE 2b (i.e. without eyebrows) (Figs. 13-14)

1. Berlin, West, Lipp. 23. From Olympia. AA 1905 16-17 fig.3 (Schröder); Kukahn, 92 no.149; Ol Ber VIII 94 n.21. (Not drawn)

2. Nicosia, Cyprus Museum, inv. no. KA2269. From Palaipaphos, Site A, from the mound associated with the siege of 498 B.C. H. 21.5 D. 31. According to Megaw, traces of incised decoration still survive: a lion on the left cheek-piece and a snake over the left eye. Arch Rep 1955 43 (Megaw); AA 1967 315 fig.18 & 316 (Maier); AAG pl.47; HHW Arch 378 right; Cyprus B.C. 105-6 no.328, ca. 500 B.C. (Fig. 13)

3. Olympia, Museum, inv. no. B.62. From the north mound of the Stadium. H. 20.9 D. 24. Ol Ber V 73 pl.39, towards 480, VIII 94. (Fig. 13)

4. Olympia, Museum, inv. no. B.954. From the third north mound of the Stadium. H. ca. 23 (incomplete). Ol Ber V 73 pl.38, VIII 94. (Fig. 14)

5. Olympia, Museum, inv. no. B.4504. From well 16 in the north mound of the Stadium. H. ca. 22. Inscribed, Τἀlργεῖοι ἀνέθεν τῶι Διϝὶ τὸν ϙορινθόθεν , along the left side edge. BCH 84 (1960) 715-6 fig.4 (Daux); Ol Ber VIII 93-95 pls. 35 & 36.2 fig.32.3. (Fig. 14)

TYPE 3 (i.e. with eyebrows and decorated offset edge) (Figs. 15-16)

1. Kassel, inv. no. Br.703.1. From a grave in Sicily. H. 24.5 D. 25.5. Snakes' heads form the termination of the upper line echoing the offset-edge at the centre front of the skull-piece. Also possible traces of the crest attachment on top. AA 1966 110-112 figs.26-27 (Lullies), dated to the beginning of the 5th cent. (Fig. 15)

2. Olympia, Museum, inv. no. B.1503. From behind the Echo Colonnade at the foot of the south mound of the Stadium. H. ca. 26 (incomplete). The ends of the relief line are lost over the centre front. Ol Ber III 111-112 fig.99, V 73 n.14 (where treated as an example of type 2a). (Fig. 15)

3. Olympia, Museum, inv. no. B.5095. From well 40 in the north mound of the Stadium. Snakes' heads at the centre front and silver palmettes applied to the outer corners of the eye-openings and the side-notches. AD 17 (1961/2) Chron 117 pl.132; Ol Ber VIII 143. (Fig. 16)

4. Olympia, Museum, inv. no. B.5179. Relief line over offset-edge continues across front without snakes' heads. Tongue pattern below offset-edge and a silver palmette above the left side-notch (presumably there were originally more). (Fig. 16)

CORINTHIAN-CHALCIDIAN HYBRIDS (Fig. 17)

1. Brooklyn Museum, Pomerance Collection. Said to be from Sicily. H. 30.5. A Corinthian helmet of type 3 with eyebrows and snakes' heads, with the addition of Chalcidian ear-cuttings. The Pomerance Collection of Ancient Art (Brooklyn Museum, Brooklyn,1966) 84 no.97, dated to the 5th cent.

2. Olympia, Museum, inv. no. B.952. From the third south mound of the Stadium. H. ca. 28. A combination of a Corinthian helmet of type 1, but with eyebrows, and a Chalcidian helmet. A trace of solder used to attach some decoration below the offset-edge at the centre front. Inscribed, TOΦOMEMΣ, on the right cheek-piece. Ol Ber III 112-113 pls.44-45 and 79-80 fig.80, possibly from a workshop closely connected with Corinth because of the use of the Corinthian alphabet for the inscription, and contemporary with Leagros;[14] Connolly, TGA fig.16, early 5th cent.

Commentary

The three main types and the hybrids exhibit features which are basic to the Late Archaic form of the Corinthian helmet: they are the off-setting of the crown area from the neck-guard, the cheek-pieces and the brow, the careful modelling of the edges of the eye-holes, the change of angle at the ear and the small, usually pointed nose-piece.[15]

Type 1 is further distinguished by the very high and pointed arch made over the forehead by the upward sweep of the offset-edge,[16] and the long, downward-running cheek-pieces.[17] The raised lines at the outer corners of the eye-holes and at the side-notches are usually more strongly developed on the helmets of type 1 than on the others (though the side ones are admittedly not very clear on nos. 1.7 & 1.12). Nos. 1.5, 1.8 and 1.13 are exceptional in having the ear-notch filled by a small piece of bronze. Since the first two came from Corinth, one might have thought the addition of this tiny detail an indication of the Corinthian workshop. However, the inscription on the third implies the use, at least, of that helmet in Southern Italy, whether by a hoplite from Rhegion or Gela. While it is

possible that helmets were made in Corinth and exported ready-made to the West, it is perhaps more likely that this helmet was made in Sicily or Southern Italy to the size and fit required by the local purchaser.

In type 2 the forehead arch is less pronounced, being instead a gentle arc or curve, and the cheek-pieces more or less continue the line of the neck-guard forward beyond the ear, instead of creating a sharp change of angle at it. Type 2a is characterised by the eyebrows in relief - a feature not new to the Corinthian helmet.[18] These eyebrows are always edged by fine relief lines, but in five cases the edging is extended as a line or groove down the length of the nose-guard. Three of the helmets in question (nos. 2a.1, 2a.4 and 2a.5) are closely related by style and the inscriptions which two of them carry. One would accordingly like to see in this feature a characteristic of an Argive or Corinthian workshop, but again the last helmet (no. 2a.7) stands out as an exception: in this case the inscription on it refers to the cities of Messene and Mylai in north-east Sicily. (The origin of no. 2a.9 is unknown.) No. 2a.4 is interesting because its side-notches are filled in as on nos. 1.5, 1.8 and 1.13. Since it was part of the Argive dedication, it lends further support to the idea that this filling-in is a characteristic of an Argive or Corinthian workshop (i.e. Corinthian, if dedicated as booty: Argive, if as a thank-offering). The less numerous helmets of type 2b lack the eyebrows and have especially low arcs, and less exaggerated eye-edging and side-notches.

Type 3 is not, in fact, distinguished like types 1 and 2 by a particularly different curve to the offset-edge. Rather, its four examples take their basic form from either type 1 or type 2, but with the noticeable addition of the line or lines above the offset-edge. Two of these (nos. 3.1 and 3.3) clearly terminate in snakes' heads at the front: no. 3.2 may also

have originally done so. No. 3.1 is closer to type 1 because of its high arch, the lines at the corners of the eyes and the sides, and the unusual filling of the side-notch. Since this helmet was found in Sicily, the presence of the last-mentioned detail is interesting in light of the earlier discussion of nos. 1.5, 1.8 and 1.13. Indeed, although the other examples of type 3 were found in Olympia, the origin of this type as a whole in Magna Graecia seems highly probable.[19] No. 3.3 in particular exhibits the continuation of the eyebrow edging down the nose-guard as seen on some of the helmets of type 2a above; at least one of those was associated with Sicily as well.

Naturally, the examples of the two main types also display some individuality, and some of the characteristic features are blended together, for example, in no. 2a.7, which comes close to type 1 in the length of its cheek-pieces and the projection of the edging at the eyes and sides.

The hybrids are primarily Corinthian in shape and decoration, but they exhibit, in addition, the large ear-cuttings which are the characteristic of Chalcidian helmets. The Brooklyn helmet[20] finds its closest parallels among the helmets of type 3, especially nos. 3.1 and 3.3. It too has the line down the nasal and a Sicilian provenance. The second hybrid is clearly based on type 1, although it also bears very elegant eyebrows which are not usual in that type.

Few of the surviving helmets show any trace of the crest-mounting. This is somewhat surprising since the crest is a major feature of the hoplite helmets in art. Traces of lead solder were reported for nos. 1.9 and 3.1, both of which derive from Sicily or South Italy, and possibly no. 1.1. There is lead and a loop on the crown of no. 1.15 which is also from South Italy, and at least one loop on no. 1.14. Holes on the crown and neck-guard

of no. 2a.9 are to be connected with the crest-mounting. The fact that so little evidence for the attachment of a crest now survives does not necessarily imply that the helmets were in reality crestless. It was presumably deliberate policy to make the crest removable, either so that it could be retained for parade purposes only or so that, if it were worn in battle, it might break off and not provide a hand-hold for the enemy at close quarters. In any case, the present condition of the surface of the helmet when it does survive in the relevant areas, and when it has not been subjected to zealous cleaning in modern times, still makes the identification of solder marks no easy task. It is interesting that solder seems to have been preferred to riveting as the means of fastening.

A few helmets (nos. 1.5, 1.8, 1.13, 2a.4, 2a.5, 2a.8, 2a.9, 3.1, 3.2 and both hybrids) have holes in the lower tips of the cheek-pieces. These are usually interpreted as the holes for a chin-strap, although none is represented in art. In addition, some helmets (nos. 1.3, 1.4, 1.8, 1.9, 1.10, 1.13, 1.16, 2a.6, 2a.7, 2a.9, 3.2 and the second hybrid) have one or two holes at the side-notch. Kunze suggested that these might have secured a strap for the times when the helmet was worn back on the crown of the head,[21] and indeed white straps are depicted here on two Corinthian helmets on a vase by the Suessula Painter (cat. no. 466) - a very rarely portrayed detail.

The lining which is presumed to have been fitted inside the helmet, must at this date have been glued to the bronze in most cases. Only nos. 2a.1, 2b.2 and 3.3 exhibit tiny rivets or rivet-holes along the lower edges at the front of the helmet. These might be associated with a sewn-in lining.[22]

Kunze proposed a chronological sequence for the two types which he distinguished: he maintained that type 1 was fully developed by the last third of the 6th century,[23] and that type 2 developed from it just before 500 B.C.[24] Subsequently, between ca. 500 and 480 B.C., both types 1 and 2 co-existed as alternatives which he did not conclusively attribute to different areas or workshops, or fit more closely into a tighter chronological framework.[25]

On the basis of the information regarding provenance and date provided in the catalogue, one might tentatively now go further. Type 1 is certainly widespread with most examples from Mainland Greece, others from Magna Graecia and even one from Thrace.[26] Kunze's broad date of ca. 530-480 B.C. still stands, although there seems to be a tendency among scholars to fit the extant helmets of type 1 into the period ca. 510-490 B.C. The early 5th century date for type 2 also still holds. At least four of the examples of type 2a can be associated with Mainland Greek cities or regions, but that the type was not unknown in the West is proved by the helmet from Olympia with the Sicilian inscription (no. 2a.7).[27] Similarly, what evidence there is for type 2b might support a homeland in the eastern Mediterranean.[28] As was suggested earlier, type 3 may have originated in Magna Graecia. One at least of the examples was found in Sicily, and the decoration may be compared with the Chalcidian helmets of Group III which Kunze also placed in South Italy.[29] Those he dated to the period 530-500 B.C. The less elaborately patterned Corinthian helmets could therefore be contemporary or perhaps slightly later in date. Finally, the hybrids which are based on types 1 and 3, will date from the same periods as those two types. The first is known to have come from Sicily and helps support the idea that type 3 itself belonged there.

In addition, one may recall here the suggestion made earlier that two of the unusual minor details of the decoration may betray their common ancestry from the same workshop or at least the same area: they were the filling-in of the side-notch and the continuation of the eyebrow-edging down the centre of the nose-guard. Both features could be associated with Argos/Corinth and Magna Graecia. If either detail was first invented at the Mainland Greek site and then adopted in the West (or vice versa), one may wonder how and when the transfer of the motif was effected.

After ca. 480 B.C. the Corinthian helmet seems to have been dropped altogether in favour of other, probably more comfortable, types, in particular the Chalcidian and the Thracian. It continued to be represented in art, however, and we turn now to consider these portrayals of it in the Classical period.

CORINTHIAN HELMETS IN ATTIC VASE-PAINTINGS

Late Archaic Period (Figs. 18-23)

The sampled vases provide 100 Corinthian helmets on 62 vases.[30] Just over half of these helmets are depicted worn on the back of the head (54), one (on no. 397) may be shown at the moment when the warrior lowers it over his face, and only 15 (nos. 273^2, 388^2, 397^5, $411a^5$ & 648) are actually worn down so as to protect the head completely. The remaining 30 are either being held or are positioned as follows:

Table 1

		Total
held by the neck-guard	- nos. 7 probably, 9, 130, 511	4
" " " side-edge	- no. 309	1
" " " cheek-piece	- nos. 130, 145b, 304^2, 313b	5

held by the nose-piece	- nos. 141[2], 142, 193	4
" " " front	- nos. 141, 634	2
hanging	- nos. 5, 501	2
hanging on a hook	- no. 266	1
on a shield	- nos. 2[2], 138, 494	4
on a 'box'	- nos. 133b, 146a, 628	3
on the ground	- nos. 446, 621	2
isolated	- nos. 532, 533	2

If one attempts to identify in Figs. 18-23 the different types of Corinthian helmets as defined from the original evidence, one may come to the following conclusion:[31]

Table 2

		Total
Type 1	- nos. 2, 7, 9, 120, 121, 137b, 141[3], 146a, 148b, 304, 304?, 306, 315, 316[2], 448, 467a, 501, 511, 587, 621, 628	24
Type 2a	- nos. 45, 123, 133b	3
Type 2b	- nos. 5, 26a, 26b, 30[2], 49, 57, 120, 130[2], 138, 147 , 298, 300b, 307, 316, 404[3], 484, 494, †499[2], 532, 533, 627	26
Type 3	- no. 193?	1
Hybrids	- nos. 2, 52a, 145b, 633	4
Without offset-edge	- nos. 142, 273[2], 309, 313a, 313b[2], 382[4], 397[8], 405[2], 411a[5], 446, †499, 629, 648	30

It must be admitted that the assignation of a particular helmet to a type is highly subjective, since in the vase-paintings the helmets are, of course, generally seen in profile view only, and the distinction then lies in the angle with which the offset-line meets the front edge. It may well be objected, especially when the shape of the cheek-piece does not seem to support the typology proposed (compare, for example, the

second helmet on no. 2 of type 1 and that on no. 5 of type 2b), that such categories are too subjective. However, I believe that while it may be true that one or other helmet might possibly be transferred to another type, this would not seriously affect the proportions of one type to another, and useful comments may be made on the basis of the list outlined above. It appears, therefore, that types 1 and 2b are almost equally represented in the sample; type 2a with the eyebrows is very rare, and type 3 is only represented on no. 193 where the offset-edge is drawn with more than a single line. On the latter there is no sign of the snakes' heads seen on the originals, and, since the type was considered likely to be of Western origin, it would perhaps be better here to classify no. 193 as an example of type 1 to which an additional offset-line has been added along with the black filling-in of the crown for decorative purposes only; i.e. it seems unlikely that the artist, the Kleophrades Painter, intended to illustrate the third type. The four helmets listed as hybrids with the Chalcidian type all have fairly large, rounded holes in the side-wall at the ear, but none fully imitates the Chalcidian ear-cutting of the vase-paintings. Indeed, one might add nos. 494 and 621 which have smaller openings at the side - more will be said on these later. Perhaps the most surprising feature of the above list of types is the total of 30 helmets on which the offset-line is not marked at all. Some of these have a very old-fashioned air, not only because of the lack of this line, but also because of the shaping of the eye-hole and the neck-guard. Those of the Nikoxenos Painter (no. 309) and the Bonn Painter (nos. 273^{2}, 397^{8}, $411a^{5}$, 648) prolong this 6th century style. Others, for example, those of the Kleophrades Painter which occur on works considered late (no. 313^{3}) and later (nos. 382^{4} and †499) by Beazley, are essentially helmets of the usual

Late Archaic types but without the offset-line drawn.[32]

The nose-pieces of the LA Corinthian helmets are regularly shown as reaching approximately half way down the length of the cheek-pieces. On the old-fashioned types referred to above it is often difficult to make out the guard as distinct from the nose itself of the wearer: the fact that on no. 405 the nose-pieces are not clearly visible although the helmets are actually worn back on top of the head, lends some support to the idea that they may be ignored on the others too.

Neck-guards are naturally present as an integral part of all the Corinthian helmets, but little can be said about the shape which is generally formed of two simply curving lines, the back one regularly indented below the edge of the offset. Only rarely is the projecting bottom ledge indicated clearly, as, for example, on nos. 145b, 150a, 298 and †499. Additional decoration on the neck-guard is not found, and only nos. 193 and 315, both by the Kleophrades Painter, include an inner line echoing the lower edge.

In approximately half of the cases where the change of angle of the lower edge is visible between the neck-guard and the cheek-piece (i.e. 43), the two lines meet in a simple point.[33] A further 23 helmets display a small stroke at this point, as, for example, on no. 142, which surely represents the projection seen at precisely this point on the original helmets. Beyond that, five of the helmets (nos. 49, 298, 306, 316, 511) have a small nick in the side, which on another 13 becomes a sizeable slit or opening approximating to the Chalcidian ear-cutting, the largest of which were mentioned earlier (nos. 2, 45, 52a, 137b, 145b, 146b, 316^{2}, 383, 494, 621, 627, 633). Such slits and nicks are not features of the original helmets which have survived.

The cheek-pieces all take the normal Corinthian shape, except for that on no. 484 which, presumably through the influence of the six Chalcidian helmets on the vase, has instead the shape of some of the fixed Chalcidian cheek-pieces or their movable shape A.[34] (Despite the cheek-piece, this is still, of course, a Corinthian helmet because it lacks the Chalcidian ear-cutting.) Only one cheek-piece has any extra decoration on it, and that is a simple black centre on no. 52a by Douris. The raised edging is suggested only on nos. 193 and 315 (cf. the neck-guard edge).

Above the cheek-piece more than half of the helmets (55) have a very simple eye-hole.[35] In 19 cases there is a short stroke at the outer corner of the eye, which, as at the side-notch mentioned above, recalls the actual form of the eye-edge on the original helmets. In a further 13 cases this stroke at the corner is actually doubled. Only on nos. 57, 306 and 316 is there any suggestion of the upper or lower edging to the eye-opening. The unusual form of the opening on no. 484 is formed by the shape of the Chalcidian-like cheek-piece discussed in the last paragraph.

Details of the crests and other attachments to the crown can be listed as follows:

Table 3

			Total
(a)	with no crest or mounting	- nos. 5, 141[2], 306, 313a, 316, 511	7
(b)	with high crest	- nos. 2, 26a, 405, 411a, 446, 633	6
(c)	with two upright crests	- no. 2	1
(d)	with low crest in mounting	(transverse, no. 501)	84
(e)	with a single plume	- no. 313b	1
(f)	unknown	- no. 130	1

(g)	dots in crest-hair		17
(h)	edge-strokes	- no. 298	1
(i)	segments	- no. 382^4	4
(j)	line in crest-hair	- no. 2^2	2
(k)	white hair	- no. 45	1
(l)	edging along top of hair	- no. 45 (red), no. 49 (black)	2
(m)	separate tuft at front	- nos. 7, 193, 313b, †499	4

A few comments may be made in relation to this list. First, of the helmets without crests, two are in the process of manufacture, two are in an arming scene, and three a departure one, so that in each case the implication may be that a crest will be fitted later, as is indeed the case for nos. 7 and 9, where the crest is held out prominently above the helmet in Hephaistos' hand. Second, the six helmets with high crests belong respectively to Ajax, Hektor, two fighting warriors, probably a Giant and an ordinary warrior. Consequently, such crests cannot be considered as exclusively the prerogative of heroic or mythological figures. On the other hand, it may be significant that the helmet with the single plume is worn by Patroklos, and that with two upright crests by Achilles.[36] The four instances of the separate tuft in the crest-hair are by the Tyszkiewicz Painter (no. 7), and the Kleophrades Painter, on very early, late and later works by him. In the last three cases it certainly amounts to a personal characteristic of the painter. Similarly, the addition of dots in the crest-hair is found on the vases of only eight painters, some of whom are closely related:

Table 4

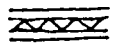
Brygos Painter	- nos. 45, 298, 627
Foundry Painter	- no. 133b
Painter of Paris Gigantomachy	- no. 633
Douris	- no. 52a
Oedipus Painter	- no. 141

Eucharides Painter - nos. 120[2], 316[2]
Triptolemos Painter - nos. 304[2], 467b, 628
Flying Angel Painter - no. 634

The six helmets with high crests display five different mountings formed basically of bands with or without dots inbetween. No. 633 is the most elaborate with an additional zig-zag band in dilute glaze and the whole fixed on top of a normal low mounting. The 82 visible low mountings (those on nos. 130 and 266 are obscured) have a range of 27 different patterns which can be listed as follows:

Table 5

		Total
(1)	- nos. 30[2], 388[2]	4
(2)	- nos. 26b, 309, 405, 501, 621	5
(3)	- nos. 146a, 316[2]	3
(4)	- no. 146b	1
(5)	- nos. 137b, 141, 148b	3
(6)	- nos. 45, 57, 120[2], 123, 133b, 273, 300b, 404[3], 484, 533 (also 633)	13
(7)	- nos. 121, 142, 532, 627	4
(8)	- nos. 273, 397[8], 411a[4], 494	14
(9)	- no. 648	1
(10)	- no. 145b	1
(11)	- nos. 138, 298, 467a, 628	4
(12)	- nos. 130[3], 147 , 315, 382[4], 445, †499[3]	13
(13)	- no. 467b	1
(14)	- no. 307 (N.B.beginning & end)	1
(15)	- no. 193	1
(16)	- no. 313b	1
(17)	- no. 629	1
(18)	- no. 49	1
(19)	- no. 587	1
(20)	- no. 304[2]	2
(21)	- no. 634	1

(22)  - no. 9 1

(23) - no. 448 1

(24) - no. 150a 1

(25) - no. 52a 1

(26) - no. 399 1

(27) - no. 7 1

Note: No attempt will be made here to distinguish between circles, • •, and squares, ▪ ▪ , in the pattern.

It is noticeable that these patterns are regularly used by some painters and not others. Thus, for example,

Table 6

Berlin Painter	uses patterns	(1) twice, (2) & (26)
Nikoxenos Painter	"	(1) twice & (2)
" " , akin to	"	(2)
Tyszkiewicz Painter	"	(2), (6), (22) & (27)
Eucharides Painter	"	(3) thrice, (4) & (6) twice
Douris	"	(24) & (25)
" , manner	"	(5)
Oedipus Painter	"	(5)
Brygos Painter	"	(6), (7) & (11)
Foundry Painter	"	(6)
Painter of Agora P42	"	(6)
(Painter of Paris Gigantomachy	"	(6) with high crest)
Bonn Painter	"	(6), (8) 13 times & (9)
Kleophrades Painter	"	(12) 13 times, (14), (15) & (16)
Triptolemos Painter	"	(11) thrice, (13) & (20) twice
Myson	"	(18) & (19)

The extra decoration applied to the crown of the helmet can be very briefly mentioned since almost all these LA Corinthian helmets are left plain. The very rare exceptions are nos. 193 by the Kleophrades Painter, a black crown; 587 by Myson, dotted scales; 511 by the Antiphon Painter,

snakes above the offset-line; and 467a & b by the Triptolemos Painter, a bull's ear and horn off the offset-line at the side, once painted black, once reserved.

The list which follows, records the wearers or owners of the LA Corinthian helmets.

Table 7

			Total
Ordinary Figures			60
	in ambush	3	
	arming	9	
	departing	11	
	fighting	22	
	setting out	1	
	in the hoplitodromos	2	
	without further context	9	
	in manufacture	1	
	helmet alone	2	
Heroic/Mythological Figures			40
	Ares	2	
	Giants	probably 2	
	Achilles	6	
	Aeneas	2	
	Ajax	1	
	Lesser Ajax	2	
	Akamas / Demophon	2	
	Antilochos	1	
	Chrysippos	1	
	Diomedes	1	
	Hektor	3	
	Heroes	9	
	Iolaos	1	
	Kyknos	1	
	Lapiths	2	
	Memnon	1	
	Menelaos	1	
	Patroklos	1	
	Peirithoos	1	

The Corinthian helmet at this date, therefore, seems to be associated more often with ordinary hoplites than with mythological characters. Notably it is not often worn by men competing in the arms race. In the second part of the list one may note the absence of Athena and Amazons, and the prominence of Achilles.

The final list for the LA Corinthian helmets is one of the artists:

Table 8

		Total
Kleophrades Painter	- nos. 130^5, 147 , 193, 307, 313^3, 315, 382^4, 445, †499^3	20
Bonn Painter	- nos. 273^2, 397^8, $411a^5$, 648	16
Eucharides Painter	- nos. 120^2, 146^2, 316^3	7
Berlin Painter	- nos. 26^2, 30^2, 306, 399	6
Triptolemos Painter	- nos. 138, 304^2, 467^2, 628	6
Nikoxenos Painter	- nos. 2^2, 309, 388^2	5
Nikoxenos Painter, akin to,	- no. 621	1
Tyszkiewicz Painter	- nos. 7, 9, 57, 501	4
Brygos Painter	- nos. 45, 298, 627	3
Oedipus Painter	- no. 141^3	3
Recalls somewhat Eleusis Painter & Proto-Panaitian Group	- no. 4043^3	3
Antiphon Painter	- nos. 484 & 511	2
Douris	- nos. 52a & 150a	2
Douris, manner of	- no. 137b	1
Flying Angel Painter	- nos. 629 & 634	2
Goettingen Painter	- no. 405^2	2
Myson	- nos. 49 & 587	2
Syleus Painter	- nos. 446 & 448	2
Briseis Painter	- no. 266	1
Copenhagen Ptr. or near	- no. 142	1
Dutuit Painter	- no. 5	1
Foundry Painter	- no. 133b	1

Makron	- no. 148b	1
Painter of Agora P42	- no. 300b	1
Painter of Paris Gigantomachy	- no. 633	1
Proto-Panaitian Group	- no. 121	1
Syriskos Painter	- no. 145b	1
Tithonos Painter	- no. 123	1
Unattributed	- nos. 494, 532, 533	3

In the 36 helmets by the Kleophrades Painter and the Bonn Painter two very distinct styles of Corinthian helmet can easily be made out. Some characteristics of the former artist have already been noted, for example, his particular pattern for the crest-mounting (Table 6), the extra tuft in the crest-hair, the occasional use of dilute glaze for the offset-line, and the inner lines along the bottom edge of the cheek-piece and the neck-guard. One might also point to the narrowness of his slit-like eye-openings. These features do not seem to be particularly associated with any one or other of the periods into which Beazley divided his work, although one may note that the inner lines referred to occur on two vases from his very early period only.

Compared with these helmets by the Kleophrades Painter, those by the Bonn Painter present a very different picture of a simple, old-fashioned standard, as mentioned earlier. Something of this change in the style of the Corinthian helmet can also be seen if one compares those painted by the Nikoxenos Painter with those of his pupil, the Eucharides Painter.

Seven helmets are by the Brygos Painter and artists of his circle, the Briseis Painter, the Foundry Painter, the Painter of Agora P42 and the Painter of the Paris Gigantomachy. Apart from the very unusual helmet

by the last named, these tend to be of type 2 and include two of the three examples of type 2a. They also share a common interest in very elaborate crests.

Early Classical Period (Figs. 24-27)

In this period the number of Corinthian helmets in the sample drops by exactly half to 50 on 38 vases.[37] The proportion of helmets worn on the back or top of the head increases when compared to the LA proportion, to 68% (34), with again only one being represented at the moment when the wearer adjusts its position (on no. 12). The biggest difference, however, is to be seen in the number of helmets depicted down over the wearer's head: only one (no. 278), i.e. 2% as compared to the LA 15% . The percentage of helmets shown in other positions remains exactly the same at 30% , although these positions vary slightly as follows:

Table 9

		Total
held by the neck-guard	- nos. 14 & 674	2
" " " side-edge	- nos. 319a & 338	2
" " " cheek-piece	- nos. 12, 43b & 675	3
" " " nose-piece	- nos. 34b, 71b^2, 151 & 164	5
on a 'box'	- no. 13	1
on the ground	- no. 70	1
on a lap	- no. †708	1

These figures may easily be compared with those for the LA period. Noticeable are the proportional increase in the number of helmets held by the nose-piece, and the omission of any in a hanging position or sitting on shields. While in LA only one helmet (no. 130) was drawn in back view and one more (no. 501)[38] in front view, in EC two helmets (nos. 212 & 278) are shown frontally and a third (no. 450) in a three-quarter

view. These alternative views, of course, reflect the steps made by the artists towards an impression of greater three-dimensionality in their work, but at the same time they help to provide us with a clearer idea of the helmet as a whole.

The EC Corinthian helmets may also be divided according to types as follows:[39]

Table 10

		Total	%
Type 1	- nos. 12², 14, 62, 68, 70², 152, 164², 212, 319a, 334, 417, 419a, 450, 455², 590, 664, 666, 674, 675	23	46
Type 2a	-	0	0
Type 2b	- nos. 43b, 67, 71b², 199, 204, 278, 292², 320b², 670, †708	13	26
Type 3	- nos. 125a & 125b²	3	6
Hybrids	-	0	0
Without offset-edge	- no. 208?	1	2
Debased	- nos. 13 & 665	2	4

Since almost all the helmets now have the offset-line marked, the numbers of types 1 to 3 are changed: type 1 increases and now represents just under half of the total; type 2b surprisingly remains the same at 26%; type 2a which was never very common in LA, disappears completely in EC, and type 3 may be identified, again only doubtfully, in the work of one artist, the Painter of Bologna 279, who duplicates the line round the offset-edge. No helmets can be confidently considered as examples of hybrids with the Chalcidian type at this date, although some do have narrow slits in the side. (See further below.) The final category, debased, becomes commoner later. These are helmets which have lost the taut forms

of the Late Archaic standard types, and which may have been worn only on the crown of the head. As a result, the relationship of the lower parts to the bowl of the crown alters, and they can no longer be easily set into the established type categories. This breakdown in the Late Archaic shapes in the Classical period can also be detected in, for example, a further mixing of the cheek-pieces and offset-lines of the different types (e.g. nos. 334, 450, 455, †708), and the addition of eyebrows to helmets otherwise of type 1 (e.g. nos. 319a and 664).

The majority of the nose-pieces reach in EC about half way down the length of the cheek-pieces - a very long one can be seen on no. 278. Occasionally, the farther cheek-piece seems to be drawn in its place (e.g. on nos. 319a and †708).

The EC neck-guards are little different in shape from those of the LA period. The horizontal ledge at the back seems to be indicated or ignored at will; the heavy edge on no. 125a is quite unusual. Once more, this area is not decorated: only an odd couple of dots appear on no. 70, and an inner line on nos. 13 and 666.

The simple, pointed junction between the neck-guard and the cheek-piece at the side is seen in EC on only nine helmets (cf. LA 42).[40] The small stroke to emphasise this point and copy the projection of the edging here on the real helmets, becomes commoner; it occurs 13 times. On another eight it actually runs right up to the line of the offset, and once (on no. 678) it is crossed by a horizontal line just below that. Nicks appear on perhaps three helmets (nos. 62, 417 and ?152), longer slits on another three (nos. 71b[2] & 503). An odder, wider gap between the two guards is seen on nos. 125a and 125b which can perhaps be explained as a quirk of the Painter of Bologna 279 based on a less exaggerated treatment by the

Niobid Painter, as seen on no. 334. None of these slits or gaps can be considered to be the equivalent of the Chalcidian ear-cutting, however, and so none of the helmets with them have been classified as examples of hybrids.

Little need be said of the EC cheek-pieces since they all display the basic Corinthian form. Only no. 13 has an inner line which appears to mark the edge, but which could equally be intended to delineate the nearer cheek-piece as opposed to the further which the outer line portrays.

As in LA a simple eye-hole remains standard for half of the helmets, although it tends more towards a narrow slit in several cases, as, for example, nos. 14 and 417.[41] The short line at the outer corner is less often included - only on five helmets. Likewise, the doubled line now appears only twice (on nos. 151 & 664): a more open version of it is provided in frontal and three-quarter view by the Pan Painter on nos. 278 and 450. In contrast, the inclusion of a line above the eye-hole becomes a commoner feature, especially in the work of the Niobid Group (on nos. 62, 68, 334 and 455[2] by the Niobid Painter, and no. 125[3] by the Painter of Bologna 279; also no. 678 by the Cleveland Painter).

Information on the EC crests is presented in the following list:

Table 11

		Total
(a) with no crest or mounting	- nos. 12, 151, 164[2], 320b[2]	6
(b) with no crest but mounting	- no. 14	1
(c) with high crest	-	0
(d) with low crest but no mounting	- nos. 204 & 503	2
(e) with low crest in mounting (transverse, nos. 212, 278)		39
(f) with a single plume	- nos. 292 & 417	2
(g) dots in crest hair		8

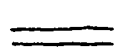
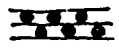
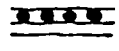
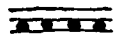
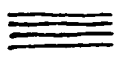
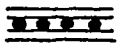
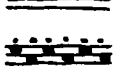
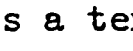
(h) edge-strokes		9
(i) long hair-lines (sometimes in groups)		6
(j) segments (marked by long or short lines)		8
(k) triple dots	- no. 664	1
(l) line in crest-hair	- no. 152	1

More helmets occur in categories (a) and (b) in EC than did in the equivalent category of (a) in LA, and again one may note the contexts of the arming of Achilles, the arming of ordinary hoplites and warriors in a non-specific situation. That is to say that crests are a regular feature of helmets in battle situations. It is surprising to see a mounting on a helmet without the hair attached (b), and this actually happens again on no.†708 when the hair in its own mounting is being fitted to a helmet which already has a mounting along the top. The reverse situation applies in category (d). There are no EC examples in the sample of helmets with high crests, but there are more with a plume. Neither of the latter serve to identify or separate out a particular, nameable hero, although in the first case the presence of the chariot among the warriors might help to suggest that they are not ordinary humans. The two helmets with transverse crests give more of an impression of their being intended as such: the lack of a tail at the proper right side of LA no. 501 leaves one wondering if the artist really meant to portray a transverse one or if he simply could not envisage the frontal view of the usual type. It is unfortunate that the break has carried away the front end of the crest on no. 450, as one would like to know where it ran to.[42] The frequency of the various small details included within the crest-hair may be compared with those on the LA list: dots appear proportionally as often, but in works by artists who do not appear to be related closely to each other or to the earlier artists; both the edge-strokes and the segments increase in number,

and the long hair-lines are now introduced.

The 39 visible mountings include some of the LA patterns and introduce other new ones as follows:[43]

Table 12

			Total
from LA:			
(1)		- nos. 14, 62, 70[2], 292, 665, 674, †708	8
(5)		- nos. 67, 125b[2], 334, 664	5
(6)		- nos. 43b, 199, 208, 419a, 455, 666, 675, 678	8
(7)		- nos. 152 & 670	2
(8)		- nos. 70 & 708	2
(11)		- no. 71b	1
new:			
(28)		- no. 71b	1
(29)		- nos. 68, 212, 319a on wheel, 455, 590	5
(30)		- nos. 125a & 338	2
(31)		- no. 34b[2]	2
(32)		- no. 13	1
(33)		- no. 12	1
(34)		- no. 278	1
(35)		- no. 450	1

There is a tendency in EC for the dots between the lines to become faint dashes instead, but, since the concept is the same, no distinction has been made here. Attention may be drawn to the odd wheel-like fixture which carries the crest on no. 319a by the Mykonos Painter. The patterns seem to be well-spread among different painters, but the preferences of some may be pointed out: in the Niobid Group, the Niobid Painter himself uses (1) in his early period (no. 62), (5) in his middle period (no. 334), (6) in his middle (no. 208) and late (no. 455) periods, and (29) twice in his late period (nos. 68 & 455); the Geneva Painter uses (1) twice (no. 70[2]) and (8) once (no. 70); an artist connected with him uses (1) on no. 14; the

Painter of the Woolly Satyrs uses (5) on no. 67; and finally, the Painter of Bologna 279 uses (5) also on no. 125b[2] and (30) on no. 125a. The Pan Painter creates the three new patterns, (33), (34) and (35), none of which were used by his teacher, Myson, in the LA period. The two instances of (7) in EC here are slightly different, but essentially the same; the first is by the Bowdoin Painter, the second, a Semi-Outline Lekythos, from the same workshop.

Additional decoration to the crowns of EC helmets is found only in the work of the Niobid Group. Two helmets are shaded by the Geneva Painter on no. 70. Small circles are added near the mounting by the Niobid Painter on nos. 68 and 455, and further down the side on no. 125b by the Painter of Bologna 279. Small squares, initially suggestive of highlights on the bronze surface, occur on nos. 14 and 70, vases connected with, and by, the Geneva Painter, no. 125a by the Painter of Bologna 279, and nos. 208 and 334 both by the Niobid Painter in his middle period. No. 68 may have part of something similar just above the offset-line at the side. For further discussion of these marks, see the section on the coin representations below.

The owners of the EC Corinthian helmets are

Table 13

			Total
Ordinary Figures			23
	arming	6	
	departing	3	
	fighting	2	
	without further context	11	
	(helmet held by woman)	1	
Heroic/Mythological Figures			27
	Athena	6	
	Giants	2	
	Achilles	4	
	Greeks in Amaz.[y]	6	

Heroes	4
Kaineus	2
Seven ag. Thebes	2
Theseus	1

In this period, therefore, the ratio of ordinary to heroic figures has changed substantially from that of the LA period: 46% to 54%.[44] In the first list the range of contexts is smaller than it was in the preceding period, and in the second only the Giants and Achilles continue to appear with unspecified heroes. Notable newcomers are Athena and Greeks fighting Amazons.

A list of the painters of the EC Corinthian helmets follows:

Table 14

		Total
*Niobid Painter	- nos. 62, 68, 208, 334, 455[2] & 503	7
Pan Painter	- nos. 12[2], 278 & 450	4
*Geneva Painter	- no. 70[3]	3
* " " ,connected with	- no. 14	1
Leningrad Painter	- nos. 151 & 292[2]	3
*Painter of Bologna 279	- no. 125[3]	3
Painter of Louvre G231	- nos. 43[2] & 204	3
Painter of Louvre G456	- no. 320b[2]	2
Penthesilea Painter	- no. 71b[2]	2
Pistoxenos Painter	- nos. 419a & 664	2
Sabouroff Painter	- no. 34b[2]	2
Telephos Painter	- no. 164[2]	2
Trophy Painter	- nos. 199 & 212	2
Boreas Painter	- no. 666	1
Bowdoin Painter	- no. 152	1
Chicago Painter	- no. 338	1
Cleveland Painter	- no. 678	1
Earlier Mannerist	- no. 13	1
Mykonos Painter	- no. 319a	1

Painter of London E777	- no. 417	1
*Painter of Woolly Satyrs	- no. 67	1
Painter of Yale Lekythos	- no. †708	1
Providence Painter	- no. 675	1
Semi-outline Lekythoi	- no. 670	1
Villa Giulia Painter	- no. 590	1
Unattributed	- nos. 665 & 674	2

Fifteen helmets are attributed to artists in the Niobid Group - marked by the asterisks above. As already stated, they share some crest-mounting patterns and added decoration on the crown, but essentially they do not display a distinctive style of Corinthian helmet. The EC helmets in Figs. 24-27 are fairly uniform: the old-fashioned variety of LA is no longer portrayed on the vases, and only one or two can be seen to presage the later debased form. No. 590 by the Villa Giulia Painter illustrates neatly the continuation of the standard Late Archaic helmet into the Classical period.

Classical Period (Figs. 27-31)

For the Classical period (ca. 450-425 B.C.) the sampled vases offer 57 Corinthian helmets on 52 pieces.[45] That is to say, there are a few more helmets and more individual vases than in the preceding period, since the repetition of the same type of helmet on more than one figure in the scene is less common. Once more there is an increase in the number of helmets worn on the top or the back of the head (to 44, about 77%). None is now depicted being adjusted, and,more importantly, none is represented in the down-position. Fewer helmets are shown in alternative positions (only 13, about 23%), and the methods of holding the helmet are less easy to define or interpret. They may be listed as follows:

Table 15

		Total
held by the neck-guard	- nos. 169 & 246	2
" " " side & front	- no. 598	1
" " " cheek-piece	- possibly nos. †229 & 698	2
" " " nose-piece	- nos. 172 & †686	2
" " " front	- nos. 366 & 547	2
" inside	- no. 55c	1
" somehow	- nos. 168 & 231	2
on a tomb stele[46]	- no. 608	1

All of these helmets are drawn in profile view. Seven of the CL helmets are associated with figures who wear head-bands, nos. 80, 354, 366, †428[2], 462, 598, and a further four appear to wear under their helmets a form of cap the long flaps of which hang down at the side or back, nos. 370, 581, 582 and 583. The broad head-bands and narrower fillets were sometimes shown with the LA and EC helmets,[47] but less often, and the flapped caps are a new development in this period. Interestingly, they are worn by warriors departing and setting out, and twice by Theseus in his fight with the Amazons, and the vases on which they occur are thought to be an early work by Aison (no. 370), another attributed to Aison (no. 583), and one by the Epimedes Painter (no. 581) who is a member of the Group of Polygnotos, to which group the painter of the last example (no. 582) also belongs; therefore interest in this feature is limited to only two or three painters.

The various types of Corinthian helmet can be identified on the CL vases as follows:[48]

Table 16

		Total	%
Type 1	- nos. 3^2, 55c, 80, 81, 84, †86, 91, 97, 100, 169, 172, †229, 231, 239, 246^2, 248, 283, 286, 345, 354, 358, 363, 374, 428, 481, 549, 563, 574, 581, 582^2, 585, 608, †681, †686, 698 & 701	39	68.5
Type 2a	- nos. 462, 526 & 583^2	4	7
Type 2b	- nos. 235a, 366, 370 & 547	4	7
Type 3	-	0	0
Hybrids	- nos. 232b & possibly 237	2	3.5
Without offset-edge	-	0	0
Debased	- nos. 364, †423 & 601	3	5.25

The predominance of type 1 which appeared in EC, is even greater in this period. Surprisingly, type 2a reappears now in an equal number of cases as type 2b. An argument might be made for seeing no. 232b as an example of type 3 here because the offset-edge is actually marked by two lines, but this reduplication of lines seems to be a characteristic of the armour by this painter, the Painter of Berlin 2536, and so, on the strength of the ear-opening, it has been considered a hybrid instead. Similarly, doubt exists about no. 237: the squared gap in the side is not really the same as the rounded Chalcidian ear-cutting, but its purpose must be comparable, and it is certainly larger than any of the slits or nicks seen in the other Corinthians. By this period all the helmets are supplied with a line to mark the offset around the skull. The number of helmets which appear to be distorted or debased, increases yet again: one might have included in this category still more, e.g. nos. 3^2, †86, 97, 481, 608, largely because

of the new, longer facial area and smaller, convex neck-guards. For the further mixing of the different types one may cite the examples of type 1 with eyebrows, e.g. nos. 97 and 172, or type 2 cheek-pieces, e.g. nos. 3, †86, 345, 481, 563, 608, †681 and 698, and the type 2 helmets which have type 1 cheek-pieces, e.g. nos. 366 and 462.

The length of the nose-pieces is little changed in this period, although the possible confusion between the farther cheek-piece and the nose-piece seems commoner, e.g. on nos. 81, †86, 237, 286, 462, 588 and 601. In two cases the nose-piece is not distinguished at all, on nos. 235a and 608.

For the majority of the helmets the shape of the neck-guard continues unchanged. A trend already beginning in the EC period to ignore the indentation of the neck-guard below the offset-line, can be detected here in about as many cases. Similarly, the care given to the forming of the horizontal ledge or its omission is comparable. New now, however, is the drawing of the back contour of the neck-guard as a convex instead of a concave line on nos. 3^{2}, †86, 97, 601. A peculiar form occurs on no. 364, and the illogicality of drawing the hair outside the line of the neck-guard may be noted on no. 232b (cf. LA 629). Most unusual is the appearance of the Attic-Chalcidian-Thracian neck-guard on no. 286. As expected none of these neck-guards is decorated, barring the inner line along the bottom on no. 428 by Polygnotos.

Fewer helmets in the CL period display the simple angled join between the neck-guard and the cheek-piece, and greater variety is evident in the drawing of this area.[49] The short stroke at this point becomes even commoner (on 20 helmets, 35%); it also occurs in a more oblique form on two helmets (nos. 81 & 526). The line which continues up to the offset-edge

is seen less often (on nos. 3, 286, 598, †681), but this form is supplemented now by the use of two lines running up the side (on nos. †86, 345, 364, 698, 701 and, not as far as the offset, nos. 97 and 366). A forked projection is indicated on nos. 248, 547, 583 and 588, and, interestingly, on the first and last of these as well as nos. †681 and †686, a curved line marks the filling-in of this area as was found on some of the original helmets. Nos. 248, 588 & †686 are by one artist, the Achilles Painter. Actual slits in the side appear on four helmets (nos. 3, †229, 428, 608) and larger openings on nos. 237 and 601. As mentioned earlier, only the hole on no. 232b really recreates the ear-cutting of the Chalcidian helmet.

The standard Corinthian shape remains regular for the cheek-pieces in this period, and only twice is the lower contour line echoed by another inside, on nos. 232b and 547. More striking now are the instances where the front line of the cheek-piece is carelessly carried beyond the upper limit of the eye-hole, as on nos. 3, 232b, 290, 364, 462, 526, 563 and 581. This feature could be seen already on a few EC helmets (e.g. EC nos. 14, 70, 125a and b, 319a and 674), but it was not present in the LA period and seems to grow commoner as the 5th century wears on.

The simple eye-hole is slightly less common (23 helmets, about 40%),[50] and only a couple are reduced to slits (nos. 563 and 701). Further detailing of the eye area is, therefore, more usual in the CL than in the EC period: nine helmets now have a single stroke beyond the outer corner; four show a forked corner (nos. 172, 248, 370 and †686); the eye is edged all the way round in two cases (nos. 172 and 366), and although it is now often very difficult to distinguish between an eyebrow and the line marking the top edging of the hole, one may perhaps say that eight helmets (nos. 80, 84, †229, 232b, 290, 588, 608 and 698) have this edging and six (nos. 97, 172,

462, 526 and 583[2]) have brows. Unlike the situation in the EC period, there does not appear to be any link between this careful treatment of the eye-hole and any one workshop. Other helmets display, on the other hand, a lack of care in the drawing of the eye-hole so that it is allowed to come into contact with the line of the offset-edge, e.g. on nos. 3, 169, 286 and †423. That these two standards can occur in the work of the one artist is illustrated by nos. 169 and 172, both by the Phiale Painter, and nos. †423 and 698, both by the Washing Painter.

Variations in the CL crests:

Table 17

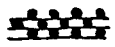
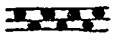
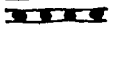
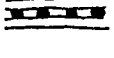
		Total	%
(a) with no crest or mounting	- nos. 100, 549 & 574	3	5.25
(b) with no crest but mounting	- no. †423	1	1.75
(c) with high crest		0	0
(d) with low crest in mounting		52	91.25
(e) unknown	- no. 701	1	1.75
(f) dots in crest hair		8	14
(g) edge-strokes		14	24.5
(h) long hair-lines (in groups)		3	5.25
(i) segments		22	38.5
(j) scaled band and two circles	- no. 232b	1	1.75

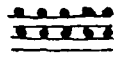
The percentage of helmets in categories (a) and (b) drops again in this period after the increase in EC. Notably all three examples without crest or mounting are by the Achilles Painter and his follower, the Dwarf Painter. The high crest remains absent, and the dominance of the low crest in a mounting is further established. The use of dots in the crest hair occurs as frequently as in the preceding two periods; the edge-strokes and the segmentation of the hair becomes more common still, but the hair-lines decline in numbers, being retained, in fact, only in the work of Aison (nos. 370 and 583[2]). A connection can be made between the addition of the

dots and the artists associated with the Achilles Painter and Polygnotos.[51] The decoration - it is surely not intended as reinforcement - of the crest by the Painter of Berlin 2536 on no. 232b seems to be an idiosyncratic addition.

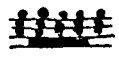
A new feature of the CL mountings is the short length of seven of them along the crown of the helmet (nos. 168, 248, 283, 370, 583^2, †686). Three of these are worn by ordinary hoplites (nos. 168, 370 and †686), three by heroes (nos. 283, 583^2) and one (no. 248) by Athena, so it does not appear to matter who is wearing the helmet at the time. Instead, one may note that three (nos. 168, 248 and †686) are by the Achilles Painter, three (nos. 370 and 583^2) are by Aison, and one (no. 283) by Polygnotos. As before, some of the patterns used for the mountings are carried over from the period before, while others are new. The following list illustrates this:[52]

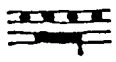
Table 18

			Total
from LA:			
(12)		- no. 547	1
from LA & EC:			
(1)		- nos. 246, 481, 608, 698 (also †423)	5
(5)		- nos. 246, 345, 563, 582^2, 598	6
(6)		- nos. 3, 80, 84, †86, 231, 235a, 239, 283, 286, 290, 364, 366, 462, 526, 601?	15
(7)		- nos. 81, †428^2	3
(8)		- no. 91	1
from EC:			
(29)		- nos. 97, 237, 354, 358	4
(30)		- no. 588	1
new:			
(36)		- nos. 169, 172, 374, 581	4
(37)		- no. 55c	1

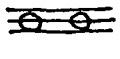
(38)  - nos. 3, †229 2

(39) - nos. 168, 363 2

(40)  - no. 248 1

(41)  - nos. 370, 583[2] 3

(42) - no. 585 1

(43)  - no. 232b 1

(44) - no. †686 1

As in EC there may be slight differences in the size of the dots in the mountings, but this has been ignored where the effect is basically the same (e.g. compare the two forms on no. 582). Pattern no. (6) continues to be the commonest at this date also. The use of (5) and (6) by the Niobid Group in EC seems to lead to its use now by Polygnotos and his Group, along with (7), (8), (29), (36) and (42). The Achilles Painter alone is responsible for (30), (39), (40) and (44), but no. 598, a work considered to be in his manner, has (5) instead. His pupil, the Phiale Painter, prefers (36). Aison invents (41).

In the decoration of the crown area, there is no sign now of the small squares and circles of the EC Niobid helmets. The closest we may come to them is in the dot on no. 526 by the Dwarf Painter, and the odd lines off the crest-mounting on nos. 370 and 583[2] by Aison. Two helmets are shaded, no. 100 partially and no. 239 all over. The only other points of interest are the feathers which rise from the side of the crest-mounting on one helmet on no. 3, possibly with the aim of distinguishing Achilles from Ajax (or vice versa?).[53]

The CL Corinthian helmets are associated with the following figures:

Table 19

			Total
Ordinary Figures			26
	arming	3	
	departing	9	

	fighting	3
	pursuing women	1
	setting out	1
	at tomb	2
	with Nike	2
	context unknown	4
	helmet on tomb stele	1
Heroic/Mythological Figures		31
	Athena	10
	Achilles	1
	Ajax	1
	Akamas	1
	Greeks in Amaz.y	7
	Kaineus	1
	Lapiths	2
	Menelaos	1
	Mounichos	1
	Peirithoos	1
	Theseus	5

The new ratio which appeared in the EC period, is maintained in the CL: the Corinthian helmet is again associated more with heroic figures than with ordinary, about 54% as compared with 46%. The association with Athena which also began in EC, is now even stronger, and other gods are ignored. Achilles surprisingly loses ground, and Theseus instead leads the identifiable heroes. The Greeks in the Amazonomachies continue to be represented with this helmet frequently.

The CL Corinthian helmets were painted by the following artists:

Table 20

		Total
Achilles Painter	- nos. 168, 248, 363, 549, 574, 588, †686	7
Achilles Ptr., manner of	- no. 598	1
*Polygnotos	- nos. 84, 283, †428^2, 585	5
*Group of Polygnotos	- nos. 91, 563, 582^2	4
Aison	- nos. 370 (? early) & 583^2	3
Kadmos Painter	- nos. 246^2, 481	3
Dwarf Painter	- nos. 100, 526	2

Hephaistos Painter	- no. 3[2]	2
Phiale Painter	- nos. 169, 172	2
Washing Painter	- nos. †423, 698	2

With one helmet only:

Alexandre Group	- no. 81	Painter of Berlin 2536	- no. 232b
Ariana Painter	- no. †86	Painter of Ferrara T143A	- no. 237
Codrus Painter	- no. 55c	Painter of London D14	- no. 239
Duomo Painter	- no. 364	Painter of London E494	- no. 345
*Epimedes Painter	- no. 581	Ptr. Louvre Centauromachy	- no. 80
*Guglielmi Painter	- no. 235a	Ptr. Louvre Symposion	- no. 547
*Hector Painter	- no. 354	Ptr. of Woolly Satyrs	- no. 462 (?late)
*Kleophon Painter	- no. 366	*Peleus Painter	- no. 358
*Komaris Painter	- no. 290	Persephone Painter	- no. 374
Naples Painter	- no. 286	Quadrate Painter	- no. 601
Orpheus Painter	- no. 97	Thanatos Painter	- no. 608

Unattributed - nos. †229, 231, †681, 701 4

From the seven helmets by the Achilles Painter we can distinguish his style of Corinthian helmet: he has a liking for short crest-mountings, the patterns of which were discussed earlier; two of his helmets lack the crest and three have the side-notch filled in. There seems to be little similarity between these and the helmets of the Berlin Painter, his teacher, except that one of the latter's, LA no. 306, was also crestless. Likewise, the Achilles Painter's follower, the Dwarf Painter, is responsible for the only other CL helmet without crest or mounting. As for the helmets of his pupil, the Phiale Painter, and those of the Persephone Painter and the Painter of London E494, whom Beazley considered to be akin to him in spirit, they seem to have little in common.

A total of 15 helmets are by Polygnotos and artists in his Group (marked with an asterisk). No one strong style emerges out of the grouping, and apart from the eye-edging on no.84, the debt to the Niobid Painter

appears negligible. The helmets by the Hector Painter and the Peleus Painter are naturally almost identical.

Other artists closely connected by Beazley are the Naples and Ariana Painters, and indeed their Corinthian helmets are similar. The reverse, however, is true of the examples by the Hephaistos and Duomo Painters.

Late 5th century (Figs. 31-32)

The number of Corinthian helmets in the sample falls at the end of the century to only 13 on 11 vases. Almost all are portrayed resting on the back of the head; only two are held, no. 611 by the side and no. 249 by the cheek-piece. The first on no. 249, is represented from the front; all the rest are shown in profile. A head-band may be depicted below the neck-guard of the Giant on no. 464 (the exact interpretation of the three lines is not clear), and the only instance of the up-turned flap is seen on no. 465, a work related to the Pronomos Painter.[54]

Type 1 continues to be the commonest type at this date also; it is found on just over half the examples (nos. 249?, 464, 465, 466[2] and 611, and essentially no. 252, despite the odd curvature of the offset-line in the centre of the side). Type 2a disappears once more, and 2b is only drawn twice (frontally on no. 249, and in profile on no. 250). There are now no cases of type 3, hybrids or helmets without the offset-line drawn. A debased type appears to be depicted in nos. 258, 381 and 431, that is 23% of the sampled helmets.[55] The cheek-pieces on the frontal helmet on no. 249 seem to be longer than normal for a helmet of type 2b, but, otherwise, this is the only striking case of a mixing of type characteristics, except among the debased helmets.

The tendency noted earlier to ignore the nose-piece or to make it indistinguishable from the farther cheek-piece still continues here (e.g. ignored, nos. 258 and 381; long, no. 465). The majority, however, are shown normally.

Similarly, most neck-guards are regular: only once (on no. 252) is it not indented or concave below the offset-line. The convex line at this point noted on a few of the CL helmets is not continued. Some neck-guards (e.g. nos. 430, 465 and 466^2) are now partly obscured by blown hair and this may be the kindest explanation of the apparent absence of the guard on no. 381. The inner line running along the bottom edge of the neck-guard is now commoner, occurring on nos. 249, 250, 252, 258 and 464.

The junction between the cheek-piece and the neck-guard is obscured in five cases, but only once among the remaining eight (on no. 252) is it drawn simply. Two helmets have a short line at this point (nos. 249 and 464), three a forked line (nos. 250 and 466^2) and one has two lines running up to the offset (no. 431). On the last of the eight (no. 258) the cheek-piece strangely ends in a spiral where it meets the neck-guard.

The shape of the cheek-piece itself is fairly uniform, except in the cases of nos. 381 and 431, the former being particularly difficult to decipher. On four helmets the front line is carried beyond the top of the eye-hole (on nos. 249^2, 250 and 611), that is proportionally more often than in the preceding CL period (about 31% as compared to 14%). Twice the lower edge is echoed internally by a second line (nos. 252 and 258).

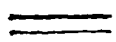
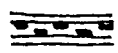
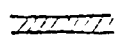
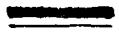
The trend apparent in the previous period towards more detail in the eye-hole area is maintained, with only four cases of simple treatment (nos. 249^2, 250 and 464), two of which are mere slits.[56] Proportionally, more than twice as many helmets now have a stroke beyond the outer corner

of the eye (nos. 381, 465, 466[2] and 611). Some form of edging is now included on three helmets (nos. 252, 431 and 466), and on one (no. 464) the eye-hole is in contact with the offset-line.

Twelve of the thirteen late 5th cent. Corinthian helmets studied have a low crest along the crown of the helmet (as a percentage just slightly more than in the CL period, i.e. about 92%), and two of these also have additional side-crests (nos. 249 and 258). The one helmet without a crest (no. 611) does nevertheless have its mounting attached to the crown. In the detail and decoration applied to the crest-hair, the situation is quite different from that which came before: dots are added in two cases (nos. 250 & 252), proportionally about as often as in the CL period, but their position so close to the mounting leaves one in doubt as to whether they are not really a part of that. (Since they do not quite touch the mounting at the back, I have treated them as separate from it.) Apart from the dots, however, the previously popular edge-strokes are now completely missing, and instead nine helmets have the massed hair-lines carefully delineated, and three (nos. 249, 252 and 381) indicate segments. Another three have white crests (nos. 249, 430 & 431), in the first case with the addition of clay in relief. Such clay is also applied to the ball at the end of the mounting of the farther side-crest on no. 258.

The shorter mounting introduced in the CL period is seen here on nos. 431 and 465, proportionally slightly more than earlier. An odder development is the inclusion of the mounting within the contour of the crown of the helmet (e.g. on nos. 249, 250 and 381), the result of which is an impossibly small crown space for the helmet itself. A forerunner of such bad drawing can be detected perhaps in CL no. 364. The mountings themselves bear patterns which with only one exception have been used before:[57]

Table 21

		Total
from LA, EC & CL:		
(1)	 - no. 381 & 611	2
(6)	- nos. 249, 250 & 258	3
from EC & CL:		
(29)	- nos. 464 & 466[2]	3
from CL:		
(37)	 - no. 465	1
(44)	 - no. 431	1
new:		
(45)	 - no. 252	1

The new pattern, (45), in fact, amounts to an inverted form of LA (4). One may note again the popularity and longevity of (6). Pattern no. (44) seems an obvious choice for a helmet on a white-ground lekythos as it had been in the CL period.

Little decoration is given to the crown of the helmet itself. On no. 252 which is unfortunately unattributed, small circles and squares appear, even partially over the crest-mounting, but this is the only instance of anything reminiscent of the EC features. One helmet (no. 430) is white, and two (nos. 431 & 465) are shaded all over.

These helmets are worn by the following:

Table 22

			Total
Ordinary Figures			4
	departing	1	
	fighting	2	
	at tomb	1	
Mythological Figures			9
	Athena	5	
	Giants	4	

The trend towards an association between this helmet and mythological

figures rather than ordinary ones, therefore, continues to grow, the percentages being 69% as compared to 31%. Athena is still prominent, and the Giants reappear. Surprisingly, no individual hero is depicted with the Corinthian helmet at this date.

The artists are

Table 23

		Total
Kekrops Painter	- nos. 249[2] & 250	3
Suessula Painter	- no. 466[2]	2
Aristophanes	- no. 464	1
Group R	- no. 611	1
Painter of Athens Wedding?	- no. 258	1
Pronomos Painter, related to	- no. 465	1
Talos Painter	- no. 430	1
Woman Painter, manner of	- no. 431	1
Unattributed	- nos. 252 & 381	2

According to Beazley, the Kekrops Painter was a follower of the Kadmos Painter; in general terms of shape there is some similarity between the helmets by them (compare, e.g. nos. 249 and 250 with CL no. 246), but in the details the former's helmets clearly belong to the later style. It is only this common style of the period which connects the helmets by Aristophanes and the Painter of the Athens Wedding?, who both worked in the manner of the Meidias Painter, rather than any specific repetition of details.

4th century (Fig. 33)

By the 4th century only six vases supply us with seven Corinthian helmets to study; of these vases three have been dated to the beginning of the century (nos. 103, 261 & 507), while one has been placed near its end, ca. 315, by Simon (no. 260). Only one of the helmets is being held,

no. 261, by the lower side-edge. All the rest are worn at the usual tilted angle on the crown of the head or rather in the case of no. 617 on the top of the pole which constitutes the support for a trophy. The latest, no. 260, is portrayed in three-quarter view, but the others are in profile as usual. That one is also the only helmet to have the flap at the side.

In this period all the helmets can be considered to be debased versions of type 1. One may note the unusual double curve of the offset-line on no. 507 which reaches no further than the start of the neck-guard, and the apparent shadowing of the area below the overhang of the offset on no. 262. Could this be a none-too-exact attempt to portray a helmet of type 3 - a view which the unique snake on the crown might support? The lower line of the cheek-piece now regularly continues that of the neck-guard (i.e. as if it were a helmet of type 2), except on no. 507 and the odd form of no. 262.

The nose-piece at this date generally seems to have proved a source of difficulty. It is ignored completely on no. 260 and (probably) no. 617, poorly drawn on nos. 103 and 261, and its edge taken all the way up to the offset on nos. 262 and 507^2. If one may make a generalisation from so small a sample, therefore, it received more attention earlier in the century than later.

The neck-guards are subject to considerable variety in details. Most now fail to indicate clearly the projection of the offset crown above them, but the edge along the bottom is still included on no. 103, and, apparently in an exaggerated form, on no. 262.

Detailed treatment is still given to the area at the centre of the side-edge: except on nos. 260 and 261 where this is obscured, we find a single stroke on nos. 103, 262? and 617, and a forked line on no. 507^2.

The basic cheek-piece shape survives little changed, but the front line is again continued beyond the eye-hole (on nos. 261 and 617). On nos. 103 and 262 the farther cheek-piece is also depicted (as well as the nose-piece) and this may be the case on no. 617 too. Edging is included on nos. 261 and 262 only, and the latter may even have some indication of a false mouth. (Cf. EC no. 664.)

Variety is again the keynote when it comes to the depiction of the eye-hole. It seems to be ignored altogether in one instance on no. 507, simply suggested by one line on no. 260 and two lines on no. 261. While the hole is more clearly shown on the other four, it is done simply on no. 617, with an apparently vertical projection at the outer corner on no. 103, and with edging around it on nos. 262 and 507. All at least are well below the line of the offset-edge.

Care has been taken to provide each helmet with a full crest of hair, and in one case, on no. 260, three crests are depicted, in the fashion which began in the preceding period, for the helmet of Athena. Although these crests run along the crown of the helmet in the usual manner, mountings are indicated on only three of them, nos. 103, 262 and 507. For the first and last of these the simple mounting, ═══(1), suffices and thereby proves its popularity right through from the Late Archaic period into the early 4th century at least. That on no. 262 includes some dilute glaze within it, and constitutes a new pattern, ▒▒▒ (46). The shorter crests of the CL period and the late 5th century do not appear here. Within the outline of the crest itself the masses of hair-lines continue to be represented on nos. 103, 262, 507 and partly 617; segments are indicated perhaps on no. 103 and the edge-strokes reappear on nos. 260, 261, 507 and 617. The dots, on the other hand, have been dropped.

Three of the helmets have some form of decoration on the crown: a small dotted circle occurs in the centre of the side on no. 261, and one of the helmets on no. 507 appears to be shaded to suggest its rotundity. Strikingly unusual, however, is the snake (and dot) in dilute glaze on the side of no. 262 - such figurative decoration has not been seen before on the Corinthian helmet of the vase-paintings.

In this century the association of the Corinthian helmet with Athena and heroes, rather than the regular hoplite, is almost complete, as the following list shows:

Table 24

		Total
Ordinary Figures		1
	on a trophy 1	
Heroic/Mythological Figures		6
	Athena 3	
	Lesser Ajax 1	
	Greek in Amaz.[y] 1	
	Neoptolemos 1	

The Lesser Ajax appears here for the first time since the LA period, while Neoptolemos is a new addition.

Little can be said of the style of the artists who painted the 4th century helmets, since only two of them have been attributed to a named individual or group by Beazley, i.e. no. 103 to the Painter of Munich 2365 and no. 262 to the F.B. Group. Overall the 4th century helmets seem to betray an interest in detailed crests and the suggestion of minor features like the side-notch or the eye-hole, but the variety in the rendering and the distortions in the proportions of the parts of the helmet itself might appear to lend support to the view that certainly by this date the Corinthian helmet had ceased to be a functioning piece of armour and had been relegated to an artistic type alone.

CORINTHIAN HELMETS IN SCULPTURE

Catalogue ca. 500-475 B.C.

1. Three warriors from the pediments of the Temple of Aphaia on Aegina: west IX, earlier east II and later east II. Marble. West and earlier east pediments ca. 500-490, later east ca. 490-480.[58]

West IX, Munich Glyptothek 80. Lullies & Hirmer, pl.76; Ohly, Guide, pl. 24, identified as Ajax; worn back on head; probably type 1; standard shape for nose-piece, neck-guard and cheek-piece; no edging along bottom edge and so no projection at sharp angle at side; eye-hole edged with projection at outer corner; remains of crest mounting along back of crown; no carved decoration.

Earlier east II, Athens, N.M. 1933. GSAP fig. 206.2; left side lost; worn back on head; type 1; pointed nose-piece with ridge down centre; edging down front of cheek-pieces and around eye-holes, with projection at outer corner and also at side-notch; a hole in crown for crest-mounting; a row of six holes along the offset-edge, and one below it at centre front.

Later east II, Athens, N.M. 1936. Ohly, 33-40 esp. 36-7, pls. 12-13, 15-17; very badly damaged; worn back on head; type unknown but offset-edge still survives at back; standard neck-guard as W IX; angle at side less deep than on W IX; no crest carved or, it seems, ever attached.

2. Warrior from the Spartan Acropolis. Marble. Athens, N.M. 3613. BSA 26 (1923-5) 253-266, pls. XVIII-XX (Woodward); Ridgway, SS 39 no. 6, and AS 76, 83; HGA 184, pl. 52a; Fitzhardinge, 87-9 fig. 105 (in colour on front of dust-jacket). Worn down on head; type 2a; nose-piece may once have existed, but present appearance suggests it was replaced by

a point reaching no further than the bridge of the wearer's nose; basic neck-guard; outline of cheek-pieces follows that of profile ram's heads; no notch along side-edge; no edging to eye-holes and so no projections; remains of marble crest with mounting to fit into two holes in crown; incised eyebrows, vertical ridge down forehead and painted spirals between cheek-piece and offset-edge at side.

3. Head of Athena from the Swedish Excavations at the Temple of Athena at Vouni, Cyprus. Limestone. Nicosia, Cyprus Museum. EWA IV 179 pl. 101 (Sjoqvist); IEE 2 165; Cyprus B.C. 106-7 no. 331. Worn back on head; type 2a; the rough carving of the pointed nose-piece distorts the shape of the front edge of the cheek-pieces; pointed angle at side; no projection there or at the eye-holes; remains of a sphinx on top; raised eyebrows which continue as a ridge down the nose-piece.

4. North side of the Harpy Tomb from Xanthos. Marble. London, B.M. B287. ca. 480-470. Xanthos 1 37ff.; Fifty Masterpieces no. 21; Ridgway, SS 95-6, 108 fig. 128; HGA 200-1. Held by cheek-piece and neck-guard by standing warrior and seated man; type 2a; no edging or projections; crest with mounting; eyebrows.

5. 'Hero' relief from Kharuda, Laconia. Marble. AM 29 (1904) 44-46 fig. 6 (Schröder); Fitzhardinge, 83 and 86 fig. 100. On ground; type 2b; no edging or projections; crest without distinct mounting.

ca. 475-450 B.C.

6. "Mourning" Athena relief. Marble. Athens, Acropolis Museum 695. ca. 460. BCH 81 (1957) 141-159 fig. 1 (Chamoux); Lullies & Hirmer, 77 pl. 139; Ridgway, SS 48-9 fig. 69, ca. 470; IEE 1 73, ca. 460-50; Brouskari, Cat 123-4 fig. 237, ca. 460; HGA 178, pl. 56d; Gk Mus 144

pl. 35. Worn back on head; type 1; standard nose-piece, neck-guard and cheek-piece; side-notch filled in; edging to eye-hole but no projection; crestwith double tail and lightly marked mounting; rolled up flaps at side and back.

7. Banquet relief from Thasos. Marble. Constantinople 578 (1947). JdI 28 (1913) 318 pl. 26 (Rodenwaldt); Lippold, 116 pl. 40.3, ca. 470; AM 80 (1965) 1-98 esp. 3, ca. 460, and 73-74 cat. no. 34, Beil.5 (Thönges-Stringaris); AJA 71 (1967) 307-9 (Ridgway); Ridgway, SS 46, 55 fig. 63; HGA 198, 377. Top left, as if hanging on wall; type 2b perhaps; side-notch possibly filled in; no crest.

8. Statuette of warrior. Bronze. London, B.M. Walters no. 603. AK 9 (1966) 50-1 pl. 11 (Robertson).[59] Worn back on head; type 1; deep angle at side; edging round eye-hole; crest on mounting with incised hair-lines.

9. Elgin Athena, statuette. Bronze. New York, Met. Mus. acc. no. 50.11.1. Schefold, M 59,69, 223 no. 264, ca. 460; Ridgway, SS 111 & 127; CGA 111 pl. 117 & 385, ca. 450. Worn back on head; possibly type 2b; edging round eye-holes and cheek-pieces; stump on top as if the remains of a stilt for a crest.

ca. 450-425 B.C.

10. Three apobatai on the Parthenon Frieze. Marble. North XII.47, North XXII.65 and South XXX.74. ca. 445-438.

N.XII.47: Athens, Acropolis Museum 3369. Brommer, PF pl. 68. Very badly damaged; worn back on head; type unknown; crest on mounting with deep segment lines; the hollow roll of a flap at the back.

N.XXII.65: London, B.M. Brommer, PF pl. 80. Worn back on head; type 1; deep angle at side with projection; eye-hole edged with projection; crest with mounting and segments signified by hollows and ridges.

S.XXX.74: London, B.M. Brommer, PF pls. 147 & 148.4. Very badly damaged; worn on back of head; type unknown; crest with thin mounting and sharply ridged segments.

ca. 425-400 B.C.

11. Two hoplites shaking hands on a grave lekythos. Marble. Athens, N.M. 835. Conze, no. 1073, pl. 218; Kjellberg, 86, dated to time of Archidamian War; Diepolder, 21, 420-410; Dohrn, 127ff. no. 35, early 4th c.; Karouzou, Cat 80, ca. 420; AM 85 (1970) pl. 25.1 (Prukakis-Christodoulopoulos); Schmaltz, 42-3 and 118 A.1; Stupperich, cat. no. 39, 430/20. Both worn back on head; a debased form of type 1; thick edging along the bottom, but no projection at the side-notch; eye-hole edged on left figure, but cursorily treated on right; crestless. (Pl. 17a-b).

12. Three helmets from the Frieze, and one from the Parapet of the Temple of Athena Nike in Athens. Marble.

(a) 'Peirithoos', AJA 76 (1972) pl. 73 fig. 3 (Harrison); worn back on head; type unknown; crest on mounting with segments.

(b) JdI 65/66 (1950-1) 163 fig. 25 (Blümel); falling; possibly type 1; nose-piece, side-notch and eye-hole just discernible; crested.

(c) Head in Boston, MFA inv. no. 18.431. Caskey, Cat 49-50 no. 19; Comstock & Vermeule, SS 27 no. 34. Worn back on head; possibly type 1 but the offset-edge is very softly modelled at the front; nose-piece

and eye-hole faintly visible; deep side-notch filled perhaps by a hair band below; hole for crest.

(d) Nike placing helmet on a trophy, Athens, Acropolis Mus. 994. SNTP pls. XI & XII; EAA Atlante pl. 53. Held by left side and cheek-piece; type 1; a ridge for the offset edge; simple nose-piece, side-notch and eye-hole; crestless.

ca. 400-375 B.C.

13. Three-sided grave relief from Aigaleo, Attica. Marble. Piraeus Museum 2575. AD 27 (1972) Chron 156 pl. 106 (Liagkouras); Arch Rep (1977-8) 10-11 fig. 19. In frontal view on material; type 1; straight nose-piece; small eye-holes; transverse crest on mounting with a tail on each side to form the volute below the half-palmette at the corner of the block. (The two griffins which rest heraldically on top of the crest-hair on two of the three sides, serve a decorative purpose in the sculptural design and are not to be thought of as a part of the helmet beneath.)[60]

14. Fragmentary head from the Argive Heraion. Marble. Athens, N.M. 3502. AM 52 (1927) 152-3 pls. XXIV-XXV Beil. XVII (Schuchhardt). Most of crown and face lost; worn back on head; type 1; the change of angle between the neck-guard and the cheek-piece is closer to that of a helmet of type 2; the separation of the cheek-pieces at the front below the nose-piece is ignored; the left eye-hole is only suggested, the right is edged with a projection from the outer corner; not known whether crested. (Cf. also N.M. 1564 which has a rolled-up flap at the right side: Karouzou, Cat 59 erroneously no. 1563.)

15. Proxeny decree relief. Marble. Athens, Acropolis Museum 1330. Brouskari, Cat 168-9 fig. 361, possibly 385-80 B.C. On ground beside seated Athena; type 1; large nose-piece; possibly a projection at the side-notch, but not at the eye-corner; crest with mounting and segments.

16. Grave relief of Demokleides. Marble. Athens, N.M. 752. Conze, no. 623 pl. 122; Diepolder, 39; HGA 370 pl. 123f. On top of shield on prow of ship; possibly debased type 1; large nose-piece; short neck-guard; Chalcidian-like opening in the side; trace of red in eye-slit; no crest.

17. Two warriors in the Amazonomachy on the Bassae Frieze. Marble. London, B.M. slabs 533 and 536. ca. 395 B.C.[61]
H22-533: Hofkes-Brukker & Mallwitz, 87-88; worn back on head; type 1; nose-piece and eye-hole lightly indicated near offset-edge; crestless.
H13-536: AK 10 (1967) 101-4 pls. 30-1 (Dörig); Hofkes-Brukker & Mallwitz, 71-72; worn back on head; probably debased type 1; nose-piece and eye-holes only lightly marked on front surface; separation of cheek-pieces at front not clear; crestless.

18. One warrior from the first frieze, and three from the second frieze of the Nereid Monument at Xanthos. Marble. London, B.M. slabs 859, 869 and 882. ca. 380 B.C.[62]
859: AM 52 (1927) Beil. XIII.3 (Schuchhardt); Cook, GRA 89 fig. 71; Lane-Fox, 142. Worn back on head of left-hand hoplite in duel; type 1; edging along bottom edges, front of cheek-piece and eye-hole with projections at side-notch and outer eye-corner; crested but no obvious mounting.
869: AM 52 (1927) Beil. XIII.6 (Schuchhardt); MTP pl. 13a; IEE 1 344-345; Childs[3], pl. 7.1. (a) worn back on head of farther defender

outside the walls; type 1; neck-guard and side-notch obscured; raised edging and projection at eye-hole; crested without mounting. (b) worn back on head of defender inside the walls (centre row, far left); type 2b; neck-guard and side-notch again obscured; no raised edging round eye-hole; no crest.

882: Childs[1], 109 fig. 3. Worn back on head of hoplite second from right; type 2b; possible edging round eye-hole; crest without mounting.

ca. 375-350 B.C.

19. Athena on treaty relief between Athens and Corcyra. Marble. Athens, N.M. 1467. 375-4 B.C. Diepolder, 36 fig. 9; Lippold, 230 pl. 88.2; PKG no. 94b; Süsserott, pl. 3.2; Richter, Hdb fig. 222; CGA 207; IEE 1 397. Worn back on head; debased type 2b; lower details difficult to see; crestless.

20. At least 20 warriors on the Frieze from the Heroon at Trysa. Limestone. Vienna, Kunsthistorisches Museum. ca. 370 B.C.[63] Corinthian helmets may be made out in the city-siege of the interior west wall (e.g. slabs A1-2, EAA Atlante pl. 269; A4-7, B6-7 and B10, EAA Atlante pl. 270, PKG no. 93, Cl Gr 42, Childs[2], 283 fig. 2, Childs[3], pl. 15), the Amazonomachy also on the interior west (e.g. slabs B13-14, EAA Atlante pl. 271, Cl Gr 46, Childs[3], pl. 17), the Centauromachy of the interior east wall (e.g. EAA Atlante pl. 273), and the Amazonomachy and Seven against Thebes of the exterior south wall (e.g. EAA Atlante pl. 275, Childs[2], 291 fig. 10 (A3), Childs[3], pl. 5.2 (B1)). Because of the present condition of the sculpture little can be said of the details of the helmets. However, most would seem to be of type 1 (possibly some type 2b, e.g. on west B10), and all are worn back on the head; crests are nearly always added

(with the exception again of the four on west B10). Very rarely one can still see a mounting (e.g. on exterior south A3) or segments in the crest-hair (e.g. on west B14).

ca. 350-325 B.C.

21. Greeks on the Amazonomachy Frieze slabs from the Mausoleum at Halicarnassus. Marble. London, B.M.

Slab no. 1006: Lullies & Hirmer, pl. 215 bottom; PKG no. 105b; ASCG 177 fig. 205. Two helmets worn back on head; type 1; neck-guard and cheek-piece completely separated at side by a deep cutting reaching up to the offset-edge, thus ; edging along neck-guard, cheek-piece and eye-hole but no projection there; crest on short, narrow mounting.

Slab no. 1007: ASCG 175 fig. 201. Worn back on head of Greek at left; type 2b; slit at side up to offset-edge similar to those on 1006; shallow eye-hole; no crest.

Slab no. 1014: Lullies & Hirmer, pl. 214 bottom; PKG no. 104b; ASCG 179 fig. 207, 183 fig. 212, 184 fig. 213; IEE 2 306. Two helmets worn back on head; type 1; neck-guard and cheek-piece separated by slit as on 1006 but slightly different shape, ; edging along bottom of neck-guard and cheek-piece, and around eye-hole; crest on short, narrow mounting.

Slab no. 1019: Lullies & Hirmer, pl. 216 top; ASCG 174 fig. 200. On Greek at far right; apparently worn back on head (partly hidden by shield); type 1; small eye-hole; crest on short, narrow mounting with segments in hair marked by ridges and grooves.

Slab no. 1021: Lullies & Hirmer, pl. 217 bottom; ASCG 171 fig. 195. Worn back on head by Greek at left; damaged; probably type 1; probably

with slit at side up to offset-edge; eye-hole only just visible; crest on short, thick mounting with segments in hair marked by ridges and grooves.

22. Amazonomachy Frieze slab from a mausoleum at Kallithea. Marble. Athens N.M. 3614. Karouzou, Cat 88; AAA 4 (1971) 110 (Tsirivakos); AK 15 (1972) 147 (Tsirivakos); Stupperich, 180. Worn back on head of Greek in centre; type 1; probably hair rather than a flap conceals side-edge; small hole for eye-opening; crest on short,thick mounting with incised segment-lines.

23. Statue of Athena from Piraeus. Bronze. Piraeus Mus.: AJA 64 (1960) 265ff. pls. 65.2, 68-69 (Vanderpool); AK 14 (1971) 37-42 and 133, pls. 15-16, shortly after 350 (Schefold); BSA 66 (1971) 373-382 pls. 67-68a, ca. 375 (Waywell); Cl Gr 10; IEE 1 in colour on back of dust-jacket; AAA 6 (1973) 323-329 figs. 1-2 (Palagia); Gk Mus 87 pl. 79, 340/30; Palagia, 21-23 and passim, pls. 32-3 and cover, 350/40. Worn back on head; type 1; slight projection over small notch at side; edging round eye-holes with larger projection; crest in short mounting on stilt concealed by a coiled snake on crown; six segments with incised hair-lines; griffins in relief on each side of crown; owls applied to cheek-pieces; rolled up flaps at sides. (Pl.20a)

24. Grave relief of Alkias from Phokis, from Corinth. Athens, N.M. 23. Third or fourth quarter of 4th century. AM 11 (1886) 150-161 pl. 5 (Loewy); Prins de Jong, pl. 102. Worn back on head; debased type 2b; low neck-guard despite position; rough eye-hole; crest without carved mounting.

Commentary

Seven Corinthian helmets are listed from the Late Archaic period. The majority of these (i.e. four) are depicted resting on the crown or back of the wearer's head; only one is worn down properly by the Spartan hoplite; the remaining two are seen on the ground and in the hands of the warrior and a seated man (perhaps his father).

All the helmets have the offset-edge indicated. Three have eyebrows and are of type 2a; two are of type 1; one only is of type 2b; one is damaged and cannot be assigned to a type.

The forms of the nose-pieces, neck-guards and cheek-pieces are essentially simple and basic to the LA Corinthian helmet, with the exceptional awkwardness of the Cypriot Athena noted above. The possible replacement of the nose-piece by a point on the bridge of the nose on the Spartan warrior's helmet, together with the ram's head cheek-pieces, suggest strong influence from the Chalcidian helmet of Group III of the late 6th century.[64] A raised edging is not usual at this date; only the front of the cheek-pieces on the helmet from the earlier east pediment at Aegina is edged in this way. Only one of the helmets catalogued displays a projection above the notch in the side-edge, and indeed, these notches are mostly very shallow, with the exception of West IX which is deeper, and the Spartan warrior's which is non-existent. The edging and projection occur, on the other hand, at the eye-hole on two of the helmets from Aegina, notably the two examples of type 1.

Crests were fitted to five of the helmets. According to Ohly, the helmet from the second east pediment at Aegina never had a crest at all. The Athena from Vouni could have had a crest mounted on the sphinx.

Wide mountings survive for only three of the crests; on the Kharuda relief it could have been painted, as could any pattern on the side of the others.

Additional features on the helmets include a row of holes along the offset-edge of the helmet from the first east pediment at Aegina, perhaps for the attachment of a wreath; painted spirals at the side of the Spartan warrior's; the sphinx on the top of the Athena from Vouni. A ridge down the front of the helmet occurs on the Spartan warrior; on the Athena a ridge continues down the nose-piece from the centre of the eyebrows. Such ridges were found on the original helmets of type 2a also. The ridge on the nose-piece of the just mentioned Aeginetan helmet, however, is exceptional for a helmet of type 1.

The wearers of these LA Corinthian helmets can be identified as Athena (once) and heroes (probably six times), although the status of the Spartan warrior, the Lycian warrior and the Kharuda 'hero' is questionable. Ohly further identified West IX as Ajax.

From the Early Classical period four examples were catalogued. Only one of these was shown in the background of the scene, while the other three were set on the top of the wearer's head. Notably none is down over the head.

Two helmets are of type 1 and perhaps the other two of type 2b. Type 2a is no longer represented in the sculpture.

The shapes of the nose-pieces, neck-guards and cheek-pieces require no comment. Only the cheek-pieces of the Elgin Athena are edged, and edging is added to the eye-holes on it and the "Mourning" Athena and B.M. statuette. There are no projections either at the eye-corner or the side-notch on any of the EC works. The small feature of the filled-in side-notch now appears for the first time on the "Mourning" Athena and perhaps the Thasian relief.

Only on this relief is the helmet crestless. The "Mourning" Athena and the B.M. statuette have a crest in a low mounting on the crown, the former with apparently two tails, the latter with incised hair-lines. The stump on the top of the Elgin Athena may once have been part of a stilted mounting, or a more functional tang similar to the thick one on the B.M. statuette.

None of these helmets carries any special decorative features. The rolled-up flaps presumably of a cap worn under the helmet, appear now for the first time on the "Mourning" Athena, at the side and the back.

The Corinthian helmet in this period is worn by Athena (twice) and associated with male warriors (twice) one of whom may be a hero, the other an ordinary warrior.

Only three helmets were included from the third quarter of the 5th century.[65] All of these came from the Parthenon Frieze, and all of them were damaged to some extent so that little can actually be said regarding the finer details of their shape.[66]

The helmets are worn back off the face. One is clearly of type 1, but the front part of the offset-edge is missing on the others so that the type cannot be determined. On the best preserved helmet, N.XXII.65, the angle at the side-notch is edged with a projection and so is the eye-hole. All three were equipped with crests on low mountings of different width; likewise the segments in the crest-hair on each are portrayed in a different way. The unusual cavity at the back of the helmet on N.XII.47 must be the remains of the rolled flap seen earlier on the "Mourning" Athena. It is omitted on the other two. In its present condition, it seems that Corinthian helmets were worn on the Frieze only by apobatai and not by the cavalrymen which could have some significance. In any

event, heroic status seems a possibility for these figures also.[67]

Six helmets could be considered from the late 5th century. Four of these are shown in the usual position on the top of the head, but one is caught as it falls from such a position and another is being placed on top of a trophy by Nike.

Where the type can be discerned, it appears to be type 1 at this date; the helmets on the Athens lekythos may be somewhat debased since the proportions of the crown area and the front are distorted. The helmet on the Parapet is exceptional in having the offset-edge portrayed by a ridge rather than a step between the crown and the lower parts.

It appears to be a feature of the Corinthian helmets of this period that the eye area is treated more softly or only roughly indicated. Edging is only found there once, on one of the helmets on the Athens lekythos, and it is also only on the lekythos that the bottom of the neck-guard and cheek-piece is provided with a raised edge. The side-notch may be filled in on the head (c) from the Nike Temple Frieze, but the straight line there could equally serve to indicate a headband worn under the helmet, as frequently on the vase-paintings.

Three of the helmets are supplied with crests, three without. Only one, however, has an obvious mounting and segments of hair indicated, i.e. (a) from the Frieze.

While the helmets from the Temple of Athena Nike are possibly portrayed in an heroic situation,[68] or a symbolic one in the case of (d), those on the grave lekythos could be part of the contemporary scene. However, in view of their debased form and the theory already referred to that the Corinthian helmet ceased to be part of the regular hoplite panoply after ca. 480 B.C., one must also consider here whether it might not be the case that the

appearance of this helmet type imparts to the two figures something of the status of heroes.

The first quarter of the 4th century sees an increase in the number of helmets in sculpture with 12 examples. While the majority (i.e. seven) are still shown resting on the back of the head, five are depicted set down, three times on a cloth, once on the ground and once on a shield.

On the Nereid Monument two helmets are of type 2b, but the remainder are of type 1, and tending towards the debased form on Demokleides' relief and the Bassae Frieze.

The lack of care in the modelling of the various parts of the front and side of the helmet seems to increase in this period, and may be typified by the treatment of the eye-holes on Demokleides' relief and the Bassae Frieze, or the omission of the division between the cheek-pieces on the head from the Argive Heraion and the Bassae Frieze again. This treatment could, of course, be a more accurate reflection of the debased Corinthian helmets which are known to have existed at least in the West at this date. A prominent edging along the neck-guard and the cheek-piece is only seen on the Nereid Monument, but the projection at the side may perhaps also occur on the Proxeny relief. The edging and projection round the eye-hole occurs not only on the Nereid Monument but also on the head from the Argive Heraion. The trend is, however, away from such detailed treatment of these features.

At least four of the helmets lack a crest. Of the seven which are crested the ones on the Aigaleo relief come as a surprise with their transverse position and twin tails. So unusual is a crest of this form at this date that one can only assume that the sculptor has been influenced by the usual volutes and tendrils of similar grave reliefs to combine them

with the crest in this unique formation. The position of the griffins likewise serves a sculptural and compositional purpose only. The Corinthian helmet also one might conclude has become a mere motif in the overall design, symbolic perhaps of the status of the deceased rather than characteristic of his actual equipment. Athena's helmet on the Proxeny relief has crest, mounting and segments; the latter two features are ignored on the three helmets of the Nereid Monument.

At this date, then, the Corinthian helmet is once again associated with Athena as well as heroes (the Argive Heraion and Bassae). It remains questionable whether the helmets on the two grave reliefs and the Nereid Monument friezes are those of ordinary warriors or heroes.

The largest number of Corinthian helmets in one period occurs in the second quarter of the 4th century, but this impression is actually deceptive since nearly all of them appear on the one frieze from Trysa, which in its multitude of figures includes many others in different types of helmets as well. All of them at any rate are worn back on the head, and are consequently recognisable often by outline alone.

Most of the Trysa helmets seem to be of type 1, but four may be of type 2b, as is the helmet of Athena on the treaty relief, though in a more debased form. As a result of this degeneration in the case of the latter and the poor condition of the former, nothing can profitably be said of the details of nose-piece, neck-guard and cheek-pieces at this date. Crests can be made out on the majority of the Trysa helmets, but the detail of mounting or segments only once each. Athena's helmet is crestless.

The wearers of the helmet are still Athena (once) and heroes, at least in the contexts of the Amazonomachies, Centauromachy and Seven against Thebes,

though the interpretation of the figures in the city-siege is still doubtful.

In the last period, ca. 350-325, ten helmets were listed in the catalogue. All of these were worn back on the head, so that one may conclude that, apart from the helmets shown on the ground or held, etc., only one, that of the LA Spartan warrior was shown worn down in the sculpture under consideration.

Eight of the ten helmets are of type 1, two of type 2b of which that worn by Alkias may be thought of as debased. These two types, therefore, have been represented together throughout the early 5th and the 4th centuries, but not the second half of the 5th, with type 1 regularly the commoner. Type 2a was only represented in LA sculpture. Furthermore, the term, debased, has been used for both types 1 and 2b since the late 5th century to signify that the form of the helmet or its proportions are no longer in accordance with the LA standard.

Only four of the helmets on two slabs from the Mausoleum have edging along the neck-guard, cheek-piece and eye-hole. The Piraeus Athena in contrast has no obvious edging except round the eye-hole, and then displays the projections at the outer eye-corner and the side-notch. This kind of edging and projection has appeared sporadically throughout the period under study, therefore, especially on helmets of type 1 for which it was particularly characteristic in the originals also. The small eye-hole on the helmet from the Kallithea frieze and the rough one on Alkias' continue instead the trend towards a simpler, more cursory treatment of such details which began in the late 5th century. The slits in the side of the helmet seen on the Mausoleum helmets are without earlier parallel - even the wider, Chalcidian-like opening along the edge of Demokleides' helmet at the beginning of the 4th century did not reach as far as the offset-edge.

Only one helmet, on the Mausoleum, lacks a crest at this date. Alkias' is standard but without a mounting. The Piraeus Athena's combines both a short stilt and a short mounting, and this new short mounting appears in two thicknesses on the other Mausoleum helmets and the Kallithea frieze. Details of the hair include incised hairlines on the Athena, and segments cut out, incised or formed by ridges and grooves on the Athena, the Kallithea frieze and the Mausoleum helmets (twice). Such minor details have appeared infrequently throughout the Classical period, therefore, and the inclusion or omission of the crest itself and its mounting seems to follow no particular pattern.

The Piraeus Athena sees a return to the decorated Corinthian helmet of the LA period, with its snake coiled around the crest-mounting, griffins on the crown and owls on the cheek-pieces. No other helmet in the Classical period proper has borne such elaborate decoration. One may also note here that the rolled-up flaps only appeared in the EC and CL periods and later in the 4th century on one fragment from the Argive Heraion and this Athena. Indeed, apart from the flap on the Parthenon apobates and the Heraion warrior, the only other instance of it was on another Athena, on the relief from the Acropolis.

The helmets of the third quarter of the fourth century are associated with the same figures as were the earlier ones, namely Athena, heroes i.e. Greeks in combat with Amazons (eight times) and a dead hoplite, Alkias from Phokis who at least need not necessarily be accorded the status of hero. Throughout the Classical period, however, the bias has been heavily weighted towards the goddess Athena and various heroes: the instances of ordinary warriors with the Corinthian helmet have been rare and subject to question. Only in the cases of the grave monuments can one associate the helmet with

a real, contemporary person, and at least for Demokleides and Alkias there seems to be no reason to believe that they have been heroised at all. Perhaps it then becomes important to note that in these instances the helmets are more debased. Do they, therefore, represent more accurately the contemporary form of the Corinthian helmet, or do they betray the sculptor's lack of familiarity with an out of date type?

CORINTHIAN HELMETS IN MINOR WORKS OF ART

Catalogue

ca. 500 B.C.

1. Miniature votive helmet. Bronze. Berlin (West) inv. no. 31360. H. ca. 2.5 cm. Type 1;projections at side-notches and eye-corners; no crest.

Early 5th cent.

2. Wall-painting in Karaburun Tomb II, Lycia. AJA 76 (1972) 267 pl. 60 figs. 23-24 (Mellink). Worn down on head of wounded hoplite who falls before the Lycian dynast on his horse; type 2b; nose-piece no longer clear; deep neck-guard and long cheek-piece (as if type 1); bichrome edging to neck-guard and cheek-piece; traces perhaps of a simple palmette at the side-notch; edging to eye-hole unclear; crest on mounting with pattern; groups of hairlines in crest-hair and band of red at outer edge and as tail.

ca. 450-400 B.C.

3. Terracotta plaque of a hoplite. Corinth, KT27-7. Corinth XV.2 Class XXI.7 p. 153 pl. 32 (Stillwell).[69] Worn on back of head; type 1;

edging round bottom and eye-hole with projection at side-notch and also probably eye-corner; crest on mounting with incised edge-strokes in hair.

Beginning of 4th cent.

4. Gold comb from Solokha. Leningrad, Hermitage Dn 1913, 1/1. Artamonov, 47, pls. 147-8 and 150; IEE 2 180; FLS 109 cat. no. 71 pls. 12-13; Grakow, pls. 10-11. Worn on back of head by central, Scythian rider (N.B.not a hoplite); type 2b; no edging; wide slit in side-edge, but not up to offset-edge; no crest.

5. Incised ivory plaque, perhaps from a sarcophagus, from Kul Oba. Leningrad, Hermitage. Minns 204B fig. 101; Pfuhl, fig. 626; Artamonov, 70 pls. 258 and 261; Gk Art fig. 164. Held by right cheek-piece by Athena in Judgement of Paris; type 1; no edging along neck-guard and cheek-piece; projection at side-notch; small eye-hole without edging; the curving line above the eye-hole could be an unusual form of eyebrow; crest in mounting, ⩛⩛⩛⩛⩛ , with hairlines; a dark wash over the metal parts of the helmet.

6. Plastic lekythos in form of bust of Athena. Terracotta. London, B.M. acc. no. 93.11-3.4. Higgins, Cat II 58-59 cat. no. 1701 pl. 38; Lezzi-Hafter, 49 pl. 173c-d. Front part of helmet only; worn back on head; type 1 in debased form; small nose-piece and eye-holes with gilt edging; gilt edging to front of cheek-pieces; possibly raised eyebrows?; grey, transverse crest on gilt, beaded mounting; crest-hair in 5 segments with pink edge and blue tails; white slip on metal area; gilt beading along offset-edge; small gilt ram's heads on cheek-pieces; worn with a green cloth with red border under the helmet.[70]

mid 4th cent.

7. Three helmets on the gold scabbard from Chertomlyk. Leningrad, Hermitage Dn 1863, 1/447. Minns, 286-7 fig. 207; Artamonov, 55 pls. 183 & 185; IEE 2 97 & 180; FLS 109 cat. no. 68 pl. 10.

(a) worn back on head of first figure at left; type 1; angle at side obscured by hair; no edging; triple crested with side-crest on wing-shaped attachment with spirals at base and incised hairlines; possible flap at back.

(b) worn back on head by third figure from left; probably type 1; angle also obscured; no edging; single crest with incised hairlines; no mounting; 'floral' with volutes on side of crown; probable flap at back.

(c) at far right, falling/fallen to ground (a space-filler); type 2b; side-notch with projection up to offset-edge?; small eye-hole; triple-crested in same manner as (a).

3rd quarter of 4th cent.

8. Attacking warrior on bronze mirror relief. Paris, Louvre 1712. Züchner, 57 KS79 pl. 9, after 350, Corinthian. AK 25 (1982) 60 pl. 10.2 (Aitken) with refs. Damaged; worn back on head; possibly type 2b; crest on apparently short mounting with incised hairlines.

9. Four helmets on the gold plate covering the quiver from the Antechamber of the Royal Tomb at Vergina. Thessaloniki Museum. Andronikos, Royal Graves 44-6 fig. 27;[71] Treas Anc Mac Cat 50 no. 89 pl. 22; Acta 50 pls. 18b & 20; Lane-Fox, 87; Philip of Mac 218-9 & 221 figs. 122-3. Two helmets worn back on head by two hoplites near centres of the upper and lower zone, and two helmets as space-fillers at the right in both zones; all probably type 1; details, e.g. eye-holes cursorily indicated; crests on mountings with incised hairlines.

10. Two bronze plaques from the handles of situlae in the form of a bust of Athena. One in Sofia, Arch. Mus. inv. no. 6047, one in Kazanluk,Arch. Mus. inv. no. 765. Venedikov & Gerassimov, 357 pls. 109-110, identified as Perseus, and dated to second half of 4th cent. Though similar, the heads and helmets are not identical; both worn back on head; type 1; eye-holes and nose-piece not distinct on first; central crest, with incised hairlines on second; side-crests with incised hairlines on attachments like raised cheek-pieces (!) at goddess's temples.

Commentary

The minor works of art listed offer 16 Corinthian helmets for discussion. Only three appear on works from the 5th century, and only one, the terracotta plaque, is from a site in Mainland Greece, the majority of the items in fact coming from areas to the north.

The 5th century pieces may profitably be considered together. The early 5th cent. painting provides the only case of a helmet worn down over the warrior's head; the Corinthian plaque shows it in the normal Classical position on the crown of the head.

Type 1 is represented on the votive helmet and the plaque, while 2b appears in the painting. (At least the offset-edge is of type 2b; the long cheek-piece is instead of type 1.) Projections occur appropriately at the side-notch and eye-corner on the two helmets of type 1, while the simpler edging on the painted helmet of type 2b has the remains of a palmette at the side.

The votive helmet lacks a crest. The terracotta one presents a crest

with the sculptured characteristics of a plain mounting and incised edge-strokes. The medium used for the Lycian example allows greater scope: not only is the mounting given a pattern (no. 23 according to the vase-paintings), but also the groups of hairlines are shown and the red border and tail to the crest-hair.

The first two 5th century helmets can probably be associated confidently with ordinary hoplites: the votive helmet would stand for a type in contemporary use with no heroic connotations, and the painted helmet may be worn by a leader of Ionian Greeks in battle with the Lycian forces. The purpose of the terracotta plaque is unknown, but the figure represented on it could well be a hero.

Of the six helmets from the first half of the 4th century five occur on works made for the Scythian market, but only in the case of the Solokha comb is the iconography also Scythian. Four helmets are worn back on the head, one is held by the farther cheek-piece and one is depicted as if falling to the ground in a fight. (It is simply a space-filler since the closest figure to which it could belong is actually an unseated Persian rider.)

Type 1 continues to be the commoner form, but 2b is still portrayed in two instances. The helmet of type 1 worn by the Athena is decidedly debased with its small, close-set eye-holes. A small eye-hole is also a feature of the helmet held by Athena on the Kul Oba ivory, and on both of these there is the unexpected suggestion of an eyebrow(s) above. A raised edging is largely ignored at this date, except on the terracotta Athena where it was gilded as well. Similarly, a projection at the side is also unusual; on the ivory it is formed by the extension of the lower edge of the cheek-piece in the manner of the vase-paintings. (Indeed, the whole portrayal of the

helmet on the ivory is reminiscent of a vase-painting: note, for example, the inclusion of the line of the far cheek-piece.) The side-edge is broken by a wide slit on the helmet on the comb, but the opening is, nevertheless, different from the rounded cutting of the Chalcidian helmet.

It is only this last mentioned helmet on the Solokha comb which is crestless. The most elaborate and unusual is that on the lekythos where the range of added colours is utilized as well as the transverse form. (One may recall the transverse crests on the helmets carved on the contemporary grave relief from Aigaleo.) Also unusual for a Corinthian helmet are the triple crests added to two of the helmets on the scabbard. The third helmet there is simpler with its single crest, comparable to that on the ivory plaque, though the latter includes the mounting.

More decoration is applied to the helmets of this period than has been seen earlier or will be seen later. Again the lekythos appears the most elaborate with its ram's heads, beading and gilding, but those on the scabbard also have florals or spirals marked by dots on the side of the crown, and the ivory plaque has a wash painted over the parts which would be of metal in an original.

The wearers or owners of the Corinthian helmets studied for this period include a Scythian horseman (in a presumably accurate portrayal of the mixed equipment and dress adopted by the Scyths), Athena (twice) and three Greeks in battle with Persians. This Persomachy, though once real, probably constitutes here an heroic context.

The seven helmets considered from later in the 4th century are all shown on the back of the head except for the two which on the Vergina quiver, fill spaces in the design in a similar manner to the one on the Chertomlyk scabbard. It was suggested that the helmet on the Louvre mirror

relief may have been of type 2b, while the others are of type 1. If that is so, then the minor works also illustrate both types throughout the Classical period with slightly more cases of type 1 than type 2b. The treatment of the various parts of the helmet like the eye-holes and nose-piece does not warrant detailed comment for this period; simple features or their omission altogether, as in the case of one of the Athena heads, are characteristic.

All the helmets have a central crest on a mounting with hairlines incised, except for the Athena heads which lack the mountings and in one case the incisions. The extra side-crests on these heads are exceptional, but may be explained as a feature borrowed from the representation of the goddess in an Attic helmet.

Athena, then, wears two of the Corinthian helmets depicted in the third quarter of the 4th century. The other five are worn by, or associated with, hoplites in battle scenes, on the quiver specifically a capture of a city, sometimes interpreted as Troy, to judge by the women, child and altars which are included. The contexts could, therefore, be heroic or mythological.

CORINTHIAN HELMETS ON AMPHORA STAMPS, GEMS AND RINGS

Catalogue — Early 5th cent.

1. Amphora stamp found in French excavations on Thasos in 1979, inv. no. 79/304. BCH 104 (1980) 732-4 fig. 21 (Grandjean), dated by associated pottery to the 6th or first half of the 5th cent. In profile view; type 2b; no side-notch; slit-like eye-hole; no crest but projection on top as if to take stilt for one.

2. Warrior and sphinx on chalcedony scaraboid by the Semon Master. London, B.M. 1933.10-15.1. GGFR pl. 363; Anc Art in Seals fig. IV-21. Worn on back of head; type 2b; side-notch; large eye-hole; no edging; crest with thin mounting and edge-strokes.

3. Standing warrior on cornelian scaraboid. Paris. GGFR pl. 367. Beside warrior (could be held by the tail of crest?); type 2b; side-notch; large eye-hole; no edging or projections; crest without mounting (?), with hairlines.

4. Seated helmet-maker on agate scarab. Nicosia Museum, D55. Richter, EG 52 no. 105; GGFR pl. 370. Neck-guard supported on left hand; type 2b; no side— notch; large eye-hole; no edging or projections; no crest.

5. Seated helmet-maker on rock crystal scaraboid. Munich, Staatliche Münzsammlung. PKG no. 161c, Ionian; Richter, EG 52-3 no. 106. Neck-guard supported on left hand; type 2b; no side— notch; large eye-hole; edging there and front of cheek-piece; no projections;no crest. (Pl. 21c)

6. "Achilles and Penthesilea" on a brownish sard scaraboid from Cyprus. Boston, MFA inv. no. 27.682. Richter, EG 62 no. 150. Worn by "Achilles" on back of head; type 1?; side-notch; crest with edge-strokes (mounting not clear).

Late 5th cent.

7. Hermes and Athena on a blue chalcedony scaraboid from Sardis. Constantinople. GGFR 310-1 pl. 855, Greco-Persian, Greek style. Worn on crown of head by Athena; type debased; long nose-piece; deep neck-guard with edging; eye-hole rough with edging; crest with hair-lines, but no mounting.

First half of 4th cent.

8. Athena on a gold ring. London, B.M. GGFR pl. 765, West Greek. Worn on crown of head; type not clear; short nose-piece; convex neck-guard; squared side-notch; crest with edge-strokes, but no mounting.

2nd or 3rd quarter of 4th cent.

9. Amphora stamp from the Athenian Agora, inv. no. SS8404. Athens, Agora Museum. From deposit dated ca. 360-325 B.C. IEE 2 14; V.R. Grace, "Exceptional Amphora Stamps" in Studies in Classical Art and Archaeology (New York, 1979) 117-127 pls. XXXV and XXXVI esp. 123 and 126 pl. XXXVI. 3. Worn by head of Athena; type not clear; thin nose-piece; eye-hole with edging; details of side not impressed; crest with incised hairlines but no mounting; queue of hair or very long flap on neck below.

Commentary

More than half of the representations of the Corinthian helmet listed in this section occur on objects of Late Archaic date: the figure of a warrior or a helmet-maker was a popular motif at this date, and more might have been included.[72] However, only half a dozen examples have been included to emphasise the later dearth.

Of the six LA helmets then one is shown by itself as the stamp on an amphora handle; two are worn on the back of the head; two are held by the neck-guard and perhaps a third held by the tail of the crest (an unprecedented position). All but the last example can be assigned to type 2b; the sixth might be of type 1. A change of angle along the bottom edge or a notch in the side occurs in equal numbers without any special significance. On the

gems the eye-holes are generally large: on the stamp this is reduced to a slit. Edging round the eye-hole is found only on the second helmet under construction. None has the projection at the side-notch or the eye-corner, and that is true also for all the helmets in this section.

The two helmets in the process of manufacture naturally have no crests. As stated above, the odd stump on the first helmet might imply a stilted crest, although its form is hardly convincing. Both edge-strokes and hair-lines are added to the crests on the three remaining helmets, but the depiction of the mounting is not considered so important.

The first five helmets seem to have no mythological or heroic connotations. The sixth may belong to Achilles or simply to a Greek hero in a fight with an Amazon. In either case it is little different from the others.

The other three helmets from the Classical period itself are all, in contrast, worn by Athena on the crown of her head. Surprisingly, only the third, the latest, retains the lines of the LA Corinthian helmet, probably of type 1, while the other two are more debased with the crown part and lower parts more distorted and broken up. The helmet on the amphora stamp probably owes its more exact form not only to its greater scale but also to the dies of Corinthian coins with which it has been compared.

More edging is found on these three helmets than on the earlier ones, but there are still no projections. The wider opening in the side of the helmet on the ring recalls that on the contemporary comb from Solokha discussed earlier, despite the fact that these should come from opposite ends of the Greek world.

Each of these helmets is crested, but the mounting is now ignored completely. The inclusion of the edge-strokes or hairlines to indicate the nature of the crest-hair seems standard.

CORINTHIAN HELMETS ON COINS

Catalogue[73] ca. 500-475 B.C.

I. Heads of Athena[74]

1. Corinth, rev. of staters (since ca. 515 B.C.)[75]

e.g. ACGC pl. 13 nos. 226 (ca. 500) and 228 (ca. 480)

cf. Ravel pl. XI T135 and T136.

Note: the form of the helmet on no. 228 may be taken as the norm (i.e. worn back on the head; type 1; basic nose-piece; indented neck-guard with out-turned rim; side-notch; edging along bottom of neck-guard and cheek-piece; no crest and no added decoration), and only major deviations from this norm need be noted in the remainder of the catalogue.

2. Leukas, rev. of staters

e.g. ACGC pl. 13 no. 227 (=pl. 23 no. 415) (ca. 490).

3. Ambracia, rev. of staters

e.g. ACGC pl. 13 no. 229 and pl. 23 no. 422 (ca. 480).

The projection at the side-notch is clear on the second of these.[76]

4. Lampsakos, rev. of dr.

e.g. Kraay & Hirmer, pl. 202 no. 728; ACGC pl. 54 no. 913 (ca. 480).

5. Lapethos, rev. of staters

e.g. ACGC pl. 63 nos. 1091 (ca. 500) and 1092 (ca. 480).

The straight line formed by the bottom edge on no. 1091 would suggest that the helmet is of type 2 - the offset-edge is lost.

III. Helmet without head

6. Kamarina, obv. of 2 dr.

e.g. Kraay & Hirmer, pl. 52 no. 146 (ca. 490-484); ACGC pl. 49 no. 844 (ca. 460); Westermark & Jenkins, 18ff. pl. 1 (ca. 492-485).[77]

As blazon of a shield; H-shape on crown.

ca. 475 B.C.

I. Heads of Athena

7. Corinth, rev. of stater

e.g. ACGC pl. 13 no. 230; cf. Ravel pl. XII T140.

ca. 475-450 B.C.

I. Heads of Athena

8. Corinth, rev. of staters

e.g. Kraay & Hirmer, pl. 152 no. 482 (ca. 470-450); ACGC pl. 13 nos. 231 and 232 (ca. 470); cf. Ravel pl. XIII T150 and T161.

9. Leukas, rev. of stater

e.g. ACGC pl. 23 no. 416 (ca. 460).

Projections at side-notch and eye-corner.

10. Cumae, obv. of stater

e.g. ACGC pl. 42 no. 724 (ca. 460).

11. Lampsakos, rev. of dr.

e.g. ACGC pl. 54 no. 914 (ca. 460).

12. Side, rev. of stater

e.g. Kraay & Hirmer, pl. 192 no. 661 (ca. 460).

Type 2b.

ca. 450 B.C.

I. Heads of Athena

13. Corinth, rev. of staters

e.g. Kraay & Hirmer, pl. 153 no. 483 (ca. 450-440); ACGC pl. 13 no. 233 and no. 234; cf. Ravel pls. XVII and XXIII T235-238.

Projection at eye-corner clear on no. 483.

14. Ambracia, rev. of stater

e.g. ACGC pl. 23 no. 423.

15. Lampsakos, rev. of ½dr.

e.g. ACGC pl. 54 no. 915.

III. Helmet without head

16. Croton and Temesa, rev. of stater

e.g. ACGC pl. 36 no. 626.

ca. 450-425 B.C.

I. Heads of Athena

17. Corinth, rev. of staters

e.g. Kraay & Hirmer, pl. 153 no. 484 (ca. 440-430); ACGC pl. 13 nos. 235-239 (ca. 435) and 240 (ca. 430); cf. Ravel pl. XIX T243-T248 and pl. XX T266.

Note the new features: a 'rotelle' on the side below the offset-edge and just behind the line of the projection at the side-notch; a hook

like a bird's head at the front and a loop below the offset-edge at the back; flaps at the side and back.

18. Leukas, rev. of staters

e.g. ACGC pl. 14 nos. 241 (ca. 440) and 242-245 (ca. 435) (no. 244 = no. 417 on pl. 23).

Similar innovations ca. 435 as on Corinthian coins: note also 'rotelle' on top of crown of no. 245.

19. Ambracia, rev. of stater

e.g. ACGC pl. 23 no. 424 (ca. 430).

20. Epidamnus, rev. of stater

e.g. ACGC pl. 14 no. 248 = pl. 23 no. 430 (ca. 435).

With flaps.

21. Potidaea, rev. of stater

e.g. ACGC pl. 14 no. 249 (ca. 430).

22. Anaktorion, rev. of stater

e.g. ACGC pl. 23 no. 431 (ca. 430).

23. Cyzicus, obv. of electrum stater

e.g. ACGC pl. 56 no. 957 (ca. 430).

Nose-piece within front profile line; small neck-guard; crest with beaded mounting and incised hairlines.

24. Lapethos, obv. of stater

e.g. ACGC pl. 63 no. 1093 (ca. 435).

With crest but no obvious mounting.

IV. Figures with small helmets

25. Thebes, rev. of 2dr.

e.g. Kraay & Hirmer, pl. 144 no. 451 (ca. 446-426); ACGC pl. 19 no. 355 (ca. 440).

Supported on left hand of Thebe; offset-edge not clear at front but probably type 1 because of long cheek-piece; crested with mounting and incised hairlines.

ca. 425 B.C.

I. Head of Athena

26. Lapethos, obv. of stater

e.g. ACGC pl. 63 no. 1094.

Lotus flower in relief on side of crown; crest with mounting and incised hairlines.

ca. 425-400 B.C.

I. Heads of Athena

27. Corinth, rev. of staters

e.g. Kraay & Hirmer, pl. 153 no. 485 (ca. 420-400); ACGC pl. 14 no. 246 (ca. 420?).

'Rotelles' at side and on top; hook at front; flaps.

28. Leukas, rev. of staters

e.g. ACGC pl. 23 no. 418 (ca. 420) and pl. 14 no. 247 (ca. 415).

'Rotelles' at side and on top; hook and loop; flaps.

29. Ambracia, rev. of stater

e.g. ACGC pl. 23 no. 425 (ca. 420).

'Rotelle' at side; flaps; wreath on side of crown.

30. Side, rev. of stater

e.g. ACGC pl. 58 no. 1002 (ca. 410).

Small neck-guard with edging; elongated cheek-piece with edging along bottom and front; crest with dotted mounting and hairlines.

ca. 400 B.C.

I. Head of Athena

31. Heraea, obv. of 1½ob.

e.g. ACGC pl. 16 no. 295.

ca. 400-375 B.C.

I. Heads of Athena

32. Corinth, rev. of staters

e.g. ACGC pl. 14 no. 250 (ca. 390) and pl. 2 no. 28 (ca. 380).

'Rotelles'; hook and loops; flaps.

33. Ambracia, rev. of staters

e.g. ACGC pl. 23 nos. 426-428 (ca. 380).

'Rotelles'; hooks; flaps. No. 427: A on side of crown.

ca. 375 B.C.

IV. Figures with small helmets

34. Lycia, rev. of staters of Perikla

e.g. ACGC pl. 57 no. 990; cf. Kraay & Hirmer, pl. 191 nos. 659-660 (ca. 380-360).

Worn on back of head by nude hoplite; type 1; crested with hairlines.

ca. 375-350 B.C.

I. Heads of Athena

35. Leukas, rev. of stater

e.g. ACGC pl. 23 no. 419 (ca. 360).

'Rotelle'; hook; flaps.

36. Salamis, rev. of gold 1/3st. and obv. of 2dr.

e.g. ACGC pl. 63 no. 1085 (ca. 370) and 1086 (ca. 355).

Both crested with short mounting and hairlines; latter also has indication of segments in hair and a wreath on side of crown.

II. Head of male

37. Mantinea, obv. of dr.

e.g. ACGC pl. 17 no. 311 (ca. 370).

With neck flap.

IV. Figures with small helmets

38. Opuntian Lokris, rev. of stater

e.g. ACGC pl. 22 no. 406 (ca. 380-360); cf. Jenkins, 118 no. 267 (and Pl. 22b).

Worn on back of head by Ajax, son of Oïleus; probably type 1; crested with hairlines.

39. Uncertain Cypriot mint, rev. of stater

e.g. ACGC pl. 64 no. 1110 (ca. 360).

Worn on back of head by Athena seated on ship's prow; probably type 1; crested.

ca. 350 B.C.

I. Heads of Athena

40. Corinth, rev. of stater

e.g. ACGC pl. 14 no. 251

'Rotelle'; hook; flaps.

41. Leukas, rev. of stater

e.g. ACGC pl. 23 no. 420.

'Rotelles'; hook; flaps.

42. Ambracia, rev. of stater

e.g. ACGC pl. 23 no. 429 = pl. 39 no. 678.

'Rotelle'; flaps.

43. Heraklea, obv. of stater[78]

e.g. ACGC pl. 42 no. 739.

Side-notch obscured by hair; crest on mounting with hairlines; 'rotelle' at side and Skylla in relief on side of crown.

IV. Figures with small helmets

44. Opuntian Lokris, rev. of staters

e.g. Kraay & Hirmer, pl. 148 no. 465; ACGC pl. 1 no. 6.

Worn on back of head by Ajax, son of Oïleus; type 1; crested.

ca. 350-325 B.C.

I. Heads of Athena

45. Corinth, rev. of staters

e.g. Kraay & Hirmer, pl. 153 no. 488 (ca. 340-325); ACGC pl. 14 no. 252 (ca. 345).

'Rotelles'; hook; flaps.

46. Corinthian colonies in N-W Greece, rev. of staters

e.g. ACGC pl. 14 nos. 258-260 (Dyrrhacium, Anaktorion, Argos) and pl. 24 nos. 433-437 and 440 (Apollonia, Corcyra, Alyzia, Astacus, Stratus, Thyrrheium) (all ca. 345).

'Rotelles' at side and on top; hooks; flaps; wreath on side of crown on no. 259.

47. Metapontum, obv. of stater

e.g. ACGC pl. 2 no. 23 = pl. 35 no. 606 (ca. 340).

Deep slit at side; possibly a 'rotelle' above it; flap.

48. Terina, obv. of stater

e.g. ACGC pl. 41 no. 718 (ca. 340).

'Rotelles' at side and on top; flap.

49. Velia, obv. of 2dr.

e.g. ACGC pl. 40 no. 703 (ca. 330).

Possibly type 3 because of double line to offset-edge; thick, rounded edge to neck-guard; crest with segments and hair-lines on mounting bearing the name of the die-cutter, Philistion(os); Nike in four-horse chariot in relief on side of crown; 'rotelle' at side; hippocamp? on neck-guard.

50. Leontini, rev. of stater

e.g. ACGC pl. 50 no. 854 (ca. 340).

'Rotelles' at side and on top; hook; flaps.

51. Syracuse, rev. of stater and obv. of bronze litra

e.g. ACGC pl. 48 no. 820 and no. 822 (ca. 340); cf. Jenkins, 171 no. 404 (ca. 344).

no. 820: 'rotelles' on side and on top; hook; flaps.

no. 822 and no. 404: flaps; wreath on side of crown.

52. Soli, obv. of stater

e.g. ACGC pl. 59 no. 1019 (ca. 340).

Triple-crested; incised hair-lines; short, dotted mountings.

II. Head of male

53. Metapontum, obv. of st. and 2st.

e.g. Kraay & Hirmer, pl. 84 nos. 242-243 (ca. 330-300); ACGC pl. 35 nos. 609 and 614 (ca. 330); cf. Jenkins, 205 no. 488.

Worn on back of head by Leukippos, the founder of Metapontum;[79]

nos. 243 and 609: 'rotelle' above very wide side-notch.

nos. 242, 614 and 488: Nike in four-horse chariot in relief on side of crown; hippocamp above side-notch.

ca. 325 B.C.

I. Head of Athena

54. Leukas, rev. of stater

e.g. ACGC pl. 14 no. 257.

Elongated cheek-piece; flaps.

ca. 325-300 B.C.

I. Head of Athena

55. Corinth, rev. of staters

e.g. Kraay & Hirmer, pl. 153 no. 487 (ca. 325-308); ACGC pl. 14 no. 253 (ca. 308-306).

no. 487: elongated cheek-piece; 'rotelle' at side; flaps; wreath on side of crown.

no. 253: 'rotelle' on side; flaps.

56. Leukas, rev. of 2dr.

e.g. ACGC pl. 23 no. 421 (ca. 320).

'Rotelle' on top; hook? at front; flaps.

57. Corinthian colonies in N-W Greece, rev. of staters

e.g. ACGC pl. 24 nos. 438-439 and 441 (ca. 310) (Anaktorion, Argos, Thyrrheium).

'Rotelles' at side and on top; hook; flaps.

58. Lokri Epizephyrii, rev. of stater

e.g. ACGC pl. 41 no. 721 (ca. 320).

'Rotelles' at side and on top; flaps.

59. Syracuse, obv. of stater

e.g. Kraay & Hirmer, pl. 47 no. 132 (ca. 310).

Elongated cheek-piece; forked projection at eye-corner; plume-like crest; griffin in relief on side of crown; 'rotelle' on side; flaps.

ca. 300 B.C.

II. Heads of male

60. Metapontum, obv. of st. and of gold 4ob.

e.g. ACGC pl. 1 no. 5 and pl. 35 no. 613.

Both worn back on head by Leukippos; no. 5: eye-hole not distinct; 'rotelle' on side; no. 613: crest on short mounting with hairlines; Skylla in relief on side of crown.

Commentary

By far the most numerous examples of Corinthian helmets on coins are to be found on the reverse of staters issued by Corinth and her colonies in the 5th and 4th centuries. (Hence the adjective, Corinthian.) Leukas and Ambracia in particular regularly issued similar or even identical types

to the Corinthian, and other cities of N-W Greece followed suit on occasion, e.g. ca. 430 and especially 345.[80] Not only Corinth's colonies copied the type with the head of Athena in Corinthian helmet, however, and examples in the catalogue range throughout the Greek mainland, South Italy and Sicily and the Eastern Mediterranean.[81] Even when the female head beneath the helmet is replaced by that of a bearded male (II), the similarity in the design remains strong. Only in III and IV is the inspiration clearly different.

When worn, whether by a whole figure (as on cat. nos. 34, 38 and 44) or by the head only, the helmet is always set back on the head so as to leave the face free - even on the Late Archaic coins. The desire not to conceal the face of the goddess, Athena, requires, of course, no explanation, while this position on the charging hoplites of the 4th century follows the norm already established for this motif in other media. Exceptions to this position for the helmet are rare: on cat. no. 25 the nymph, Thebe, holds the helmet on her left hand; the helmet appears as a shield blazon on cat. no. 6[82] and alone as the device on cat. no. 16.

All but three of the helmets illustrated on the coins listed in the catalogue could be assigned to type 1, the standard characteristics of which were outlined in cat. no. 1. (Despite the small scale of several of the helmets the type is still generally recognisable if not by the angle of the offset-edge, then by the shape of the cheek-pieces.) Type 2a was represented on Corinthian coins prior to ca. 500, but it appears to have played no significant part after that. Type 2b, on the other hand, appeared on a coin of Lapethos (cat. no. 5, ca. 500) and another of Side (cat. no. 12, ca. 460), both in the eastern Mediterranean and perhaps

further from Corinthian influence. Certainly type 2b does not seem to have any long period of popularity as an alternative to type 1 on coins. One example of type 3 was tentatively identified on cat. no. 49 from Velia, ca. 330.

Few points arise from a consideration of the minor details of the shape of these helmets once the types have been identified. The elongation of the cheek-piece into the debased form seen elsewhere occurs first on cat. no. 30 from Side towards the end of the 5th century, but is not found again, and indeed does not have any influence on the standard design of the coins of Corinth and her colonies, until the last quarter of the next century (cat. nos. 54, Leukas; 55, Corinth; 59, Syracuse). The inclusion of the projections at the side-notch and the eye-corner occurs early, from ca. 480 on cat. nos. 3, 9 and 13, and continues throughout the period, but, as pointed out in note 76, these features may easily be lost through wear and so no attempt has been made to follow their course precisely. The different form at the eye-corner on cat. no. 59 seems exceptional among the coin types and very late when compared to this forked projection on the vases.[83]

A crest is never added to the helmet on the coins of Corinth and her colonies. However, crests do appear in the following cases:
cat. nos. 23 Cyzicus ca. 430; 24 Lapethos ca. 435; 26 Lapethos ca. 425; 36 Salamis ca. 370 and 355; 39 Cypriot mint ca. 360; 43 Heraklea ca. 350; 49 Velia ca. 330; 52 Soli ca. 340; 59 Syracuse ca. 310; 60 Metapontum ca. 300. (All of these are on Athena except the last which is worn by Leukippos.) Also the helmets which are shown in the small scale with whole figures (IV) have crests: cat. nos. 25 Thebes ca. 440; 34 Lycia ca. 375; 38 and 44 Opuntian Lokris ca. 380-350. One may note that these

mints are spread from Sicily and South Italy in the west, through Greece itself, to Asia Minor and Cyprus in the east.

Understandably perhaps because of the scale of the helmets, mountings are included on only seven of the above cases (cat. nos. 23, beaded, 25, 26, 36, 43, 52, dotted, and 60), but it is still noticeable that the unusually short mountings appear on cat. nos. 36, 52 and 60, that is after ca. 370.

Hairlines are added to some of these crests from the third quarter of the 5th century when they first appear (cat. nos. 23, 25, 26, 34, 36, 38, 43, 49, 52 and 60), but the separation of the segments is rarely shown (only on cat. nos. 36 and 49 in the middle of the 4th century). Finally, one may emphasise here that nearly all these crests are of the single, low form: the exceptions are cat. no. 52 which has three crests and cat. no. 59 where the mounting is not shown and the crest is more like a plume.

It is a striking feature of these helmets that the crown is usually left quite free of elaborate decoration. The few exceptions to this rule are cat. nos. 26 Lapethos ca. 425 a lotus flower; 43 Heraklea ca. 350 and 60 Metapontum ca. 300 Skylla; 49 Velia ca. 330 and 53 Metapontum ca. 330 Nike in a four-horse chariot; and 59 Syracuse ca. 310 a griffin. Thus apart from the first of these, we are dealing with only three forms of relief decoration applied to helmets from mints in Sicily and Southern Italy in the second half of the 4th century. The inspiration for these is not hard to find in the contemporary coin types which bear Athena wearing an Attic helmet decorated in just this way. The historical reasons behind the adoption of these figures is, of course, another matter.[84] Hippocamps are also popular on the Attic helmets, but here they only appear as smaller

figures, once on the neck-guard perhaps (cat. no. 49) and once on the side (cat. no. 53), both ca. 330.

A different form of decoration sometimes applied to the crown of a helmet is a wreath of leaves. Instances occur on cat. nos. 29 Ambracia ca. 420; 36 Salamis ca. 355; 46 Anaktorion ca. 345; 51 Syracuse ca. 340; and 55 Corinth ca. 325-00. This list noticeably includes Corinth and two of her colonies. The wreath presumably alludes to a victory won by the city concerned, the exact circumstances of which could form the subject of an historical study in each case.

The only other decoration on the helmets is of a minor but puzzling type. After ca. 435 in a series of dies which show a variety of hair-styles for Athena (a queue, plait or loose curls) one begins to see the gradual addition of the 'rotelles' to the side and also, but less often, to the summit of the helmet, and the bird's-head-like hook to the front and a loop to the back. (The latter seems to be frequently ignored or is too small to be seen except in enlargements.) These appear first on the coins of Corinth and then her colonies, but in the second half of the 4th century they were also added to the helmets on the coins of some of the cities in Sicily and South Italy (cat. nos. 47 (perhaps) Metapontum; 48 Terina; 49 Velia; 50 Leontini; 51 Syracuse; 53 Metapontum; 58 Lokri Epizephyrii; 59 Syracuse; 60 Metapontum).

The situation is almost the same when it comes to the flaps which hang below the helmet worn by Athena (and surprisingly, the man on the drachma from Mantinea ca. 370 (cat. no. 37), though not Leukippos). These flaps too make their first appearance ca. 435 on the coins of Corinth, then her colonies and subsequently a few other cities (namely

cat. nos. 47 Metapontum; 48 Terina; 50 Leontini; 51 Syracuse; 58 Lokri Epizephyrii; 59 Syracuse), in the second half of the 4th century when the whole design of the coin die is copied. The flaps themselves vary in size, especially at the back, where they seem to be designed to provide the protection for the neck which the helmet itself in its raised position fails to give. They do, therefore, constitute a regular characteristic of the helmet of Athena on coins from Corinth and mints under her influence in the 4th century. A functional purpose may be supported, but their omission on the heads of Leukippos from Metapontum strengthens the association of the flap with the head and helmet of the goddess, Athena - a conclusion which seems to be backed up by the sculptured evidence as well.

As for the 'rotelles', hooks and loops, they occur in no other artistic representations, nor on any of the surviving originals. It seems unlikely that such small and precise features would have been adopted so suddenly and retained for so long if they had no possible function and were purely decorative. At least the loop at the back may be paralleled on Illyrian helmets, where along with a round stud at the front, it served to fasten down the crest which lay between the ridges on the crown. A similar function, therefore, may be reasonably postulated for the hook and loop on these helmets. The 'rotelles', on the other hand, are not so easily explained. If they too are a part of the crest-fixtures, then we would seem to have evidence for transverse crests as well. Could they themselves be merely decorative? At any rate, if these are all crest-fittings, it then seems even odder that none of the helmets actually shows the crest attached by them.

Finally, in this commentary on the helmets on coins, one may summarise

the situation regarding the figures associated with the Corinthian helmet. The vast majority (I) are worn by Athena, a few (II) by Leukippos, according to Kraay an historical figure, and one by an unidentified man (cat. no.37), presumably a similar figure or a legendary hero. Only two helmets exist in their own right (III), while in (IV) we find Athena again (cat. no. 39), an eponymous nymph, Thebe, (cat. no. 25),[85] and in three cases fighting hoplites (cat. nos. 34, 38 and 44) who, in at least the last two instances have been named, Ajax, the son of Oïleus.

CONCLUSION

From the literature we learned little about the Corinthian helmet. All the originals which have survived down to the present day, seem to date from before the Classical period, and there may be good grounds for believing that the Corinthian helmet was not a popular type in that period - save in its Apulo-Corinthian form in Italy. In the art, however, its popularity did not decline; in major and minor works the number of representations of it actually appears to grow in the 4th century. One may wonder whether it had by then become merely "artistic" or even "symbolic" to indicate the special status, divine or heroic, of the wearer. Each instance must be considered carefully, but perhaps something of both ideas applied. By the late 5th century the artistic portrayals of this helmet, especially on the Attic vases and in sculpture, appear to be less accurate depictions of the type as we know it from the Late Archaic originals. Even if one accepts that the type will not have stood still, but continued to develop (if it continued to be made), these inaccuracies appear to betray not merely attempts at the depiction of possibly existing but "debased"

Corinthian helmets, but basic misunderstandings of the style and features of the helmet itself, which certainly does not seem to have been as familiar to the artists as it had been earlier.

From our study of the Late Archaic originals we established the existence of four designs (type 2 being divided into two sub-groups) and hybrid forms combining both Corinthian and Chalcidian characteristics. An attempt was also made to suggest the places of origin of these types. It was noted that little useful information concerning crests could be gleaned from the originals, in contrast to the representations, and for the use of chin-straps the reverse was true in that these are hardly ever illustrated in the art, although their use could be deduced from the holes in the surviving helmets.

Having identified these Late Archaic types, we were in a position to discuss their portrayal not only in the Late Archaic art but also in the Classical. Type 1 was by far the commonest represented in the various media, increasing in numbers and being the only one illustrated in the 4th century at least on the vases. Type 2a was rare on the vases and elsewhere was only found in Late Archaic sculpture. Type 2b, on the other hand, continued to be included as an alternative to type 1 even in the 4th century in sculpture. Type 3 was certainly the rarest in the vase-paintings which is quite understandable if it was indeed a Western Greek type. In the other arts it only appeared once on a coin significantly from Velia. Some hybrids may have been portrayed on the vases, but they were difficult to identify when the large, Chalcidian ear-cutting was not emphasised. Further, it was noted that features of the different types were often mixed and by the late 5th century one could talk of "debased" helmets on the vases, in

sculpture, on gems and, later in the 4th century, even on coins. The coins of Corinth and her colonies were notable for maintaining the Late Archaic standard type 1 in its purest form longest.

On the whole the details of the helmet, the nose-pieces, neck-guards and cheek-pieces, were well represented throughout the period. Even the small features like the projection at the side-notch and the outer corner of the eye-hole were picked up and recorded where the scale of the representation permitted. It was suggested in the study of the originals that two other small features might be attributable to specific regions, namely Corinth (less probably Argos) and Magna Graecia. These features were the filling-in of the side-notch and the ridge down the centre of the nasal. In fact, this theory was not borne out by the art. The filling-in was not seen on Corinthian coins, but was found on two Attic vases of the third quarter of the 5th century, and in sculpture, on the "Mourning" Athena and the Thasian relief. The ridge off the eyebrows occurred in Late Archaic art only, on the Warrior from Sparta and the Athena from Cyprus. It seems less likely, therefore, that any regional significance can be given to these details.

The appeal of the design of the Corinthian helmet lies in the simplicity of its surfaces and lines, and it is unusual for it to be given added decoration - though it is not unknown. The Würzburg helmet (no. 2a.9) with its horns and ears is an example of a highly decorated original. In vase-painting decoration is added only to the Late Archaic and 4th century helmets. In sculpture only the Piraeus Athena carries it. The extra decoration on the helmet worn by Athena in the form of the lekythos owes its inspiration to the medium in which it was made; similarly, on the

coins influences can be traced back to other coins with mainly Attic helmets. It is, of course, on the coins that we find the tiny 'rotelles', hooks and loops after ca. 435 B.C. These were unparalleled in exactly the same form, although features on the Early Classical (Niobid) vases could be related. Only two CL vases and one late 5th c. showed something similar. On the coins they seem to be connected with the fittings for the crest, and this might help explain their presence on the later vases, but the Niobid cases remain puzzling, positioned as they are on the side of the crown further away from the crest, and looking remarkably like highlights glinting off the polished bronze surface.

The majority of the helmets in art carry crests along the crown: on the vases the fighting contexts would suggest that there is no idea of their being worn only for special, peaceful occasions. Plumes are rare, and crests on stilts disappear from the paintings after LA. Side- or triple-crests only appear late in the 5th century or in the 4th on vases, minor works and one coin. In fact, on the coins which depict the head of Athena it is regularly an uncrested helmet which is worn: small figures in group IV, on the other hand, do have crested helmets.

The detailed treatment of the hair in the crest was discussed most fully in the vase-section, but the hairlines and the segments also appear in sculpture etc. The mountings likewise could be studied in most depth from the vases where the patterns are indicated usually as variations on the theme of dots between lines. In the other arts only the mounting itself (as a smooth band), if that, can generally be made out. In sculpture paint may well have supplied these details. The vases also served to show that the crests generally fit together with a mounting which can be detached

from the surface of the helmet - oddly sometimes the mounting is shown on the crown without hair in it. Short mountings appeared on the vases in the CL period and late 5th century: on coins, however, they are not seen before ca. 370.

In the Classical period the vast majority of helmets are shown raised on to the back or top of the head when worn. Only in Late Archaic vase-painting, sculpture and wall-painting, and on one EC vase, is the Corinthian helmet worn down over the head in battle. The alterations to the shape of the helmet which lead to the "debased" or Apulo-Corinthian types can be attributed directly to this fact. If the Corinthian helmet was still being made in the Classical period, it was more than likely with this position in mind,and the Apulo-Corinthian type may be derived from intermediary forms which have just not survived from Mainland Greece, or, it may be suggested, it was created in reality not on the model of real helmets but on the basis of the helmets painted on the imported Attic vases. That is, the South Italian Greeks may have converted a purely artistic form into a real helmet.[86]

It is, then, in the light of this doubt as to the actual use of the Corinthian helmet outside of Italy in the Classical period that one repeats the findings concerning the owners or wearers of the helmet in art. The vases displayed a steady and growing association with mythological figures rather than ordinary hoplites after the LA period, although the latter were never omitted altogether. A similar situation exists to some extent with the sculpture. The warriors on the grave reliefs, one would think, are real hoplites who have died and not heroes, but these representations constitute a minor part of the whole. And in the minor works, gems and

coins the helmet is associated exclusively with either heroes or Athena. (One may point out the total absence of Amazons with Corinthian helmets.) The association with Athena is, in fact, particularly strong and that goes for not only the helmet but also the flaps of the cap which, it seems, could be worn underneath it. These appear first on the "Mourning" Athena ca. 460; in the third quarter of the century on the apobates on the Parthenon Frieze, the heads of Athena on coins of Corinth and her colonies and on ordinary warriors and Theseus on Attic vases; subsequently they are associated only with Athena, except for the one instance of a Giant on a late 5th century vase and a warrior from the Argive Heraion. One can hardly see in this evidence grounds for believing that a flapped cap was regularly worn beneath the helmet by hoplites in the Classical period.

Our final conclusion, I think, must, then, be that in the Classical period the wearing of the Corinthian helmet was no longer normal for the Greek hoplite - but that is not to say that it could not still be worn by some especially in the 5th century, as it was in Italy then and later. In art certainly it is more strongly associated firstly with Athena and secondly with heroic or mythological figures.

c. THE ATTIC HELMET

INTRODUCTION

The literary evidence does not associate a particular type of helmet with regular Athenian use. The modern term, Attic, is used therefore without ancient validation.[1] Indeed, it has been applied to a number of slightly different types by various scholars, and, in particular, "Attic" and "Chalcidian" are often confusingly used.[2] Admittedly the situation is not straightforward - the type of helmet to which I wish to restrict the term, Attic, develops over the Classical period. Its distinguishing characteristics for the 5th and 4th centuries are the presence of a tiara- or diadem-like frontlet, projecting in front of a tight-fitting cap over the skull with a neck-guard at the back reaching below the level of the ears. Cheek-pieces and nose-guards are optional and usually indicate a mixing or conflation of types by the Greek artists. The earliest 'standard' Attic helmets are those worn by Athena on 6th century Athenian coins and black-figure vases.[3] The frontlet may at times even be understood as a normal, feminine tiara or diadem worn over the simple crested cap which in turn seems to have been specifically designed so as not to obscure the face of the goddess, in the way the Corinthian helmet did those of the male warriors depicted. It seems to have been an easy extension from there to give it to Amazons to distinguish them from their male opponents, and to add neck-guard, cheek-pieces and nasal for the sake of greater credibility. The stage is soon reached where it may be worn by heroes as well.[4]

No original Attic helmet has survived,[5] and one must seriously question its very existence in Classical Greece. Could it have been a purely

artistic creation which was only realised by the South Italian Greeks,[6] Hellenistic rulers[7] and eventually the Romans?[8]

It is precisely because no original Attic helmet has survived to the present day, that the artistic representations of it take on particular importance. It appears on vases, in sculpture, on coins, gems and rings throughout the fifth and fourth centuries B.C. I propose to look at some of these in detail, beginning with the vases.

ATTIC HELMETS IN ATTIC VASE-PAINTINGS

The discussion which follows, is based on a study of 168 Attic helmets on 135 vases in the catalogue. The number in each period declines steadily throughout: thus LA 71 on 60 vases; EC 47 on 35; CL 23 on 21; late 5th cent. 19 on 12; and 4th cent. 8 on 7 vases.

The majority of the helmets are worn properly on the head, unlike the Corinthian, with only two startling exceptions; on EC no. 126 where Athena wears a diadem below the helmet, and CL no. 569 where a female Pyrrhic dancer wears one up. A few helmets are not worn:

Table 24

LA	-	held:	nos. 2, 26a, 179, 180, 185a, 191 (all by Athena) and 384 (by a satyr for Dionysos)
	-	on a box:	no. 183
EC	-	held:	nos. 126 (by a hero), 198, 200, 203, 209, 211 (with a spear), 214, 217, 219 (all by Athena)
	-	on a shield:	no. 676
CL	-	held:	no. 230 (by Athena)

Since the most distinctive feature of the Attic helmet is its frontlet, we may as well begin by surveying the variety of shapes and patterns used

to portray it (Figs. 34-38). The frontlet must by its very nature project beyond the line of the crown of the helmet. If it does not, the helmet is more likely to be of the Chalcidian type with the offset ridge-line marked. The lines delineating the top and bottom contours may be curved or straight; they are found together on some, e.g. LA nos. 179 or 181. The short line which represents the profile at the centre may be straight, concave or less commonly convex. A straight line is usual in the 4th cent. The use of a second inner line echoing the contour and serving to mark one or more edges is common throughout. A stepped effect is rare, e.g. LA no. 175. While most frontlets terminate simply in a point or edge near the ear-hole, irregular forms are also found; e.g. the upper line is occasionally continued to the back of the helmet, e.g. LA nos. 26a and 179 (both by the Berlin Painter), EC nos. 126 and 217 by the Niobid and Providence Painters respectively, and CL no. 236 by the Achilles Painter and no. 569 by the Pothos Painter, or it ends in a spiral on the side of the crown, as on LA no. 499 (Pl. 12a). In EC spirals at the end of the frontlet include two which curl downwards on to the wearer's cheek (nos. 198 and 213). There are no spirals on the CL vases in the survey, but they reappear in the late 5th cent. and in cursory form in the 4th. The addition of a nose-guard is exceptional (note EC no. 280).[9] (The form of the frontlet found on LA nos. 49, 135, 177 etc. may represent an attempt to show the continuation of it round the other side of the head and not a nose-guard, which would hardly cover more than the bridge of the nose.) After the CL period the guard is dropped. The indication of a central point in the lower edge is seen throughout the 5th cent., e.g. LA nos. 270 and 394, EC nos. 126, 339b, 504b, CL nos. 230 and 569 and late 5th cent. nos. 256 and 466.

Black glaze is used in LA, EC and CL to fill in the centre of the frontlet, but illogically a reserved margin is also left at the brow end. (Cf. the neck-guards below.)

Leaves do not decorate the top edge until the EC period (contrast the situation re coinage); they are strangely missing in CL, but reappear in the late 5th cent. and one may be shown on 4th cent. no. 553. The range of other patterns includes:

Table 25

LA - row of dots (no. 107); battlement (nos. 187 & 193); ⌀ (no. †499).

EC - dilute meander (no. 196); dots (nos. 68, 72, 214 & 503); scales (no. 504a); crosses (nos. 68, 126 & 222); zeds (no. 68); dashes (no. 62); ⁂ (no. 339b).

CL - "locks" (nos. 227, 245, 367 & 370); ⊛ (no. 58); oo⊗oo (no. 583).

Late 5th cent. - dots (nos. 463, 464 & 466); stars (no. 254); meander (no. 253); ⁂ (nos. 256 & 466).

4th. cent. - none.

Frontal and three-quarter views are only found in EC, CL and Late 5th cent. Finally one may note the unique upward projection on Late 5th cent. no. 430.

By the 5th century B.C. it is normal for the Attic helmet to be equipped with a neck-guard, but there is still no one standard type (Figs. 39-43). In LA and EC the tendency is towards massive proportions (note the length of EC no.205); in the later periods a smaller scale becomes common, but note the exception of CL no. 241. Throughout the 5th century the offset ridge of the crown is usually marked by a line or lines above the neck-guard; occasionally this line is rolled up into a spiral behind the ear-hole. There is no uniformity in the drawing of the angle formed

between the vertical front edge and horizontal lower edge of the neck-guard. Similarly the profile of the projecting lower edge at the back may be straight, concave or convex, oblique or stepped; an inner line may continue the bottom edge up the front, e.g. EC no. 504, or even up the centre of the back, e.g. CL no. 118. These inner lines are less common in LA.

Very rarely in LA and EC the central field of the neck-guard is decorated, e.g. with black glaze or scales (N.B.LA no.175 also has a red edge). This decoration is usually dispensed with later, but note CL no. 247 (black) and no. 85 (a yellow wash).

Cheek-pieces had become an optional extra on Attic helmets already before the 5th century, and unless the frontlet is also clearly depicted it is frequently difficult to be sure whether some shapes are raised cheek-pieces or frontlets (as e.g. on Late 5th cent. no. 554) (Figs. 44-48). Over half of the LA Attic helmets have cheek-pieces; by EC the proportion is about half and half; in CL and the Late 5th cent. it is very unusual for the helmet not to have them, but in the 4th cent. they are again largely ignored.

In LA half as many cheek-pieces are shown raised as lowered; in the following three periods they are nearly all raised until the 4th cent. when they are placed downwards again. The raised position presupposes the presence of a hinge, but it is only in LA that the artist bothers to show its sections, e.g. on nos. 128 and 394. The lowered cheek-pieces are apparently immovable, made in one with the side of the helmet, and it is common in LA for the whole helmet to be held by one of its cheek-pieces. The range of shapes is considerable from gently curving to sharply angled, with indentations on the face edge normal. The shapes are clearly

related to those on Chalcidian helmets.[10] An unusual shape is found on CL vases nos. 85 and 355. These are attributed to the Christie Painter who was a member of the Group of Polygnotos, and to the Kleophon Painter, who, according to Beazley (ARV 1027), "learned under Polygnotos and may even be counted a member of the Polygnotan Group". The shape also appears on Chalcidian helmets by the Polygnotan Group. Worthy of special mention are the circular cheek-piece on LA no. 499, on a statue (Pl. 12a) and the ram's head ones on LA nos. 183 and 193.

Black filled centres and a thick or thin line echoing the outer contour are common especially from EC to the Late 5th cent. Other patterns include:

Table 26

scales	- EC nos. 68, 72, 126? & 339b.
white dots	- Late 5th cent. no. 466.
snake	- LA no. 316; EC nos. 215, 458 & 504[2]; CL no. 228; Late 5th cent. no. 255.
lizard	- CL no. 241.
centaur	- Late 5th cent. no. 253
Pegasos or a griffin	- Late 5th cent. no. 256 (red on black).

One notes the leaves on CL no. 29b as if it were a frontlet, and the crests on Late 5th cent. no. 466 (cf. triple-crested coin types). Both cheek-pieces are regularly drawn on CL and Late 5th cent. vases, but only rarely before then and not at all afterwards.

Considering that on the Athenian coins Athena's helmet always lacks the cheek-piece, one might wonder whether a similar artistic convention existed for the vase-paintings. Apparently it did not; a large proportion of the helmets under study are Athena's.[11] Admittedly some are held and not worn, but while the majority of the cheek-pieces are raised, a few

are in the down-position partly obscuring the goddess's face. (But not generally down in EC and CL.) One sees a peculiar position for the cheek-piece on Late 5th cent. no. 251, above the frontlet's top edge.[12]

These Attic helmets are all crested, with the sole exceptions of LA no. 26a & 4th cent. nos. 101 & 435. The crests themselves come in two basic forms, the more usual running low along the crown of the helmet from front to back(N.B.one transverse one on EC no. 503), the rarer carried high up on a hooked stilt (Figs. 49-53). Only rarely in LA is the hair of the crest divided up into segments (e.g. on no. 382a) or marked with short strokes along the outer edge (e.g. nos. 1 and 438). In EC the inclusion of segments, edge-strokes or longer lines to indicate the hairs is almost universal. The edge-strokes, often in dilute glaze, are sometimes found on CL helmets, but the other details are mostly ignored. The hair-lines instead are included in the Late 5th cent. and a few edge-strokes in the 4th. Added white is applied on Late 5th cent. nos. 430 and 554, and 4th cent. nos. 259 and 265.

Between the hair of the crest and the helmet there is usually a mounting; a few exceptions may be noted, Late 5th cent. no. 616, 4th cent. nos. 259 and 553. The range of patterns on both the low crest-mounting and the stilted variety are illustrated in Figs. 49-53. The mounting may consist of up to four 'bands' which are decorated for the most part with variations on the theme of a row of dots as on the Corinthian helmets. Other patterns can be seen on LA nos. 182, 192, 193, 270 and 394 (cf. some early Athenian coin types), and CL no. 228.

Most of the stilted mountings simply have a rounded end; others form attractive bird's heads, e.g. LA no. 183, EC no. 221, or turn completely into snakes, e.g. CL no. 240 and Late 5th cent. no. 554. For their unusual

character, note LA no. 191 (with both a low and stilted mounting), EC no. 205 and Late 5th cent. no. 464. Alternatively, the crest can be borne by a ring or wheel (Late 5th cent. no. 254) or a sphinx (EC nos. 62 and 223). Extra side-crests appear in the Late 5th cent. (e.g. on no. 257, cf. no. 253 on horse protomes, no. 256 on wings and no. 466 on the cheek-pieces) and, it seems, on one vase in the 4th cent. (no. 507).

Finally, with regard to the crest and its mounting we may consider here the small dots which occasionally appear in the crest hair above the mounting (e.g. on LA nos. 6, 60, 121, 182, 183, 184, 186, 191, 192, 394, 467b and 636, CL nos. 227, 228, and 367, cf. Late 5th cent. no. 463 (dashes) and no. 430 (battlement)). These dots were briefly mentioned in the previous section, but how are they to be interpreted? Are they purely decorative studs (of precious metal?), or are they an integral part of the manufacture of the crest? Indeed, what does the alternation of black glaze and reserved clay along the mountings of nearly all the helmets mean?

We have now looked at the individual parts of the Attic helmet except for the crown itself. It is basically modelled closely to the shape of the skull, except for EC no. 223 when it takes on the form of a sphinx. We have noted the spirals which originate from the frontlet or the neck-guard, and we may now review the further decoration applied to the crown itself (Figs. 54-58).

Spiralling tendril-like ornament, with or without palmette-type florals, is common throughout the fifth century, especially on helmets by the Niobid Group. Scales too cover helmets from LA to Late 5th cent.; the alignment varies and some are dotted. Chequerboard is found (and cross-hatching e.g. on CL no. 583).[13] Some helmets are painted with the black glaze (e.g. LA nos. 174 and 189, EC nos. 62 and 72, Late 5th Cent. no. 256),

others with a yellow/dilute glaze wash (e.g. LA nos. 6 and 440, CL no. 85), and one with added white and yellow (4th cent. no. 265). Gilding was applied to Late 5th Cent. no. 554. The latter and the yellow/dilute might have been intended to suggest the metallic surface of a bronze (or gold?) helmet, but the use of the black probably betrays the interest of the vase-painter in creating contrasted areas in his painting, unless silver or iron were intended.

It is very unusual in the Attic vase-paintings to find an animal on the side of the Attic helmet (contrast the situation in the Greek coinage). There are only two examples on the sampled vases, a sphinx on LA no. 192 and a lion on CL no. 118.

Table 27 shows who is represented wearing these Attic helmets on the sampled vases.

Table 27

			Total	%
LA				
Heroic/Mythological Figures			59	83
	Athena	44		
	Dionysos	1		
	Amazons	7		
	Demophon	1		
	Heroes	3		
	Kaineus	1		
	Lapith	1		
	Theseus	1		
Ordinary Figures			12	17
	arming	1		
	in ambush	2		
	departing	1		
	fighting	5		
	without further context	3		
EC				
Heroic/Mythological Figures			42	89
	Athena	25		
	Amazons	10		
	Greek in Amazy	1		
	Heroes	5		
	Kaineus	1		

			Total	%
Ordinary Figures			5	11
	fighting	2		
	departing	1		
	Pyrrhic dancer	1		
	without further context	1		
CL				
Heroic/Mythological Figures			19	83
	Athena	12		
	Amazons	6		
	Patroklos	1		
Ordinary Figures			4	17
	departing	3		
	Pyrrhic dancer (female)	1		
Late 5th cent.				
Heroic/Mythological Figures			17	89
	Ares	3		
	Athena	9		
	Giants	5		
Ordinary Figures			2	11
	fighting	1		
	at trophy	1		
4th cent.				
Heroic/Mythological Figures			5	62.5
	Athena	4		
	Greek in Amazy.	1		
Ordinary Figures			3	37.5
	fighting	2		
	with Nike	1		

Athena is clearly the commonest figure in each of the periods distinguished and overall has 56% of the helmets. Amazons are well-represented, except in the Late 5th and 4th centuries when they are not included at all. Other mythological figures and gods appear in small numbers, with Giants strongly represented in the late 5th century. Ordinary warriors are consistently in the minority as the percentages show.[14] Over the whole period, only 16% of the Attic helmets on the sampled vases are worn by ordinary men. If one considers these examples from the point of view of the artists, one may suggest a connection between painter and helmet. Especially in LA, for example, out of 13 cases one finds that five helmets are attributed

to the Colmar Painter (nos. 135, 393, 626, 632, 639) and one to the Bonn Painter (no. 397) whom Beazley thought might be one and the same. A further two are by an artist akin to the Nikoxenos Painter (no. 389[2]) and one by the Eucharides Painter (no. 316) who was a pupil of his. The later periods provide fewer cases for comparison, but one may note even there that in EC, of the five, one (no. 339b) is by the Niobid Painter and two (nos. 413 and 325) are near him and in his manner; in CL,of the three, two (nos. 355 and 367) are by the Kleophon Painter. The supply of an Attic helmet to an ordinary hoplite may, therefore, be largely dependent on the preference of the painter.

All the artists of these Attic helmets are listed in Table 28.

Table 28

		Total
LA		
Douris	- nos. 10, 60a, 183, 192, 394, 636	6
Douris, manner of	- no. 28[2]	2
Berlin Painter	- nos. 25a, 26a, 107[2], 108, 179, 185a	7
Myson	- nos. 49, 177[2], 270[2], 587	6
Colmar Painter	- nos. 135, 393, 626, 632, 639	5
Syleus Painter	- nos. 189, 195, 267b[2], 448	5
Nikoxenos Painter	- nos. 2, 181, 184	3
Nikoxenos Painter, akin to	- no. 389[2]	2
Kleophrades Painter	- nos. 175, 193, 382a, †499	4
Makron	- nos. 1, 174, 178, 438	4
Proto-Panaitian Group	- nos. 109b, 121[2]	3
Syriskos Painter	- no. 478[3]	3
Tyszkiewicz Painter	- nos. 7, 106[2]	3
Brygos Painter	- nos. 6, 439	2
Eucharides Painter	- nos. 27, 316	2
Geras Painter	- nos. 194, 384	2
Siren Painter	- no. 187[2]	2
Triptolemos Painter	- nos. 182, 467b	2

with one helmet only:

Bonn Painter	- no. 397	Painter of Palermo 4	- no. 180
Eleusis Painter	- no. 440	Ptr. of Paris Gigantomachy	- no. 191
Onesimos	- no. 186	Prob. Terpaulos Painter	- no. 128
Ptr. of Munich 2306	- no. 474		
Ptr. of Naples RC132	- no. 443		

EC

		Total
Niobid Painter	- nos. 62[3], 68[5], 72[3], 126[3], 221, 222, 339b, 503, 504 a&b	20
Niobid Painter, manner of	- nos. 325, 413 (near)	2
Altamura Painter	- nos. 219, 457, †458	3
Nikon Painter	- nos. 198, 676	2
Painter of Bologna 279	- no. 125a[2]	2
Providence Painter	- nos. 211, 217	2

with one helmet only:

Aegisthus Painter	- no. 200	Kaineus Painter	- no. 280
Amphitrite Painter	- no. 203	Lewis Painter	- no. 225
Bowdoin Painter	- no. 205	Ptr. of Birth of Athena	- no. 215
Charmides Painter	- no. 209	Ptr. of London E342, manner of	- no. 213
Deepdene Painter	- no. 197	Pan Painter	- no. 206
Earlier Mannerist	- no. 218	Sabouroff Painter	- no. 214
Group of Berlin 2415	- no. 201	Trophy Painter	- no. 223
Hermonax, near	- no. 196		

Unattributed	- no. 566	1

CL

Kleophon Painter	- nos. 227, 245, 355, 367	4
Kleophon Painter, manner of	- no. 243	1
Eretria Painter	- nos. 29b, 118[3]	4
Achilles Painter	- nos. 230, 236	2
Aison	- no. 583	1
Aison early?	- no. 370	1

with one helmet only:

Alexandre Group	- no. 81	Painter of Munich 2335	- no. 226
Christie Painter	- no. 85	Pothos Painter	- no. 569
Codrus Painter	- no. 58	Waterkeyn Painter	- no. 242
Nausicaa Painter	- no. 241		

Unattributed	- nos. 228, 240, 247	3

Late 5th cent.

Aristophanes	- no. 464^5	5
Suessula Painter	- no. 466^3	3
Talos Painter	- no. 430	1
Talos Painter, near	- nos. 255, 256	2
Pronomos Painter, near	- no. 463^2	2
Meidias Painter, manner of	- no. 554	1
Modica Painter	- no. 257	1
Nikias Painter	- no. 254	1
Painter of Carlsruhe Paris	- no. 253	1
Unattributed	- nos. 251, 616	2

4th cent.

Not so close to Group G	- no. 435^2	2
Amazon Painter	- no. 101	1
Erotostasia Painter	- no. 259	1
Painter of Vatican 9103	- no. 264	1
Telos Painter	- no. 265	1
Unattributed	- nos. 507, 553	2

The individual styles of the various painters can be seen in their Attic helmets, as illustrated in the figures e.g. the Berlin Painter's or the Kleophon Painter's, but it is readily apparent that only the Niobid Painter showed any strong preference for this helmet, and that was presumably because of the nature of most of the subjects he was portraying, i.e. Amazonomachies and scenes involving Athena.

ATTIC HELMETS IN SCULPTURE

Catalogue

1. The metopes from the Athenian Treasury at Delphi, ca. 500-490 B.C. FdD IV.4 70-7, pls. 27-30 and 32.6; GSAP fig. 213.

Among those which depict an Amazonomachy no. 8 shows Theseus in combat. Both the hero and the Amazon wear Attic helmets; the most striking feature of Theseus' is the wide frontlet which is continued behind the ear into the edge of the neck-guard; the Amazon's seems to be similar, but the illustrations make this less certain.[15] Both the helmets originally had crests, but of two different types; Theseus' ran from front to back along the crown of the helmet, while the Amazon's was of the high, stilted variety (a hole remains in the head for the mounting).

2. The terracotta head of Athena found at Olympia. Inv. no. T6. Ol Ber VI 169ff. pls. 66-70; GSAP fig. 186; PKG 173-4 no. 50; Gk Mus 194 pl. 3 in colour.

Dated to ca. 490 B.C., and believed to have formed part of a three-quarter life-size group of four figures.[16] Her helmet is surely to be considered as of the Attic type, but the frontlet takes instead the form of an encircling diadem, brightly decorated with lotus buds and flowers. Kunze interpreted this diadem as a completely separate item, and went so far as to declare that the front edge of the helmet itself disappears beneath it.[17] If this is really the case, then the later, standard form of the Attic helmet in which the frontlet is one with the crown, seems even more likely to have originated in the idea of

adding the ordinary, feminine head-dress to the basic cap-like helmet of the warrior goddess. The neck-guard at the back is long, and ends at the lower edge in a double ridge (cf. Theseus' above). (Note the view of it from the front and compare the vase-representations, e.g. cat. nos. 62, 503 (both EC), 58 (CL), and 256 (Late 5th cent.)- Figs. 41-43.) The crest which originally decorated the helmet was of the high type; an iron peg still projects from the hole on the top and the line of the hair is still visible down the back. (Its width was approximately 1.7 cm.)

3. A small, bronze figure of a runner in the hoplitodromos. Tübingen, Archaeological Institute of the University, inv. no. 1. H. 16.3 cm. ca. 490 B.C. PKG 173 no. 49; Becatti pl. 111; EO 169 fig. 76 in colour.[18] He is depicted naked except for his Attic helmet and the (now lost) shield on his left arm. The frontlet rises above the heavy locks of his fringe, as on both the Theseus and the Athena, but here it reaches no further than the ear. One might compare the frontlets on the Athenian coins, but there the similarity ends, for the gently curved line of the neck-guard and the high crest (now indicated only by the two attachment points on the crown) are quite different.

4. The helmets worn by Athena and a warrior from the east pediment of the Temple of Aphaia on Aegina, ca. 490-80 B.C. The Athena, Ohly, 16-25 pls. 1-3, 11c figs. 6-19. The warrior, O.VI, Ohly, 76-9 pls. 36-9 figs. 67-70.

The warrior's helmet seems to lack a true frontlet, since the front of the crown merely ends in a slightly up-swept rim (cf. the representation of Athena's on LA vase no. 474 - Fig. 35). The Athena from the east

pediment, however, appears to have not only this rim above the area where locks of hair would have been added separately, but also the projecting, diadem-like frontlet (cf. vase cat. nos. 10 (LA) or 196 (EC) - Figs. 34 and 36). Indeed, one would have been inclined to see the frontlet as an independent addition were it not for the fact that it continues behind the ears as the forward edge of the neck-guard.[19] The latter is simple in shape, but had the interesting detail of a painted lotus and palmette frieze, traces of which survive.[20] Traces of blue were seen once on the warrior's helmet, but the precise design and the number of colours used were not determined.[21] As for the crests, Ohly wished to restore a low snake mounting in the large hole on the top of Athena's head, on the strength of a piece of tenon known in 1811. However, even if his interpretation of a snake form is correct, the comparable example he cites by the Amasis Painter[22] and the 5th century examples on red-figure vases[23] would rather suggest a much higher form of snake. The low alignment here was apparently necessitated by the special circumstances relating to the available height in the pediment.[24] Part of the more usual low crest of the warrior still survives. It will be discussed further in Appendix A.

5. Throughout the first half of the 5th century a series of small, bronze figurines was created depicting Athena in martial pose. She strides forward against an unidentified enemy with spear and shield raised, and wearing aegis and Attic helmet. Athena Promachos is the term generally applied to these figures, which were made at Athens especially.[25] They are essentially identical to the Athenas on the black-figure Panathenaic amphorae made at Athens from the middle of the 6th century, and a cult image may have provided the inspiration for both.[26] A couple

of examples have been dated to the Classical period itself, after 480 B.C. (a) Athens, N.M. 6447, from east of the Erechtheion. De Ridder, Acrop 312-4 fig. 302; AntP 3 (1964) 21-2 pls. 11 and 34a; Gk Mus pl. 95.(Pl. 20b) (b) N.M. 16768, from the sanctuary of Athena between Despina and Antikyra. (Cf. Late Archaic examples, N.M. 6458 AntP 3 (1964) 13 pl. 10 and Berlin inv. no. 6218 Grîefenhagen, GG 31 pl. I.)

The Attic helmets are in the basic Archaic form, without cheek-pieces or nose-guard; the frontlets run only from ear to ear and do not encircle the head. The statuette, NM 16768, has a lotus flower pattern on the frontlet which recalls the decoration on the terracotta head from Olympia; its shape, however, is closer to that on the Aegina Athena since it displays the detail of a raised rim between the projecting part and the goddess's hair. The crests of these statuettes are generally of the high, stilted type; a number of fragments are in the National Museum and they will be discussed in Appendix A. The one from NM 16768 has been lost, but on NM 6447 the mounting is modelled into the form of a bird's head with a further band between it and the crest-hair (cf. LA vase cat. no. 183, Fig. 49). Niemeyer suggested that the latter would have had riveted to it a sheet of precious metal.[27]

6. In stark contrast with these small-scale figures (usually about 30 cm. high) stand the fragmentary remains of the Athena from the west pediment of the Parthenon, from the third quarter of the century. BM 304L (body) and Acrop. Mus. fr. (head). H. 76 cm. Brommer, SP-G 39 pl. 101; HGA 299, 304f. pl. 100e.

Very little of the Attic helmet actually survives; three holes in the right side of the neck indicate that details of the neck-guard and the

hair were attached separately and are now lost. However, what makes this fragment important is the trace of a relief spiral above the goddess's ear. Its high position and the route of the coil show that it comes at the end of the frontlet and not off the offset line between the crown and the neck-guard. We may compare the helmets drawn on the vases for the addition of this spiral (in all the periods except, surprisingly, the Classical (450-425) in my sample). Unfortunately, since the whole front of the head has been sliced off, no exact parallel can be drawn from the paintings.

7. On the Parthenon Frieze a number of riders and apobatai wear helmets, but once again the damage is often so great that it becomes impossible to distinguish the different types in all but a small handful of cases.[28] Clearly Attic are the two helmets worn on West Slab VI by figures 11 and 12. Brommer, PF 10-1, pls. 18-20.

The frontlet on the latter is sadly almost completely worn away on the building, but is apparent in the cast. That of W11 is better preserved; the upper and lower edges are raised so that there is a groove between them; the upper peters out above the ear, but the lower bends down sharply in front of it, extends out in a broad flap around the ear and then runs into the front and eventually the lower edge of the neck-guard. On the side of the crown is an eagle and, according to Brommer, an animal in low relief (cf. the helmets on Greek coins below or on vases, e.g. the sphinx on cat. no. 192 (LA) and the lion on cat. no. 118 (CL)). Both helmets are crested along the crown with simple mountings, and both have holes in the side presumably for the attachment of separate cheek-pieces in the raised position, as on the fragment (Acr. 1193)[29] which may well originally have had a more pronounced, Attic, frontlet.

8. In fact, this frontlet closely resembles that on the representations of the Athena Parthenos[30] in so far as the upper and lower edges there are emphasised by ridges too, and the actual projection of the frontlet beyond the crown is less marked. Noticeable are the points at the centre of the frontlet, new features in the portrayal of the Attic helmet. To gain an idea of the original helmet worn by this Athena, one has to combine together various details which are only echoed in Pausanias' description (1.24.5), small copies, coin-types and representations in minor arts, such as terracottas and jewellery. The total is an extremely elaborate helmet unlike any so far considered.

On the Varvakeion Statuette the continuation of the frontlet into the neck-guard is effected by a very heavy and ugly band, recalling the Theseus from the Athenian Treasury. The treatment on the terracottas and the Larissa head is hardly more delicate. Sickle-shaped cheek-pieces jutted out at an angle from the area above the ears and the end of the frontlet; on the exposed inside were depicted griffins within the frame of the raised border. The neck-guard was apparently scaled, and the centre of the frontlet may have borne rosettes. (They are only to be found on the small clay moulds and medallions.) Along the top of the frontlet were set the protomes of alternately Pegasoi and deer (sometimes griffins instead). These animals were surpassed by the full figures of two Pegasoi either side of a Sphinx which carried the three crests of the helmet. Behind and below these three-dimensional figures the bowl of the helmet was decorated further with spiralling tendrils in relief. The presence of an owl on the cheek-piece on the Kul Oba medallions (cf. p. 151 and Pl.21b) has given rise to the suggestion that the original was also so endowed, but since the reproductions are so selective

in their copying, further proof of this decorative feature remains lacking.

Before leaving the Athena Parthenos we may note that Attic helmets were worn by some of the Amazons on the outside of the shield which stood at Athena's left side.[31] These were clearly much simpler than the helmet on the statue itself, and yet on the Piraeus reliefs two are decorated with a griffin and a bearded snake, and one with florals on the side of the bowl.[32]

9. An Attic helmet is held by a Nike on the Parapet of the Temple of Athena Nike. Athens, Acrop. Mus. 1013. ca. 410 B.C.[33] SNTP pl. XXXIII.4 (Frg. 1001); Ridgway, FS fig. 81.

The frontlet projects above the forehead edge of the helmet. It rises to a central point along the upper contour only, and ends at the side in a volute, below which are attached the cheek-pieces and the neck-guard. The front edge of the cheek-piece is straight, the back edge curved. The crest seems to be fixed by a double mounting i.e. in two steps.

10. A small, fragmentary figure of Athena from a relief. Basel Mus. BS228. E. Berger, "Eine Athena aus dem Späten 5. Jahrhundert v. Chr.", AK 10 (1967) 82-8 pls. 22-4, ca. 420 or shortly after; Ridgway, FS 36 no. 3, "perhaps closer to 400".

The frontlet of the helmet appears to be down-pointing along its lower edge and gently curved above (though the up-swept hair and the damage to the surface make this less certain). Instead of running into the neck-guard, however, it ends above the ears in spirals. Like the Athena Parthenos' this helmet was also triple-crested, and possibly had raised cheek-pieces or, less likely, animals attached at the sides.

It is at this point in the late fifth century that our study of the Attic helmets must turn for its evidence not to more large-scale works but instead to small reliefs, some of which can be dated precisely to individual years on the basis of the inscriptions which accompany them. Three of these portray Athena shaking hands with a figure who represents the other party to an agreement made by the people of Athens.

11. The first concerns a treaty made with Chios in 406/5 B.C. Athens, Epigraphical Museum. Süsserott, 30 pl. 1.2.

    The Attic helmet here is so simple that it is not even clear whether it is crested or not. It does, however, have the frontlet which ends in a volute above the front edge of the small neck-guard.

12. A year later (405/4 B.C.) a treaty was made with Samos, and the relief shows Athena and Hera as the respective patronesses of the two states. Athens, Acrop. Mus. inv. no. 1333. J. Kirchner, Imagines Inscriptionum Atticarum (Berlin, 1935) 15-6 no. 40 pl. 19; Johansen, 150 fig. 76; PKG 187-8 pl. 94a; IEE 1 304.

    The Attic helmet is very similar to the last, except that it has a crest on a mounting along the crown, and instead of a volute at the ear, there appears to be a raised, hook-shaped cheek-piece.

13. This helmet is copied in all its essential details on a very similar Athena on a relief of 398/7 B.C. Athens, N.M. 1479. Lippold 229 n. 15 pl. 88.1; Süsserott, 35-6 pl. 1.4; IEE 2 19. The presence of the crest might actually be questioned.

14. With these helmets on Athenas we may compare another worn by an ordinary hoplite or general or hero (?) on a monument from the Acropolis. Athens, Acrop. Mus. inv. no. 3173. R. Schöne, Griechische Reliefs

(Leipzig, 1872) 50 no. 97 pl. 23; MTP pl. 11.

The form of the frontlet recalls especially that on the first Athena, the crest that on the second, but here the neck-guard juts forward sharply and there seems to be a trace of a cheek-piece over the warrior's beard.

15. A warrior from a metope of the Argive Heraion (Pl. 19a-b).

Athens, N.M. 1573. C. Waldstein et al., The Argive Heraeum (Boston and New York, 1902) I 177-178 pl. 30; Picard, Manuel II 2 816-824, fig. 328; HGA 359, 396f. Early 4th century.

The crested Attic helmet on one of the fragmentary warriors has a straightforward neck-guard with broad raised edge. The frontlet, however, is pointed along both its raised edges in the manner of the Athena Parthenos, but unlike that model it terminates in volutes at the sides, noticeably in front of rather than above the ears. Below the volute a large drill-hole is visible in the carved hair - presumably cheek-pieces were once attached here.

16. A number of very simple Attic helmets appear on the Bassae Frieze (ca. 395) where they are worn by Kaineus in the Centauromachy and both Greeks and Amazons in the Amazonomachy. Hofkes-Brukker & Mallwitz 58-9, 71-2, 79-80, 82, 85-86, 87-8, 96-7.

The frontlet takes the form of a curved band over the forehead; the ends at the sides are concealed beneath the stray locks of hair from the temples. The neck-guard when visible is straightforward with slightly raised edge, and the crests when carved (and not merely painted?) are set in a mounting along the crown. There are no obvious cheek-pieces.[34]

17. One of the hoplites on the Academy Relief wears an Attic helmet presented in three-quarter frontal view. Athens, N.M. 3708. Early 4th century. AA 1931 217-222 figs. 1-3 (Karo); JHS 51 (1931) 187 fig. 4 (Payne); Dohrn, 127, 134, early 4th cent.; IEE 2 88-9 first half of 4th cent.; Stupperich, cat. no. 151, about 400 or shortly after that.

The frontlet rises to a point at the centre and ends in a volute at the side. The neck-guard is only just visible at the left side. The crest has grooves for the hair-lines and is set into a low mounting along the crown.

18. Eight Attic helmets are worn by (Greek?) hoplites on the west frieze of the Heroon from Limyra in Lycia, ca. 370 B.C. IstMitt 17 (1967) 151-167, esp. 157 ff. and pl. 14.2 (Borchhardt); AA 1970 353-90, esp. 372-383 (Borchhardt); Borchhardt, 49 ff., hoplites nos.1, 5, 7, 8, 11, 12, 13 and 14(N.B.also the rider, no. 18) pls. 20-21 and 22.1-2.

The frontlets vary in the degree of curvature over the face, but all end in a volute at the side. All the helmets have small neck-guards, but only three (on nos. 1, 11 and 12) have cheek-pieces with two bites out of the front edge. Crests are omitted from nos. 7, 13 and 14 and perhaps 11; the mounting is not depicted separately.

19. Among the various helmets worn by the warriors on the frieze from the Heroon at Trysa (ca. 370 B.C.) one can discern some of the Attic type. Cl Gr 39?, 40, 42-3; IEE 1 360; Childs[3], pls. 15-16.

They tend to be crested with neck-guards of the standard type. Whether cheek-pieces are sometimes present is uncertain because of the poor state of preservation. The frontlets, however, definitely include some

which end in the volute over the ear, and have raised ridges for the top and bottom contours. One may compare the very similar frontlets on two of the riders behind Payava on the base-frieze of the Payava Sarcophagus, ca. 370-60 B.C.[35]

20. The 4th century grave-reliefs produced in Athens rarely portray Attic helmets. One does appear, however, on the head of Ktesikrates. Louvre, cat. somm.3382. Diepolder, 33 pl. 28.1, dated to the early 4th century; Stupperich, cat. no. 521, dated to second quarter of the 4th.
It lacks a crest; the frontlet has ridged edges and ends possibly in a volute at the ear; the neck-guard and narrow cheek-piece are short. One recalls the practical helmet on the monument from the Akropolis above.

21. Finally, for Attic helmets of the 4th century we must note those on the heads from Tegea, from the west pediment of the Temple of Athena Alea, ca. 350-40 B.C. Athens, N.M. 180 and Tegea no. 61. Stewart, 23-4 no. 17 pls. 14 c-d, 15, 35 c-d, 52 a-c and 24-5 no. 18 pl. 16 (with further references).
The head in Athens, sometimes described as that of Achilles, wears an Attic helmet with a prominent frontlet; a double ridge marks the top and bottom of it over the forehead, and these come together into the spiral over the ear. A very unusual feature is the double-ridged loop which then runs from the back of the spiral around the back of the helmet and apparently upwards to the crown, where it seems there was no crest attached. The neck-guard below this loop is short with a grooved edge which winds round from behind the ear. The other, poorly preserved, head in Tegea shows slight differences in the

treatment of the helmet. The frontlet has a noticeable downward point in the centre of the lower edge,[36] and the spiral is less curved and elaborate at the side. Little remains of the neck-guard except for the edge behind the right ear. As far as one can tell, the offset edge is not marked on this helmet by any looped ridges.[37]

Commentary

The Attic helmets from the Late Archaic monuments showed no uniformity in the portrayal of the frontlet and neck-guard. A preference for high crests might be detected, though both types of mounting were represented. Some indication of the possible origin of the helmet-type might be suggested in the similarity between the frontlet and female head-gear.

The Early Classical statuettes of Athena stand closer to their Late Archaic predecessors than to what follows in the second half of the century; one notes the continuation of the stilted crests.

For the third quarter the Parthenon sculptures serve to illustrate a number of points; the first spiral-ended frontlet on the Athena from the pediment, and from the frieze the first relief decoration on the side of the crown and the first added cheek-pieces, perhaps because these helmets are worn by men/heroes instead of Athena. And yet, the Athena Parthenos has herself acquired cheek-pieces too. Indeed, her helmet emphasises the scope for elaborate decoration of the surface areas available to the artist; alongside the animals tendrils now appear on the back of the crown (note their earlier presence on the Attic vases and coinage). Two important developments in the shape of the frontlet are illustrated here too: the points in the centre of the edges, and the use of ridges to set the frontlet off from the crown and forehead instead of a more pronounced projection.

These changes and the triple crest are reflected in the Basel Athena of the late fifth century.

By the end of the fifth century, then, two strains exist in the representation of the Attic helmet, an elaborate variety seen on large works of sculpture, and a simpler, more practical one for Athenas on small reliefs and some ?ordinary hoplites/heroes. It is the latter which continues to be represented in the 4th century on mythological and heroic figures, and eventually even ordinary mortals like Ktesikrates or the Greeks in Lycia. One may note, however, that there is very little evidence in the sculpture for the belief that the Attic helmet was the everyday type worn by the ordinary Athenian soldier. Throughout the 4th century the type remains variable in its details - the precise shape of the frontlet, the presence or absence of the spiral- or volute-end and the cheek-piece. Only the neck-guard can be said to be at all standardised.

ATTIC HELMETS ON COINS

What follows is a brief study of the different characteristics and development of the helmet on Greek coinage. I do not intend to discuss every case of an Attic helmet on a coin of 5th or 4th century date. Instead I hope to draw attention to specific details concerning the helmet as it is represented on some of the more important and better preserved examples. A further search through SNG, BMC, etc. would bring to light more parallels and additions, but these would be beyond the scope of this work. The chronological order adopted is basically that of Kraay in ACGC.[38]

The Attic helmet appears on the coins of a number of cities and regions. The Athenian coins (and their imitations) immediately come to

mind, as might a series of similar types from Southern Italy, i.e. from Sybaris-Thurii, Neapolis, Velia (Hyele), Nola-Hyria, Heraklea, Cumae and Taras. In addition, however, there are examples from Sicily (Kamarina and Syracuse), Greece itself (Cranium, Pale and Same on Cephallenia, Aegira in Achaia, Cleitor, Heraea and Tegea in Arcadia, and Coroneia in Boiotia), Pharsalus in Thessaly, the Molossi in Epirus, Scione and Acanthus in the Chalcidice, Abdera in Thrace, in Asia Minor (Cyzicus, Lampsakos, Sigeum, Ophrynium, Assus, Elaea, Phocaea, Clazomenae and Halicarnassus), Lesbos (Methymna and Mytilene), Soli and Tarsus in Cilicia and Salamis on Cyprus.

Almost all of these helmets are worn by Athena. Three heroes wear Attic helmets;Protesilaos on a coin of Scione, Leukaspis at Syracuse and "Hektor" at Ophrynium. The helmeted head of a general or satrap is found on the coins of the Persians Pharnabazos and Datames, but there appear to be no clear cases of ordinary hoplites wearing Attic helmets on Greek coins. Some bronze hemiobols from Cranium feature the helmet alone between ca. 431 and 330 B.C., presumably as a pun on the name of the inhabitants.[39]

Catalogue and Commentary

The Athenian series with the head of Athena on the obverse (e.g. Pl. 22a) began in the late 6th century B.C., and it is, of course, the form of the helmet represented there that has given the title "Attic" to the helmet-type in modern times.[40] The Athenian coins of between 480 and 449 B.C. have been studied in depth by Chester G. Starr and I will be following his conclusions regarding date and development of design for that period.[41] Starr provides a very careful and detailed description of the minute changes in the coin dies over the second quarter of the fifth century.

For our purposes, however, the basic features of the helmet may be said to remain substantially the same. The bowl of the helmet is always close-fitting, with a narrow frontlet and a practical neck-guard; the crest is fitted along the crown, generally with a mounting which is rendered by a row of dots.

In the earliest examples of the tetradrachms, in Starr's Group I of the mid 470s, there is also a dotted zig-zag band below the dots;[42] the frontlet itself is sometimes a row of dots as well,[43] but this quickly settles down to being a narrow, straight band from Athena's ear to her browline. Only very occasionally does it stop short of her ear, in Group IV of the early 450s,[44] or in the later Group V,[45] and only in some examples of the latter group does it develop a pronounced curve instead.[46] The variations in Group I can be explained perhaps as part of a general lack of standardisation at the time; the others in Groups IV and V foreshadow the less careful workmanship of the mass-produced coinage of the second half of the fifth century.

The precise changes in the number and position of the olive leaves along the back of the frontlet, or in the design and angle of the spiral and palmette on the side of the bowl, while of considerable importance for distinguishing the denominations and the stylistic development of the coin-type, are of less relevance for this study of the Attic helmet. Starr maintains that, "Attic red-figure vase-painters of the fifth century often adorn the bowl of the helmet, but with designs bearing no similarity to the spiral and palmette of the coins."[47] Certainly the examples which he cites (one of which is actually of a Thracian helmet!) would seem to confirm this statement. But there is, in fact, a very strong tradition in the vase-painting for decorating Attic helmets (and others) with spiral and

palmette patterns of various kinds, some of which are at least similar to, though not exact copies, of the type found on the coins.[48] Furthermore, apart from the Amazons mentioned by Starr as having leaves on their helmets,[49] not only Athena, but even male warriors, can be seen on EC and CL vases with their helmets so decorated.[50] Starr was, therefore, not completely familiar with the range of comparable material in the vase-paintings, and yet his conclusion that, "Just as potters as a rule seem to have had no desire to imitate a well-defined type of the numismatic medium, so the die-cutters cannot be shown to have borrowed directly from models in the other arts,"[51] remains essentially correct. The continuity in the limited variety of decoration found in the coin-types of the different denominations at Athens is certainly not matched in the representations of Athena on the vases which have survived.

Between 449 and 415 B.C. the Athenian coins become simpler and more standardised, and the quality of execution varies considerably. Starr publishes a few of them on plates XXII and XXIII (nos. 1-3 soon after 449, nos. 4-5 ca. 431, nos. 6-7 down to ca. 415, and nos. 8-11 without more specific dates).[52] The dotted crest-mounting remains standard throughout, but changes take place in the depiction of the frontlet and the neck-guard. The frontlet tends to be curved rather than straight, and it may project even further beyond Athena's noseline, its top and bottom edges now in relief. More importantly the neck-guard displays greater variety in its shape and proportions, e.g. it is longer and thinner on Starr, pl. XXII.4'-5', has a double, outlining ridge on pls. XXII.8' and XXIII.10', and on ACGC no. 199 it is shorter in depth at the back. In addition to these changes in the modelling of the helmet, small differences are also noticeable in the spiral and palmette, and the leaves on the frontlet. The exact details

need not concern us, for the design remains the same, while the style becomes generally coarser.

From the late 5th century this form of the Attic helmet remains fairly static.[53] The dotted mounting, the clearly-edged frontlet and the small type of neck-guard are standard on the Athenian coins through the 4th century.[54]

At the same time imitations of Athenian coins were minted with varying degrees of accuracy,[55] but most of them add little to our understanding of the Attic helmet. Sometimes the dots of the crest-mounting are replaced by dashes or are repeated as two rows.[56] The double outline of the frontlet may be more emphasised than it is on the Athenian coins of the 4th century, but the neck-guard copies the usual or the slightly smaller form without serious deformation.

Simple Attic helmets, without elaborate decoration, are depicted on a few coins, e.g. from mints on Lesbos and at Halicarnassus.[57] One is found on the head of Protesilaos (his name appears on the crest-mounting) on a tetradrachm of Scione (ca. 470 B.C.).[58] The crown is absolutely smooth, the frontlet narrow and straight, and the neck-guard practical with a fairly broad edge behind his ear.[59] The hair of the crest is not marked beyond the mounting.

Towards the end of the 5th century two simple helmets were represented on Syracusan coins. On a drachm of 410-400 B.C. Leukaspis wears an Attic helmet which appears to have two lines for the crest-mounting, a double-edged frontlet terminating in a circular 'button' above the ear, and a small, rounded neck-guard.[60] A somewhat similar helmet is worn by Athena on a coin of about 405 B.C.[61] The neck-guard closely resembles that on Leukaspis, but the frontlet tapers more to the ear and the crest-mounting

is formed by a single ridge.

A helmet on its own is depicted on the coins of Cranium in Cephallenia (ca. 431-330 B.C.).[62] The close relationship between the Attic and Thracian types of helmet is here apparent, so much so that there might be some doubt as to which is represented on these coins. However, the line of the crest-mounting and the projection of the frontlet assign this helmet to the Attic type. At least two slightly different forms of the Attic helmet are here presented, and they are unusual for the added cheek-pieces and the way in which the frontlet on one ends in a roll or volute above the ear. More will be said on these features in connection with Athena's helmets later.

In the second half of the fifth century and in the fourth century B.C., a number of cities minted coins with similar heads of Athena. Although some of them come from the Eastern Mediterranean, one particular series originated in Sicily and Southern Italy. On the latter the Attic helmet worn by the goddess changes little except in the variety of the decorative additions, e.g. an olive wreath, hippocamp, Skylla, griffin or wing on the side of the crown.

The olive wreath first appeared on the coins of New Sybaris about 445 B.C.[63] and, although the name of the city was altered to Thurii about 440, the type continued to be used on the coinage.[64] The wreath itself may vary in shape, even becoming an ivy one on one occasion, and details of the helmet too change slightly. The original simple crest-mounting has sometimes two ridges or a row of dots; most frontlets have strongly projecting top and bottom edges, and the neck-guards tend to become more flamboyant with a double line for the edge of the metal.[65] Imitative coins were widely minted, e.g. by Cumae,[66] Neapolis,[67] Taras,[68] Velia,[69] and the

Campani.[70] An interesting variant was minted principally at Hyria and Nola,[71] but also at Cumae and Neapolis,[72] with an owl seated on the olive wreath. Parallels for the addition of the wreath may be found in the coinage of Abdera in Thrace in the 5th century and Assus in the 4th and later.[73]

The hippocamp was adopted on coins of Heraklea, with pointed wing,[74] and Kamarina, with rounded wing,[75] as well as Thurii[76] and Taras.[77]

At Thurii, however, it was more usual to decorate the helmet with a figure of Skylla, which fitted across the side of the crown in a pose comparable to that of the hippocamp.[78] Similar Skyllas occur on the coins of Heraklea[79] and Taras,[80] and indeed there is a striking case of a double-bodied Skylla on a triple-crested helmet seen in three-quarter view on another coin of Heraklea.[81] Despite the fact that Skylla is naturally associated with Southern Italy, she does also appear on helmets worn by Athena on coins from further east, from Acanthus (ca. 400 or later),[82] Pharsalus (ca. 400-344),[83] and Tegea (ca. 431-370).[84]

The third figure regularly found as the ornament for Athena's helmet on this series of coins is the griffin, e.g. from Thurii,[85] Heraklea,[86] and Velia.[87] This mythical creature, of course, originated in the east, and was already a popular device on coins there.[88] As the motif on a helmet, it appears on a coin of Phocaea of the third quarter of the 5th century.[89] Unlike the Italian helmets the Phocaean one has a dotted crest-mounting, a straight frontlet and a less curved neck-guard. Closer in date and style to the western coins are two from Soli in Cilicia,[90] but these helmets have a dotted mounting in one case, and none at all in the other, and two quite different forms of neck-guard. Other examples of griffins may be briefly mentioned as occurring on coins of Clazomenae[91]

and of the Molossi in Epirus.[92]

A wing is occasionally represented on the side of the Attic helmet on coins minted at Velia[93] and Kamarina.[94] Distinguishing between a wing and a raised cheek-piece may sometimes present difficulties, and it does seem rather surprising that there are not more cases of wings on Attic helmets, given the known preference of the South Italian Greeks for wings and feathers on their helmets, as evidenced by their wall- and vase-paintings.

Towards the end of the fifth century (ca. 410 B.C.) a striking version of the Attic helmet appears on the tetradrachms of Syracuse.[95] The creation of the die-cutter, Eukleidas, the helmet has a central crest in a square-ended mounting which does not quite reach the frontlet, and two wings at the sides like cheek-pieces. The goddess's face is seen in a three-quarter frontal view, so for the first time the shape of the frontlet can be made out more surely; it rises to a rounded point in the middle of the top edge and is decorated with spiralling florals. Above the frontlet a palmette and volute pattern (and the artist's signature) is visible. Extremely close copies of this type were minted in Lycia ca. 390 B.C.[96] and a simplified version at Issus about ten years later.[97]

A similar three-quarter helmeted head also appears on the coins of Heraklea ca. 350.[98] Athena is, however, facing in the opposite direction, and, although the crest-mounting is much the same, the rest of the helmet is not. The frontlet is partially hidden under the goddess's hair, and the small side-features are truly crests, not wings or upturned cheek-pieces. Despite, therefore, the initial similarity to the Syracusan type above, it is a different Attic helmet presented here, and Kraay was ready to credit Heraklea with the evolution of an original version.[99]

The idea of viewing a triple-crested Attic helmet on the head of Athena from a three-quarter or frontal angle was current at this time in the eastern Mediterranean too. The first instance of it on a coin of Cyzicus is approximately contemporary with the Syracusan type in the late 5th century.[100] The list of cities minting similar coins in the 4th century includes Clazomenae,[101] Sigeum,[102] Lesbos,[103] Assus,[104] Pale,[105] Same,[106] and Coroneia.[107] Ophrynium produced an interesting variation in that the head below the helmet is male.[108] On the silver coins the face is seen frontally, and the frontlet has a down-turned point at the centre of its lower edge; this is omitted, and the face is in three-quarter view on the bronze. There are actually very slight differences in the way in which the crests are attached to the helmets in these 4th century examples; on the coin from Coroneia all three rise from the crown of the helmet itself; this is also the case on the coins from Sigeum, Lesbos and Assus but at the sides the helmet has in addition raised cheek-pieces; on the remainder the side-crests spring from curved fittings, almost like cheek-pieces, close by the ends of the frontlet. (Indeed, on the coins from Same it is not at all clear whether cheek-pieces, crests or even extensions of the frontlet are intended.)

Attic helmets with a raised cheek-piece and a single crest are represented on coins from Tegea,[109] Cleitor[110] and Heraea.[111] Examples from Pharsalus begin in the 5th century and resume in the 4th.[112] On the early types[113] ranks of dots like locks of hair replace the frontlet over the forehead, and the cheek-piece itself can vary considerably in size and shape, becoming sickle-shaped later. Western Greek influence is apparent in the 4th century in that the cheek-piece is sometimes replaced by other decorative features such as Skylla, a wing or sphinx.[114] With

these one may compare coins of Lesbos[115] on which the Attic helmet has a palmette and spiral either side of the cheek-piece, a gold stater of Lampsakos[116] with a spiral at the back, and a drachm of Assus with an olive wreath in front.[117]

What could be interpreted as a tiny, almost circular cheek-piece appears on other Lesbian coins.[118] It comes at the lower end of a gently curving, double-edged frontlet and projects on to the cheek between the eye and ear of the goddess.[119] Further examples of helmets with the cheek-piece in its down position are to be found on the coins of Clazomenae ca. 387-300,[120] Sigeum ca. 355-334,[121] and in two different shapes, Cranium ca. 431-330.[122]

Copies of the Athenian coins were minted, probably at Tarsus between 379 and 374, by the Persians Pharnabazos and Datames.[123] It is interesting to note that these helmeted heads of generals or satraps, despite the artistic influence of the Athenian type, have the added practical feature of a cheek-piece.

One very significant change took place in the depiction of the Attic helmet on coins some time in the 4th century B.C. Occasionally the frontlet is shown ending in a roll or volute above the ear.[124] Examples may be seen on some Athenian coins, including the bronze ones which Kraay has dated to probably after 350 B.C.,[125] on the silver and bronze coinage from Assus (ca. 400-241),[126] coins of Itanus in Crete (5th-4th cent.)[127] and the previously mentioned coin of Cranium (ca. 431-330).[128] Only one instance can be more precisely dated, on the coins of Euagoras II, minted at Salamis on Cyprus ca. 361-351 B.C.[129] This form of the frontlet was already depicted in other media on Attic helmets in the 5th century, and its adoption on the coinage later, i.e. mainly in the 4th cent., is somewhat surprising.

ATTIC HELMETS IN MINOR WORKS OF ART

Catalogue and Commentary

1. The earliest Classical gem which is relevant here, is a cornelian scaraboid from Kourion in Cyprus and now in the British Museum, acc. no. 89.11-11.1: Richter, EG no. 242; GGFR pl. 486.
It may be dated to the third quarter of the fifth century.[130] The "Pheidian" Athena engraved on the gem wears a crested Attic helmet with a pronounced frontlet and a simple neck-guard. One odd feature is the ear-like or leaf-shaped cheek-piece.

2. A gold ring from Marion belongs slightly later in the fifth century: British Museum, acc. no. 91.8-6.86: Richter, EG no. 287; GGFR pl. 688.
The seated Athena represented here is viewed almost frontally. She wears an Attic helmet recognisable by its arched frontlet, and equipped with three crests. Any indication of the neck-guard at the sides is hidden behind her flowing locks of hair.

3. Another triple-crested Attic helmet is worn by Athena on a glass scaraboid in East Berlin: A. Furtwängler, Beschreibung der geschnittenen Steine in Antiquarium (Berlin, 1896) 31 no. 321, pl. 6; GGFR 416 cat. no. 411.
It dates from approximately the same period or perhaps a little later in the early fourth century. On this helmet the frontlet rises to a point at the centre and appears to terminate at the sides in raised, sickle-shaped cheek-pieces.

4.-5. Two more Attic helmets are worn by statues of Athena, at which Kassandra seeks refuge. One appears on a gold ring in the Metropolitan Museum of Art in New York, acc. no. 53.11.2: Richter, EG no. 294; GGFR pl. 709, dated to the early fourth century; the other on a cornelian ringstone gem from Granitsa, now in Boston, acc. no. 27.704: Richter, EG no. 293; GGFR pl. 591.

On the former Athena's head is again seen in frontal view with a triple-crested, Attic helmet; on the latter, however, the archaistic nature of the statue is emphasised, and the helmet takes the simple form with frontlet and neck-guard, and a high stilted crest.

6.-7. These two variations in the depiction of Athena's helmet, i.e. a frontal, triple-crested type and a single-crested one in profile view, continue through the fourth century. For an example of the former we may cite a statue of Athena on a cornelian scaraboid in Boston: GGFR pl. 599; for the latter, a West Greek silver ring in the British Museum, R 1070: GGFR 423 cat. no. 781.

8. All the Attic helmets so far considered have been associated with Athena or a statue of her. There is one case of an Attic helmet in a possibly human context on a silver ring in Munich, A2496: GGFR pl. 776, Western Greek, 4th cent., the common style. The helmet here is to be seen on a trophy which Nike is crowning; one would assume that the equipment represented in such a setting would be ordinary and not mythological. The helmet is in fact crestless, but the frontlet, neck-guard and cheek-piece are present. So, rather surprisingly, is the head of the wearer underneath!

9. Another helmet is associated with Achilles. It is carried by Thetis on a Hippocamp on a rock-crystal and lapis lazuli bezel of a silver ring from Homolion in Thessaly, Volos Museum, M58: Treas Anc Mac Cat 33, no. 4, pl. 3, 4th cent.

The exact details of the crested helmet are difficult to make out, but I believe it is of the Attic type with a frontlet which ends in a volute above the ear.

10. The final item in this section concerns not the decoration of a ring or gem, but a pair of gold temple-ornaments from the Kul-Oba Kurgan in the Crimea, Leningrad, K.0.5: AM 71 (1956) 90-7 Beil. 51.1 (Fink); Artamonov, pl. 214; IEE 2 181. (Pl. 21b.)

This beautiful piece of 4th cent. jewellery gave the apparently Greek craftsman a greater field for the head of the Athena Parthenos which fills the centre of the upper disk (cf. above p. 132). The characteristic details of the decoration of the helmet are finely copied; the triple crests supported by a central sphinx and two Pegasoi, the griffins on the raised cheek-pieces and the animal protomes over the frontlet which has an arched top and rounded bottom and running volutes in between. The owl at the side is probably not to be thought of as sitting on the helmet or the cheek-piece.[131] Such exquisite workmanship brings to a conclusion the list of otherwise uninspiring examples of Attic helmets on the minor works of art.

CONCLUSION

Without repeating all of the points of comparison already made in the preceding sections, we may now summarise what has been discovered about the

Attic helmet as it is represented in the different artistic media of the fifth and fourth centuries B.C. It is noticeable that certain details, e.g. the addition of the nose-guard, occur only in one medium, i.e. vase-painting (and that rarely). One can also discern the creation of independent variations by the different artists who seem to have been working in their own artistic tradition, e.g. that of the die-cutters of the Attic coins.

If we consider the individual parts which make up the whole helmet, these variations may become clearer. The range of shapes for the frontlet is considerable, especially in the vase-painting; the central point(s) found on the sculptures after the Athena Parthenos can be matched on the vases and coins of the late 5th century when three-quarter and frontal views make their presence obvious, but it was suggested that some could be detected even in the profile views of the LA, EC and CL periods. The continuation of the frontlet round the ear and into the edge of the neck-guard appeared only on the sculpture, and not on the vases or the coins. The termination in a spiral or volute can be found earliest on the vases (LA and EC), on the sculpture only after the Athena from the Parthenon pediment and on coins in general rarely, if at all, before the 4th century. The degree of projection of the frontlet beyond the crown of the helmet varied; in the sculpture it was found that by the second half of the 5th century the frontlet could be simply set off by raised edges along the top and bottom. These ridges can be interpreted on the vases throughout the classical period in the inner lines and reserved strips. One form of frontlet ( ) is found only on some EC vases, and the substitution of a row(s) of dots or locks for the frontlet occurs on Attic and Pharsalian coins only (but compare the locks on Chalcidian helmets discussed in the next section). With regard to the decoration of the frontlets rather than

their shape, we may note that the leaves added to Athena's helmet on the Athenian coins after ca. 475 B.C. also appear in vase-painting after this date, but are absent from the sculpture, where instead the use of animal protomes is attested in the second half of the 5th century. Geometric and floral patterns decorate the frontlet on vases, florals and animals on the sculpture and florals on the coins.

Like the frontlets the neck-guards also display a great range of forms and sizes over this period, but the idea of a raised edge at the front and along the bottom becomes common. One can begin to talk about a 'standard' form of neck-guard, which is small, neat and apparently practical, in the late 5th and 4th centuries in all the media. The upper offset line, clearly marked on the sculpture, is almost invariably drawn on the vases after the LA period. Spirals and eventually elaborate tendrils develop at the ear end of it on the vases; these are an essential feature of the Athenian coin helmet and are also seen on some copies of the Athena Parthenos. The vertical area of the neck-guard itself is seldom decorated on the vases, except for a filling of black glaze or scales; the latter appear on the Athena Parthenos, but there is no parallel for the lotus and palmette frieze on the Aegina Athena.

Cheek-pieces in a range of shapes could be attached to the Attic helmet throughout the Classical period, even to images of Athena. The majority are set in the raised position, above the frontlet (sometimes so high or out of alignment as to have been useless if they had ever been lowered). In sculpture the cheek-pieces were regularly fixed to the helmet separately so that their presence can only be deduced from the now empty holes. The Athena Parthenos' at least were decorated with griffins on the exposed inside, and similar animals (and black or dilute

glaze centres) are found on the vases. Scales are seen only on EC vases, and the coin versions are left plain.

Almost all the Attic helmets reviewed in the different media were crested, with one or other of the two basic types of crest. Surprisingly, the stilted type is represented throughout the fifth century - its survival at all after LA is in contrast with the situation found with Corinthian helmets. Here too it may be generally Archaistic in tone later. Triple crests make an appearance on vases, statues, coins and gems in the latter part of the fifth century especially in frontal and three-quarter views; note the mixing of side-crests, cheek-pieces, frontlet-ends and wings on the vases and coins of this period and the 4th century. The variety of stilted mountings is attested in both vase-paintings and statuettes, and the different patterns which decorate the low mounting are illustrated on the vases and coins. Mountings are occasionally omitted altogether on vases of the late 5th and 4th centuries, but their presence was certainly essential in reality. The crest-hair is rendered with most detail in the vase-paintings, with segments, edge-strokes and hair-lines marked especially after EC and the unexplained dots throughout. White as the colour of the hair is found on the vases of the late 5th and 4th century.

The vase-painters provide us with the best illustrations of the possible range of decoration which could be applied to the crown of the helmet, and which if originally painted is now lost from the marble sculpture. The relief figures of eagle, griffin, snake etc. on the side of some of the sculptured helmets find rare companions on the vases from Athens, while similar decoration in the form of a hippocamp, Skylla etc. appears to be the norm on the South Italian coinage(N.B.also the Phocaean griffin).

The owl on the olive wreath on the helmet of the coins minted at Hyria, Nola etc. may call to mind the owl beside the cheek-piece of the Kul Oba medallions.

The association of the owl with the goddess Athena leads us into the final aspect of the Attic helmet which should be mentioned in this conclusion. Namely, how closely is the Attic type associated with representations of the warrior-goddess? The answer must be very closely, as it was in 6th century art. In the vast majority of cases, the figure who wears or is shown with the Attic helmet in all the media studied here, is Athena. Only a few Amazons who as female warriors are understandably associated with her, the occasional Ares or Dionysos, Giants and heroes are included in the artistic representations of the fifth and fourth centuries. The instances in which we may begin to believe an ordinary human is or might be depicted with this helmet are extremely rare in comparison - though not totally unknown, especially in sculpture. The exact status of the possessor is sometimes left doubtful, and so long as an original example of the Attic type remains non-existent, one is left wondering whether it could ever be considered regular wear for the Greek soldier in the Classical period.

d. THE CHALCIDIAN HELMET

INTRODUCTION

For almost a century the term "Chalcidian" has been applied to a particular type of Greek helmet. The adjective has no ancient basis with reference to helmets, and was first used by Furtwängler in 1890.[1] He seems to have considered it as a development from the early Attic type[2] though he did acknowledge later influence from the Corinthian. In the intervening years the terminology for these two different types of helmets, the Attic and the Chalcidian, has fallen into a more and more tangled mess, partly it seems as a direct result of what Furtwängler wrote.[3] There is, however, little excuse for this, at least when one is discussing an original helmet, since precise definitions of both types have been published by Schröder as early as 1905[4] and more recently and fully by Kunze.[5] The difference lies in the presence in the Chalcidian of a 'bridge' of metal connecting the neck-guard and the cheek-piece above the ear-cutting and below the offset-edge of the skull-cap. Snodgrass consequently saw the development of the Chalcidian as a refinement of and improvement on the Corinthian, not the Attic.[6] As to its place of origin, two theories have been upheld: that of Kunze who supported the case for Chalcis on the grounds of the appearance of the helmet on "Chalcidian" vases and in the spheres of Chalcis' colonial interests,[7] and that of Snodgrass who favoured Magna Graecia.[8]

THE ORIGINALS

Whatever the origin of the Chalcidian helmet in the 6th century, by the Classical period its manufacture and use were widespread throughout

the Greek world, not least in the west and the north whence much of our evidence comes. Kunze's definitions of the Archaic groups still serve as a starting point for the later variants in the art,[9] but in both the originals and the representations the typical form at this date is one with hinged, movable cheek-pieces (Kunze's Group VII).

Catalogue and Commentary

Group I[10] is characterised by immovable, rounded cheek-pieces. Eight helmets are listed by Kunze; five from Olympia, two without provenance and one from Lokri Epizephyrii. He dates the group to ca. 520-480, and proposes an origin in Magna Graecia on the basis of similarities with Corinthian helmets from there. In addition to the form of the cheek-pieces, this group shares a long, thin nose-guard, a ridge over the crown from front to back, a downward point at the junction of the offset-edges over the centre front and on two examples a raised bud above that point. Some of them also provide evidence for a pattern along the edge, added eyebrows, decoration on the cheek-pieces and the means of attaching the crest by pins or solder on the crown and neck-guard ledge.

Group II[11] is characterised by immovable, sickle-shaped cheek-pieces. Thirty one helmets (whole or fragmentary) are listed; twenty from Olympia, one from Paestum and one from Magna Graecia in general, one from the Athenian Acropolis, two from Macedonia, four from Thrace and South Russia and two with unknown provenance. To these may be added one in the Kanellopoulos Collection in Athens which is reported to have come from Euboea.[12] Kunze places the group as a whole between the 530s and the first decades of the fifth century, and emphasises the wide range of findspots over the Greek World. Apart from the shape of the cheek-piece they share

an upward point to the offset over the front and a small nose-piece. The variations, however, in other details, especially of the decoration, are considerable, and Kunze has thereby allocated some of them to particular areas: to the Greek Mainland (probably II.2-5, 18 and j), to the Chalcidice (II.20, d and e to which the Kanellopoulos helmet may be added), to Thrace and South Russia (II.f-h) and to Magna Graecia (II.1, 6, 9, a-b and k). (II.i is a problem in that it is stylistically close to the South Italian helmets, but was found in North-east Bulgaria.) The Mainland helmets may be characterised by a raised lotus-like flower over volutes on the front of the crown, or by doubled eyebrows. The helmets from the Chalcidice form a distinctive group with their point in the offset-edge in front of the ear-cutting, but, while two are severely simple, two are elaborately decorated along the offset and on the cheek-pieces. Peculiar to the helmets from further north are the curved profile of the neck-guard and its rounded projection behind the ear, as well as the high, furrowed arch made by the offset-edge over the brow. Kunze interpreted the latter as a later mannerism and accordingly placed these helmets in the Classical period itself, but not later than the first half of the 5th cent.[13] The attribution of helmets to Magna Graecia was based partly on the evidence of inscriptions and find-spots, but also on stylistic features like engraved eye-brows adorned with palmettes, or tongues and locks of hair finely engraved under the offset-edge, pattern-bands above the offset or incised florals or animals at the centre front or sides. One cheek-piece, we may note, Kunze thought might be from the Classical period rather than the Archaic, since it is made of unusually thick (2mm) and hard bronze (II.19).

Group III[14] is characterised by cheek-pieces in the form of ram's heads (e.g. Pl. 1b). Kunze lists nine helmets or parts thereof: six from Olympia,

and one each from Lokri, Metapontum and Ruvo. He places the group in the last third of the sixth century and makes a strong case for a South Italian origin. Some of the helmets lack nose-pieces, and this feature appears to be irrelevant to the identification of the type. Its more important traits include the careful and elaborate decoration of the front and side areas with tongues and locks of hair under the offset-edge, guilloche and floral patterns above it, eyebrows which may end in snakes' heads, other incised snakes and sphinxes on the crown and spiral-and-palmette patterns in the centre front panel.

Group IV[15] is characterised by pointed cheek-pieces. Six examples are known to me.

1. Berlin, Lipperheide Collection, no. 34. AA 1905, 20 fig. 6 (Schröder). Right cheek-piece up to offset-edge. Parts of the relief eyebrow, tongue pattern under the offset and an inlaid silver strip along the edges (Schröder).

2. London, Brit. Mus., Walters no. 2822. From Apulia. Lipperheide, 101 no. 247; Kukahn, 43 pl. 5.3-4. H. ca. 23.5 cm. (Walters) Wt. about 1165gr. = 21b. 9oz. (Mus. Register). Projecting ledge of neck-guard lost. Relief eyebrows; point instead of nose-piece; edging round eye-holes and front of cheek-pieces. A second ledge below offset-edge.

3. Lyons, Musée Saint-Pierre, inv. no. X 228. From near Carrara. RA 1964 I. 101-2, fig. 3 (Boucher); S. Boucher, Bronzes de Lyon (Lyon, 1970) 27 no. 11. H. ca. 26 cm. (Boucher). Relief eyebrows and long nose-piece. Apparently no decoration along offset-edge, but an applied strip echoing lower contour from back of ear-hole to ear-hole.

4. Milan, Museo Poldi Pezzoli. From Basilicata. Lipperheide, 102 no. 35; ArchCl 9 (1957) 234-242 pls. 101-103 (Vlad Borrelli). No nose-guard; pointed instead. Eyebrows, edging and apparently two ledges below offset-edge. The Messapian? inscription on the cheek-pieces is possibly later in date (Vlad Borrelli).

5. Present location unknown. AA 1933, 469ff. 17 fig. 8 (Vulić). From Trebenishte. Fragments of the front and cheek-pieces. Thin eyebrows; apparently no nose-piece. Edging bounded by tiny nails and two lines.

6. Present location unknown, probably Budapest (cf. Vlad Borrelli, supra no. 4, 238 n. 4). Formerly Vienna, Stefan Delhaes Coll. Lipperheide, 100 no. 436. Point instead of nose-piece. Possible eyebrows. Edging (possibly only as far as beginning of ear-cutting).

Unfortunately, these helmets have not been published in sufficient detail for me to offer a detailed discussion of the Group, especially with reference to any decoration which may have existed under the offset-edge or in the centre front panel. One may notice that only one of them (no. 3) has a long nose-piece instead of a simple point. The addition of eyebrows is a characteristic feature, and a narrow fillet echoing the outline of the opening around the face, appears on four out of the six examples. Kunze states that the forehead-hair and tongue-pattern common to group III helmets is also found in group IV,[16] but that is hard to verify at present. One must await his future publication of this group of Late Archaic helmets, but in the meantime one may profitably refer to his study of the helmet represented on the chamfron from Olympia.[17]

In his study of these four groups Kunze showed that some features of the decoration may be found in more than one group, and that there is no

single line of development from one to another in a straight chronological sequence. The groups co-existed in the Late Archaic period.

Before moving on to consider the Chalcidian helmets which have hinged cheek-pieces, and which were in use in the Classical period, we should note that there is another group of Chalcidian helmets with immovable cheek-pieces not discussed by Kunze, presumably because they were not represented in the material found at Olympia.

This Group V (not to be confused with Kunze's Group V) is best represented by eight fragmentary helmets which were ploughed up in the region of Rousse in Northern Bulgaria in 1970.

1.-8. D. Ivanov, "A Find of Ancient Bronze Helmets in the Region of Rousse", Arkheologiia XIV.4 (1972) 51-56.[18]

Despite slight differences in the height of the cranial part above the offset-edge, they all share the same style, and a single local workshop has been suggested. In their present condition it is very difficult to tell just how much of a nose-piece would have existed originally on them. The eye-hole is rounded and edged above, but is not formed below since the cheek-piece runs down in a straight line from its outer corner. The cheek-piece then curves round to the arched ear-cutting and the neck-guard which displays the characteristically curved and projecting form already noted by Kunze for helmets from Thrace and South Russia (cf. Group IIf-h.). All the cheek-pieces had holes in them for straps, and at least two had a notched front edge. Only two helmets had any form of decoration applied to them: one had a pattern of snail-like spirals along the offset-edge and a boss on the cheek-piece; another had had a band, probably of precious metal, attached to the offset-edge and up over the centre. Random

triangles seem to have been cut out of the strip over the top, and the upper side of the band along the offset was finished in a wave pattern. In view of the considerable evidence for wear and tear and subsequent repair to the helmets in antiquity, a long period of use may be suspected, and Ivanov dated this group as late as the second half of the fifth to the second half of the fourth centuries B.C.

9. Komotini Museum, inv. no. 1887. From Arzos in north-east Greece. Treas Anc Mac Cat 106 no. 458 pl. 60, dated to the late 4th cent. Search 155 no. 105 pl. 16, end of 4th cent. H. 30 cm.
Well-preserved except for the loss of the nose-piece. It clearly displays the general characteristics of the Chalcidian helmets from the north.

10. Sofia, Arch. Mus., inv. no. 2445. From Pastousha, Plovdiv district. BCH 49 (1925) 429 no. 90 in fig. 11 and 436-7 (Seure); Thrac Treas Cat 49 no. 185, early 5th cent. H. 17 cm.
Despite the apparent difference in the date suggested for this helmet, it may also be an example of Group V, with unusually short cheek-pieces.

The Chalcidian helmets with hinged cheek-pieces, Kunze's Group VII, may be subdivided initially according to the shape of the cheek-piece, and one may begin by looking for the same (or similar) shapes as distinguished Groups I to IV. To my knowledge, the rounded form of the first group was not translated into the new system. The sickle-shaped cheek-piece of Group II is represented on only one helmet, a Scythian item from near Kiev.[19] The published photograph permits one to recognise the usual features of the Thracian/Scythian version: the high domed skull-piece with the channelled offset-arch over the front, the short, curved neck-guard with the extra projection at the ear-cuttings, and the reinforced eye-edges

which run into the (for once preserved) pointed nose-piece. On the summit of the slightly ridged crown two loops survive from the crest-fittings. The cheek-pieces themselves are attached to the main part of the helmet by an eight-part hinge, fixed with four rivets on each side. They almost appear to be alien, since the match is not evenly made; the cheek-piece, though set centrally, is narrower than the upper edge. Near its bottom edge is a small hole for the chin-strap. This helmet was not dated by Grakow, and it remains difficult to place it precisely within the Classical period.

The ram's head shape which characterised Group III, was carried over into the new hinged pieces. Kunze mentioned three such examples;[20] two were unavailable to me, and the third in the Musée de L'Armée in Paris is clearly attached to a quite different type of helmet which I wish to discuss later.

Two more Chalcidian helmets, however, might be mentioned at this point. Both display the particular feature of a double ledge at the front. One in the Greek Museum of the University of Newcastle-upon-Tyne, no. 101,[21] is extremely elaborately decorated, and its proposed date early in the fifth century is probably correct. Archaic parallels for most of its decoration are not difficult to find; e.g. for the sea-snakes on the crown, cf. III.2, for the guilloche pattern over the offset, cf. IIk, III.1, b and c, and for the engraved ornament over the brows, cf. III.2 and a. However, the new, inverted alignment of the tongues below the offset-edge on the second level, and the intricacy of the guilloche above indicate that a further stage has been reached. The lozenge-like shape of the chunky nose-piece (an ancient replacement) may be referred back to Archaic helmets like III.a or IV.3, but its size and the fan of leaves on the bridge

are unusual. Finally, one may note that although the cheek-pieces are now missing (they had been secured by seven-part hinges), they may well have taken the form of ram's heads, an echo of which appears in the engraved heads at the ends of the guilloche pattern.[22]

The Newcastle helmet was reputed to have come from Apulia. The other helmet with the double ledge was more precisely located in that area as having come from Ruvo.[23] This helmet in Karlsruhe bears a very strong resemblance to IV.2 and 4 (from Apulia and Basilicata) in the formation of the offset, second ledge and eyebrows. Unlike the Newcastle helmet, it has a slight point instead of a nose-piece, and a long, straight neck-guard with no horizontal ledge at its base. While the Newcastle piece had traces of solder either side of the ridge over the crown and at the back, and a hole in the neck-guard for the attachment of the crest, the Karlsruhe helmet seems to have the remains, in the form of rivets, holes and pieces of metal, of some, possibly transverse, crest-mounting. The original cheek-pieces had been attached by hinges with three iron rivets on the side-wall; the outstanding cheek-pieces which now decorate this helmet are apparently alien, but presumably themselves ancient and worthy of study. Each has the shape of a crested griffin's head, the tip of the beak being the point at the wearer's chin. (This means that they actually face the opposite way from the more common ram's heads.) These two helmets, then, while of little assistance in the search for the continuation of Group III in the Classical period, have led us to note the existence of a new characteristic, the double ledge, which seems to be associated with Apulia.

The sharply angled cheek-pieces of Group IV do not seem to have been made in a hinged form. However, one should note in passing that the fixed cheek-pieces are represented in Etruscan art, e.g. on the terracotta acroterion

from Falerii of ca. 480,[24] that IV.3 above was said to have come from Carrara, and that a couple of Etruscan helmets of the 5th cent. are supplied with hinged cheek-pieces which might be considered as derived from the earlier shape, but now more rounded at the corners.[25] This shape, therefore, may have Etruscan associations.

So much, then, for the helmets which might be thought to reflect Kunze's Late Archaic categories in their new, hinged cheek-pieces. The rounded shape was dropped, the sickle-shaped occurs only in the far north, the ram's head seems to have existed a little longer in Italy, and the angular pieces may have been adapted in Etruria. The remaining helmets which we shall consider from the Classical period, have cheek-pieces of new, different outlines, and may best be studied according to their place of origin.

In Southern Italy the Chalcidian helmet continued to be popular, and it is generally impossible to draw a dividing line between those made by/for Greeks and those by/for the native Italian tribes. The evidence from tombs regularly betrays a generous mixture of martial equipment. Some helmets appear to stand closer to the original Greek type (a), while others display individual eccentricities (b) or form a new distinct group (c).

(a) Three examples may serve to illustrate the former:

1. York, Yorkshire Museum. Robinson, 63 fig. 99 dated to the 4th to 3rd cent.; Connolly, TGA 35 fig. 19.
2. Paestum. From the Gaudo Necropolis. Arch Rep 1957 36-8; BdA 43 (1958) 55 fig. 16 (Sestieri); Archaeology 12 (1959) 33-7 (Sestieri); AA 1966 348-9 (Hermann).[26]
3. Paris, Bib. Nat. Lipperheide, 109 no. 352.

On each of these helmets the offset-edge around the skull-piece is maintained with its pointed arch at the centre front. Despite the date suggested by Russell Robinson above, a case could, I think, be made for placing the first one in the 5th cent. and before the other two; it still has the applied eyebrows and neat neck-guard of the Late Archaic helmets. None of the helmets we have yet to consider have these naturalistic brows, and the long neck-guards of the other two with the lower, forward projection at the ear-cutting represent a new, standard feature for South Italian Chalcidian helmets of this period. (The projection is comparable to that on the helmets from the Thracian and Scythian areas, but the length is quite different.) From now on too nose-pieces are no longer a feature of the South Italian helmets (cf. groups III and IV.2, 4 and 6 above); a small point is all that remains. On either side of this point the edge of the metal is raised to form a border, and a similar method is employed over the ear-hole. The cheek-pieces are missing from the third helmet, and those on the second are too broad for the side-wall above, so that one wonders whether they may not be replacements. Two slightly different shapes of cheek-piece are found here; on the second the front contour is convex above and concave below to end with a small point at the chin (cf. the outline of the griffin-headed piece on the Karlsruhe helmet), while on the first two large bites are cut out of this front edge so that two points project forward onto the face.[27] Moreover, the actual surface of the piece of no. 2 is higher in the centre with a lower edge, but reversed on no. 1 i.e. ⌣——⌢ and ⌢——⌣. The curve of the back edge is similar on both. The York helmet has a hole near the centre of that edge, presumably for a chin-strap; the

Paestum helmet has one hole there also plus another higher up and a third opposite along the front edge. Finally on either side of the crown the Paestum helmet bears the plume- or feather-holders often thought characteristic of Samnite helmets.

(b) A helmet in the Castel Sant'Angelo in Rome[28] illustrates a further variation on the Chalcidian theme. The offset-edge is still there but it lacks the arch at the centre front, and echoing its gentle sweep the edge of the bronze passes across the wearer's brow without even a central point. The neck-guard is long but without the extra projection, and the cheek-piece stands close to those on the York helmet, though perhaps a little broader towards its base. Across the crown from side to side are the remains of the crest fittings.

Another helmet which seems even more removed from the earlier Greek concept of the Chalcidian helmet is on display in the National Museum in Naples.[29] The offset-edge around the crown is extremely odd; apart from rising slightly over the ear-cutting to dip again over the cheek-piece, it peters out over the brow, and the crown itself is crossed from side to side by two raised bands and from front to back by a third. The central point, the raised eye- and ear-edges and the neck-guard follow the new South Italian norm, but the cheek-piece has a curved, instead of straight, back contour. These two helmets show us something of the changes which the Chalcidian helmet underwent to suit the taste of the market in Southern Italy.

(c) The following helmets survive in sufficient numbers for us to recognise a new group created there. The group consists of at least 11 helmets.[30] Its existence has been noted already by Kunze, who sets it in the second half of the fifth and the fourth centuries.[31]

1. Cambridge, Fitzwilliam Museum, GR B. 4. Provenance unknown.
2. London, Brit. Mus., inv. no. 1842.7-28.711 (?). From Vulci (Walters): from Basilicata (Mohen). Walters Cat 342 no. 2724; Lipperheide, 119; DS 1443, fig. 3448; G & R Life 76-7, fig. 68; Connolly, HER 25, fig. 1. H. ca. 20 cm. (Walters).
3. London, Tower of London, II 197.[32] From "Cumae". Lipperheide, 107; Connolly, HER 27 fig. 12, ca. 375; Warry, 109 fig. 5.
4. Malibu, J. Paul Getty Museum, inv. no. 80.AC.12. GettyMusJ 10 (1982) 133-140 figs. 1-4, dated to the third quarter of the 4th cent. (Zimmermann). H. 22.5 W. 21.
5. Munich (destroyed in the war). Lipperheide, 120.
6. Naples, Nat. Mus., inv. no. 119,920. From Pertosa, Salerno. Lipperheide, 118.
7. Market, New York, Emmerich Gallery. From Magna Graecia? Art of the Ancients Feb. 7 - Mar. 13 1968, Cat 34-5 no. 43, 5th cent. H. 22 cm.
8. Paris, Musée de L'Armée, inv. no. E. 4. From a tomb near Capodignano between Paestum and Salerno. RA 1970 214-6 figs. 4-5 (Mohen). H. 22.2 cm.
9. Paris, Musée de L'Armée, inv. no. E.6. From "the Kingdom of Naples". RA 1970 216-8 figs. 6.2 and 7.2 (Mohen). H. 23.6 cm.
10. Paris, Musée de L'Armée, inv. no. E.7. From "the Kingdom of Naples". RA 1970 217-9, figs. 6.1 and 7.1 (Mohen). H. 23.1 cm.

To these ten helmets should be appended an eleventh; the main part of the helmet clearly belongs with the others, and it seems to have been excluded by Mohen (and Kunze?) simply because its cheek-pieces are in the shape of ram's heads, a distinction which is of no value here.

11. Paris,Musée de L'Armée, inv. no. E. 5. From "the Kingdom of Naples". RA 1970 219-20 fig. 8 (Mohen). H. ca. 19 cm.

The essential characteristic which sets this group of helmets apart, is the spiral or volute on the side of the crown, correctly identified by Zimmermann (supra no. 4) as a feature taken from the Attic helmet.[33] It is formed from the two ridges of the offset at the front, as on nos. 2 and 8, or from the upper offset-line and the "eyebrows", as on nos. 3, 4, 7, 9, 10 and 11. This important breaking of the offset-line of the Chalcidian helmet occurs on each, but the effect varies within the group; for example, on nos. 8 and 10, and especially 11, the transition from crown to neck-guard is smoother; on 2, 7, 8 and 9 the offset rises as it passes over the ear-cutting; the moulding of the offset at the front on no. 8 becomes on the others more of a sharp, upper ridge with a softer step below, and on nos. 3 and 4 the step is omitted altogether. Nos. 2, 4, 10 and 11 develop a sharp ridge running from front to back over the crown, and this is crossed, on 2 and 10, and probably originally 11 also,[34] by a feather (and crest?) mounting. The neck-guards vary in length and shape: some have the forward projection, some the horizontal ledge, others neither; no. 4 is extremely long, and no. 8 is decorated with a spiral-ended band. The front edge over the warrior's eyes is usually pointed, but on nos. 9 and 11 it is straight, and on the former it is trimmed with an incised wave pattern either side of a central palmette. The cheek-pieces survive only on nos. 4, 8 and 11. Those on no. 4 are of the same type as those on the Paestan helmet, discussed earlier, while those on no. 8 have the same raised border as those on the helmet in York, but the bites out of the front edge are shallower, and the central plane is decorated with a relief horse's head with

incised detail. The seven-part hinge on no. 8 has a toothed lower edge. The cheek-pieces of no. 11 have the shape of the ram's headed type, but the relief top-plate has not survived. The right hinge "qui fonctionne encore" (Mohen), resembles the three-part Roman hinges and may not be original.[35] Apart from the feather/crest fittings mentioned above, and those partially surviving on no. 3, additional decoration appears on nos. 3, 8 and 9; no. 3 has wings above the volutes and incised 'locks' and central palmette below the front offset-edge; no. 8 has an incised palmette above a facing female head, partly incised and partly in relief, in the front 'pediment', as well as the decoration already mentioned on the neck-guard and the cheek-pieces; the incised palmette-and-wave pattern on no. 9 was described above. These 11 helmets, despite minor dissimilarities, form a coherent group which we may call Attico-Chalcidian. It must have been invented in Southern Italy, perhaps in Apulia, Southern Campania or Lucania, in the second half of the 5th century. The variations among them which may provide evidence for internal development within the group seem to confirm Kunze's supposition that it extended over a century,[36] and the influence of the type may be traced into Roman helmets as late as the first century A.D.[37]

We now return to the Mainland of Greece where a single Chalcidian helmet has been found and published from the Classical period. It is now housed in a private collection in Athens, but it is reputed to have been ploughed up in a field near Tithorea in Phthiotis, near the border with Boiotia.[38] The helmet is high-domed with the offset pointed at the front. There may be a trace of solder used to attach a palmette-appliqué or crest-fitting above the point. The edges above the eyes and the small, pointed nose-piece have been reinforced. The bronze around the ear-hole is turned outwards.

This detail Kunze thought might be a characteristic of helmets made in the mainland[39] but, along with the treatment of the eye-edges, it is also a feature of the helmets from Thrace and South Russia. Neither is, at any rate, common in the west. The neck-guard does not survive, but Andriomenou was no doubt correct in supposing that it would have taken a similar shape to the Scythian form.[40] The single, right cheek-piece which was found near the helmet and is assumed to have belonged to it, is decorated partly in relief and partly incised, with the figure of Eros riding a dolphin. It is by means of a stylistic comparison of this design with other reliefs from mirrors, cheek-pieces, etc., that Andriomenou comes to her date of the first quarter of the 4th cent., or more widely within the period between the late 5th and first half of the 4th. The back edge of the cheek-piece is gently curved; the upper half of the front edge is concave, the lower vertical but sinuous. The contour is echoed by a raised border bounded by a ridge on each side, and the whole cheek-piece was connected to the wall of the helmet by a seven-part hinge secured by four rivets on each part.

The Tithorea helmet may represent for us the form of the Chalcidian helmet worn in Mainland Greece in the late 5th - 4th cent.[41] Its closest parallels are to be found not in the West but in the North, in the lands occupied by the Thracians and the Scyths. A few of the many helmets discovered there have been illustrated in books available in English, and these may serve as representatives of the rest.

Very similar in shape to the Tithorea helmet is one found in the Kekuvatsky Barrow in Kerch.[42] It had been placed at the foot of the body along with his greaves and sword. The tomb also contained a red-figure pelike by which it was dated to the beginning of the 4th century. The helmet has the standard, northern characteristics; the arched offset-edge,

the short neck-guard with its forward projection, the out-turned edge around the ear-cutting, and the reinforced eye-edges and small, pointed nose-guard. The cheek-pieces, of which only the left is preserved, were attached by (probably seven-part) hinges and took basically the same form as those on the Tithorea helmet, but the lower front edge is slightly concave instead of sinuous.

A very unusual cheek-piece is fitted to a helmet which was found at Sborishté near Nova Zagora.[43] This piece is symmetrical with a cutting at the ear-hole to match that for the eye. The edge of the bronze is turned outwards all the way round, except at the top where its four links of the hinge fit into the five on the side of the helmet. The offset-edge of the helmet displays the long furrow to the arch at the front, typical of the Thracian version of the Chalcidian helmet. The shape of the neck-guard, the treatment of the ear- and eye-edges are as usual, but one should note the double curve of the eye-line and the length of the nasal (cf. the Scythian helmet above pp. 162-3).

The last two refinements also occur on the sad remains of what must once have been an extremely elaborate Chalcidian helmet from Thrace.[44] Each side of the skull bears in relief a flying griffin, the feathers of the wings and other inner details finely incised. The front 'pediment' as far as the seven-part hinges of the now lost cheek-pieces, blooms with exuberant growth from an acanthus-like base over the nose-piece; the central palmette was flanked by spiralling tendrils from which buds and leaves grow. According to Venedikov and Gerassimov (p. 94) the "animal ornamentation" is unique among Thracian helmets, and of such high quality as to suggest a date in "the first half or the middle of the fourth century B.C." The floral decoration, however, may be paralleled on Attic grave stelai of the late 5th

century,[45] so an earlier date in that century seems equally possible.

Summary

This survey of the surviving Chalcidian helmets began with a brief look at the four Late Archaic groups with fixed cheek-pieces which were distinguished by Kunze. In addition, we noted that there existed a fifth shape of fixed cheek-piece represented only by examples from Thrace and which, surprisingly, is dated roughly throughout the 5th and 4th centuries, that is apparently contemporary and co-existent with the helmets with hinged cheek-pieces also known from that area. Perhaps one should not be surprised at this state of affairs in the northern regions of the Greek sphere of influence, and one might do well also to remember that there is as yet no firm evidence to support the view that hinged cheek-pieces completely replaced fixed ones even in Mainland Greece and Southern Italy at the beginning of the Classical period. No doubt the change was gradual, and it seems possible that at least some of the helmets discussed by Kunze may be of later date.

The Chalcidian helmets with hinged cheek-pieces were reviewed initially from the point of view of the possible transfer of the Late Archaic shapes into the new movable pieces. Although the ram's headed variety did continue, the other three appear to have been dropped or adapted quite quickly, and new shapes were created for the new fitting. Indeed, when dealing with these Classical helmets, Kunze's approach of characterising groups according to their cheek-pieces is no longer useful; with the help of a few certain provenances, distinctive types can be allocated to particular areas on the basis of a wider range of typical features. In this way it proved possible to divide the surviving Chalcidian helmets into major groups: on the one

hand, those from South Italy which ranged from a type close to the original Late Archaic concept of the Chalcidian, through a few odd individuals, to a new and very distinct collection of 11 - a hybrid with Attic; on the other hand, those from the Greek Mainland and the North, from Thrace and South Russia. And along the way there appeared an Etruscan development, probably from the Late Archaic Group IV, and a possibly Apulian characteristic in the double ledge under the offset. As for more precise dating of particular helmets, the necessary external data are generally lacking and stylistic criteria remain the primary ones. Accordingly, a date in the 5th century may be proposed for those helmets which in general still betray their Archaic origin, while a 4th century date seems probable for those of a more advanced design.

CHALCIDIAN HELMETS IN SCULPTURE

There are surprisingly few clear illustrations of the Chalcidian helmet in the sculpture of the Classical period which has come down to us. Unlike the Attic helmet which was strongly associated with Athena and other mythological or heroic figures, and which may rarely have been worn by an ordinary hoplite at least in the fifth century, the Chalcidian helmet had no such extraordinary status, and, as the surviving originals have demonstrated, was commonly worn throughout the Greek World. And yet, when one comes to consider the sculptural representations of this helmet, one finds that it too is heavily associated with mythological or heroic figures, not the ordinary hoplite.

Catalogue

1. Herakles in his fight with Kyknos wears one on metope 21 of the

Athenian Treasury at Delphi, ca. 500-490 B.C. Delphi Museum, no. 749. FdD IV.4 131-2 pls. 62-64.[46]

The basic form of the helmet recalls Kunze's Group IV with angular cheek-pieces. There is here, however, a very long nose-piece and no carved edging or eyebrows. The neck-guard is small and neat with a slight ridge along the bottom and the vertical front edge. What makes this helmet special, of course, is the lion scalp which rests tightly over the crown and the cheek-pieces, and over which somehow the usual low crest is imagined as fitted in its mounting. Herakles is, therefore, portrayed here as a hoplite (he carried a shield on his left arm), and to distinguish him from his opponent and make clear his identity, he wears not the whole lion skin as we might have expected, but only the skin of the head moulded over his basic Chalcidian helmet.

2. In contrast, on the east pediment of the Temple of Aphaia on Aegina

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the archer at the right (O.V) who is generally considered to be Herakles,[47] wears a helmet which takes the form of a lion's head in its front part. Ohly, 65-66 pls. 31-4. Behind the double row of flame-like mane-locks is the crown and neck-guard of a Chalcidian helmet: in front, the carefully modelled face of a living lion complete with teeth and fangs which originally hung down over the warrior's forehead. But to maintain the image of a helmet, the sides were fitted with (raised) hinged cheek-pieces of which now only a small part of the piece and the hinge still survive in the mortise on the left. There was apparently no crest on this helmet: sufficient ornament was provided by the lion-head and the painted zig-zag pattern on the back of the crown.[48]

3.-5. Of the Chalcidian helmets originally worn or held in this pediment only another three have survived in recognisable form; those of the dying warrior (O.XI), the archer (O.X) and the helper (O.IX) all from the left side. O.XI, Ohly, 107-8 pls. 69-70; O.X, ibid., 99-101 pls. 59-61; O.IX, ibid., 92-5 pls. 52-4.

No two are identical. They share the treatment of the offset-edge rising to a low arch at the centre front and the simple shape of neck-guard which gently slopes down and out from under the offset and terminates without a raised ledge. Other features, however, vary. The helmet worn by the dying warrior has a rounded skull with a hole on top for the crest which Ohly restores as of the high, stilted type. The badly damaged helmet of the archer was probably similar but crestless. The helper's displays the unusual detail of a broad band framed by slight ridges running from front to back, as if in preparation for the fitting of a low crest-mounting in another material (but Ohly believed that it too was crestless). On the sides of the crown it preserves traces of the painted decoration - a lozenge pattern made up of dots.[49] Similar painted designs may once have existed on the others too. At the sides of the helmet the dying warrior lacks completely any kind of ear-cutting, a most unusual circumstance for what must be a Chalcidian helmet in all other respects. The other two are more normal in this, but one should note that the helmet worn by the Herakles-archer is also odd; the ear-cuttings on it reach beyond the offset-edge into the skull-piece, and thereby should prevent this helmet from being classed as Chalcidian at all according to Kunze's definition of the type. Cheek-pieces must be restored on all three helmets from the left side

of the pediment. Those on the dying warrior were lowered over the bearded cheeks, and fixed by mortise and tenon (on the right) and a pin (on the left). The fragment which remains from the right side, shows the border marked by an engraved line and the (originally five-part) hinge, carved entirely on the cheek-piece. The surface of the face underneath gives some indication in its lack of weathering of the original shape of the cheek-piece, but Ohly's restored form seems to me questionable.[50] On the archer the hinge was carved on the helmet instead of the cheek-piece, and the latter was applied along with a lead beard over the cheeks by tenons and pins. The beardless face of the helper was not protected by the cheek-pieces, since these, like those on the Herakles, were raised. The hinge must have been carved on the cheek-piece which was secured in a mortise and pinned only on the left side. Finally, one may note that, although all three helmets share a basically similar reinforcement of the eye-edges, the nasal is treated differently on each. The long nose-piece on the dying warrior originally reached the tip of his nose; the archer has only a small point at the bridge; the helper had a long nasal, but it was separately worked and has been lost.

6.-8. On the Early Classical Temple of Zeus at Olympia Chalcidian helmets are worn by three figures: Athena in the metope of the cleaning of the stables of Augeias, and Pelops and Oinomaos in the East pediment. The Athena, Olympia III 176-8 pls. XLIII.12 and XLIV.2; Ashmole & Yalouris, pls. 202-3, 206 and 211; ASCG 78-81 figs. 90-2. Pelops, Olympia III 46-9 pls. IX.2 and XI.1; Ashmole & Yalouris, pls. 46-7 and 49. Oinomaos, Olympia III 49-50 pls. IX.3 and XI.2; Ashmole & Yalouris, pls. 15 and 18.

The last two are severely damaged, and we must concentrate on the Athena. Her simple helmet is little different from those of the Late Archaic period. The offset-edge runs round to a point at the front, and at the back the neck-guard below it is comparable to that on the Herakles-archer. As it passes behind her ear, the level of the offset-edge comes somewhere between that on the Herakles and those on the left archer and helper. In fact, it is hard to believe that any 'bridge' still exists to connect the neck-guard to the front. Unlike the earlier helmets which come low down on the face of the wearer, following the line of the eyebrows, Athena's helmet here ends just below the middle of her forehead in a gentle arc without a nose-piece or even a central point. At the left side two large holes indicate where the cheek-piece had been attached, probably in the up-right position, and noticeably again in the hinged version.[51] On top the low crest is carved in one with the helmet.

The remains of the heads of Pelops and Oinomaos lead one to believe that they too had Chalcidian helmets of essentially the same format as that on Athena. Differences can be seen in the neck-guard of Pelops (it has more of a straight-cut edge at the base), and in the fact that both lack any form of rounded ear-cutting (cf. the dying warrior at Aegina). The marble crest, the form of the front and the separately worked and attached cheek-pieces are all similar to Athena's. However, in both cases the cheek-pieces were in the lowered position.[52]

9.-13. For the third quarter of the fifth century one would have liked to be able to cite examples of the Chalcidian helmet on the sculptures from the Parthenon. However, in its present state of preservation, the Frieze enables one to say little more than that there seem to have

been helmets of this type on a few of the riders and an apobates (the riders W XI 20, S XIV-XV 38, 40 and 41; the apobates N XVII 57). Brommer, PF pls. 33-5, 132-3 and 73-4.

The damage to the front part always seems to be worse, so that one can only comment on the neck-guard and the crest. The neck-guards vary between having a sharp angle at the junction of the front and bottom edges (as on the north apobates and the south rider no. 41), and having a more rounded curve (as on south nos. 38 and 40) - the raised edge is clearly visible in either case. Crests are omitted from the carving of the south riders (though they could, of course, have been indicated by the painter). Both the west rider and the north apobates have low crests on a mounting, but the former is deeply grooved to indicate the horse-hair, while the latter is now at any rate smooth. The evidence would seem to suggest that none of the helmets had cheek-pieces, but that is not at all certain.

14. A better preserved head with a Chalcidian helmet is housed in the Museum of Fine Arts in Boston, inv. no. 95.66. Caskey, Cat 48-9 no. 18; Comstock & Vermeule, SS 26-7 no. 33.

It has been associated in general with the sculptures of the Hephaisteion, and may be dated ca. 430 B.C.[53]

At first glance one is reminded of the helmet worn by the Athena at Olympia, but closer inspection reveals the small changes that have taken place. The crown actually rises to a slight ridge running from front to back (visible in the front view), and the narrow front 'pediment' is pointed along its lower edge over the warrior's nose. At the sides large holes served to fix the now-lost cheek-pieces which might have been set in the raised position as on the Athena. In

contrast to her helmet, however, this one has a clear 'bridge' over the ear into the front edge of the neck-guard which, instead of falling vertically, is thrust forward under the ear, precisely in the manner familiar from the South Italian and Northern helmets of the late 5th and 4th centuries. (The helmets on the Parthenon Frieze perhaps begin to hint at this change in the neck-guard.)[54] On the crown there is the hole for the crest which may have been of marble also but separately worked, and the intriguing detail of the remains of the fingers of a left hand on the left side. Since in the vase-paintings at least, warriors usually put on their helmets by pushing down at the front, not the side, the published suggestion that this hand does not belong to the wearer is probably correct. However, it is equally difficult to see in what situation an opponent would hold the side of the helmet rather than the crest.

15. Sculptured Chalcidian helmets of fourth century date are few and far between. There seems to be a number on the two battle friezes from the Nereid Monument in the British Museum (ca. 380 B.C.). Slab 850b, Smith, Cat pl. III; IEE 1.353; Childs[1], 107 fig. 1. Cf. slabs 857, Childs[1], fig. 2, and 858, AntP 18 (1979) fig. 14 (Krug).
The helmet worn by the nude hoplite on slab 850 at least seems to be close to the type portrayed on the Parthenon Frieze or on the Boston head. It has a low crest, the usual offset-edge, a sharp angle on the edged neck-guard, no cheek-piece and only the hint of a point over the forehead.[55]

Commentary

Chalcidian helmets, therefore, are represented in Greek sculpture throughout the fifth century and hardly at all in the fourth. The Nereid Monument reflects stylistic developments in Greece towards the end of the fifth century, and it is certainly noticeable that this type of helmet is not clearly or frequently represented on Attic grave reliefs of the fourth century.[56] Other types, e.g. the Thracian helmet and the pilos, seem to have become more popular at this time.

As for the detailed portrayal of the Chalcidian type in the sculpture considered, it became apparent, especially for the Late Archaic - Early Classical examples, that the artists were not copying the real helmets exactly. They were clearly not familiar with Kunze's definition of the Chalcidian type, when it came to showing the typical ear-cutting with its little 'bridge' of bronze from the neck-guard to the front. In fact, one must acknowledge that that definition is only strictly applicable in a study of original helmets, not those in art. It would seem that a case can be made here for artistic distortion of reality, presumably as a result of a lack of interest, rather than ignorance, on the part of the sculptors. Nevertheless, one has little trouble in identifying these helmets as essentially of the Chalcidian type, and the appearance of changes in the representation of other features may give us valuable help in dating these changes which are also found on the originals. For example, the Aegina sculptures provide us with a possible date for the introduction of the hinged cheek-piece in the decade 490-480 B.C. That is to say, the change to hinged cheek-pieces may have taken place in the time of the Persian Wars. One may wonder whether it was not precisely because of the contact made with Eastern Greeks at this point that a characteristic feature of the

Ionian helmet was recognised for the improvement that it was and duly adopted in the Mainland and the West.[57] The Boston head, similarly, gives us a date in the third quarter of the fifth century for two more changes: namely, the addition of a point in the centre of the forehead-edge, and the forward projection of the neck-guard below the ear. (The former should not be confused with the short, pointed nasal seen on one of the Aegina helmets; it may be compared with the point which appears at this time also on the Attic helmet,as, for example, on the Athena Parthenos.)

We have, then, in Classical sculpture a number of illustrations of helmets which can be classed as Chalcidian, though they are not photographically exact copies of the original. Of the Late Archaic groups isolated by Kunze, only the fourth seems to be portrayed at Delphi on an Athenian monument. It is unfortunate that the technique of attaching 'hinged' cheek-pieces separately to the helmet, has resulted in their loss in most cases. As for the main part of the helmet which remains, one may note that at least in the sculpture cited here, there is no indication of the regional variation which was detected especially in the originals of Western Greek origin. The simple forms of the Tithorea helmet and the Olympia fragment are reproduced, and one may reasonably suppose that the sculpture is a close reflection of the type of Chalcidian helmet in use in Mainland Greece in the fifth century. The search for representations of the regional variants in South Italian and Thracian/Scythian art would no doubt be worthwhile but is beyond the scope of this work. Those originals are included of necessity in the face of a shortage of real-life material from Greece.

CHALCIDIAN HELMETS IN MINOR WORKS OF ART

The Chalcidian helmet can also be recognised in minor works of art. We will look at half a dozen from the 5th and first half of the 4th centuries B.C. The geographical spread of these items is very wide, and one might hope to see reflected in them the regional variety detected in the originals discussed. However, one finds on the whole that the small scale and lack of careful detail considerably lessens their value as comparative material, despite the fact that their dating appears to be much more precise.

Catalogue and Commentary

1. We may begin where we left off, in Lycia, further north-east from Xanthos, at Karaburun in the plain of Elmali. The north wall of Tomb II there is painted with a battle scene, presumably showing the deceased Lycian ruler fighting Greeks. AJA 76 (1972) 263-9 pls. 59-60, esp. 268 pl. 59 fig. 22 (Mellink).

At the far right a fleeing warrior turns back to look at his pursuer; he wears a Chalcidian helmet. The offset-edge is clearly marked, as is the very broad ear-cutting, and the neck-guard is deep with a vertical, right-angled front edge. A thin line runs along the whole of the lower contour from the centre of the neck-guard to the centre front, where there appears to be neither nose-piece nor point. The striking feature of this helmet is the cheek-piece; it is of the immovable type, but its shape does not conform to any of the usual types. The wide arc made down the side of the warrior's face from the upper eye-edge to the point in the beard, somewhat resembles the line created on the helmets from Bulgaria, etc. (Group V), which likewise omitted

the lower edge below the eye. They, however, dropped down in a straight line from the corner of the eye, and the shape of the neck-guard was instead more rounded, so that even they do not provide us with a parallel for this unusual form. It seems quite likely that the wall-painter here has allowed his sense of design to override his desire to give an accurate picture of the equipment. The alternative interpretation that the East Greeks had developed just such a variant of the Chalcidian helmet, cannot, of course, be ruled out. This helmet certainly did not have a low crest; it is possible, though unlikely, that the lost plaster above the head bore some sort of central plume, if not a high, stilted crest. The wall-painting dates from the early 5th century.

2. Approximately contemporary or slightly later is a small bronze figurine of a falling warrior in the Louvre. J. Charbonneaux, Les Bronzes Grecs (Paris, 1958) 144 pl. XXII.3; IEE 1 307.

He is nude except for his Chalcidian helmet which this time has a decorative low crest. The horse-hair is striated, and the mounting is incised with a zig-zag pattern. This careful attention to detail is lacking, however, in the helmet itself: the offset-edge is ignored in the modelling, and the edging, especially on the cheek-piece and the ear-cutting, is excessively broad. The fixed cheek-piece, like that on the Karaburun warrior, hardly reaches over the cheek at all, but, unlike the other, it does have a small point in the front edge below the level of the eye. It might be thought to resemble the cheek-pieces of Kunze's Group IV, if it can be associated with any of the original helmets. Charbonneaux suggested that the statuette might be from a Tarentine workshop on the basis of its style, and an origin in Magna

Graecia seems reasonable from the helmet too.

3.-4. A couple of terracotta representations of the Chalcidian helmet date from the middle of the 5th century. Bellerophon wears one on a Melian relief in the British Museum, reg. no. TB 1135 (201), Walters B 364. Higgins, Cat 167-8 no. 616; Richter, Hdb 237 fig. 338.[58] Another occurs on the head of an Amazon rider who forms part of a rhyton by Sotades. Boston, Museum of Fine Arts, inv. no. 21.2286. From Meroë in Nubia. AGA 222 pl. XC.1; Schoder, M no. 37, ca. 450 (in colour); ARV 772.θ and 1669; Para 416; GERA 93-4 pl. 94; Gks Overseas 140 fig. 165, ca. 460; LIMC I 624, towards 440 B.C.,pl. 507 Amazones 589.
Of course, the contrast in style between the two groups of horse and rider is considerable, and the difference in the depiction of the helmet is no less obvious. On Bellerophon's one can only just make out the neck-guard, the raised cheek-pieces and the front over the brow. The curve of the skull is echoed by a heavy mounting and uneven crest. The modelling of the Amazon's helmet, on the other hand, is neat and precise. The offset-edge is marked by a slight ridge at the front, and there is a clear point over the nose in the lower front edge. This may be compared with the point on the Boston head, and von Bothmer's date for the rhyton ca. 440 seems appropriate. The shape of the neck-guard likewise is comparable to those on the Boston head and the Parthenon Frieze. Here, fortunately, the raised cheek-pieces have survived, and the outline can be seen to be close to that on the helmet in York, mentioned above (pp. 165-166), with two shallow 'bites' out of the front edge and a gently curved back one. Both the terracottas were originally colourfully painted; on the Amazon some of the colour is still visible. The helmet itself is red, the cheek-pieces violet, and the grooved crest-hair

above the mounting is white. How much this might reflect the actual colouring of any real Chalcidian helmet is difficult to say, but the white crest is certainly vouched for in literature (cf. p. 12) and sculpture (cf. Appendix A, p.530-1).

5.-6. Two Chalcidian helmets are represented on apobatai in the gold inlay inside a silver phiale which was found near Duvanli , and which, with its echoes of the Parthenon Frieze, may be dated towards the end of the 5th century. Plovdiv, Arch. Mus., inv. no. 1515. From the Bashova Mogila. Hoddinott, Bulgaria 65; Venedikov & Gerassimov, 362 pls. 170-2.

One is seen in three-quarter, one in profile view. Both are crestless, and both have the offset-edge marked by an incised line - that on the profile head is echoed above by another line which also presumably encircled the head. The clearest detail on both the helmets is the cheek-piece, which is of the fixed, sickle-shaped form (Kunze's Group II, known from not only Thrace, but also South Russia and the Chalcidice). The distinguishing details of the originals, for example, the furrowed arch at the front, the shape of the neck-guard, etc., cannot be discerned on the phiale (in the illustrations available to me), but if the description of the cheek-piece is correct (i.e. that it is not hinged), then Kunze's limit of down to the mid 5th century for this type of helmet must be extended at least for the appearance of this cheek-piece in art.

7. Finally, again for the 4th century there is little evidence in the minor arts for Chalcidian helmets. One is represented on a trophy which is being erected by Nike, on a blue chalcedony scaraboid.

London, Brit. Mus., 601. GGFR 206 pl. 590.

It is seen from the front, so that the arch of the offset and the stumpy nose-piece in the centre of the reinforced edge of the eye-holes are clearly visible. The cheek-pieces hang down at the sides, apparently without hinges, though these could easily have been omitted because of the small scale of the work and the angle of the view. (It is possible that the hinge is indicated at the top and side of one cheek-piece.) Attached to the crown of the helmet are two feathers and a transverse crest on a central pin; one recalls the ornamentation of South Italian helmets in the 4th century, and might propose a Western Greek origin for this gem.

CHALCIDIAN HELMETS ON COINS

When one comes to look for representations of Chalcidian helmets on Greek coins, one runs into an astonishing lack of evidence. Despite the fact that Corinthian and Attic helmets frequently appear on coin types, either individually or worn by a warrior or hero, or especially Athena, the Chalcidian helmet never appears to have been popular in the Classical period. Only two cases are known to me, although, of course, others may exist which have not been published in the general works on Greek coinage. Both date from about the limits of the period in question.

Catalogue and Commentary

1. The first is worn by a head of Athena on the obverse of an electrum stater which was minted by Cyzicus in Mysia ca. 500-480 B.C. BMC 19 & 20 pl. IV.2 & 3; PCG 2.25; Kraay & Hirmer, no. 701.

   The offset-edge is clearly marked along with the deep neck-guard and

the broad ear-cutting; the cheek-piece could be thought of as roughly sickle-shaped, but it hardly covers the goddess's face at all; similarly the front of the helmet does not reach low over her forehead, and there is no nose-piece. The low crest is finely lined to indicate the horse-hair, and is fitted into a mounting decorated with a dotted zig-zag. This coin type immediately calls to mind the Athenian series with Athena in an Attic helmet, but the different helmet and direction of the head must reflect a conscious decision to create something new. (Cf. the closer imitation of the Athenian die minted by Miltiades II in the Thracian Chersonese.)[59]

2. The second example was minted at Entella in Sicily by Campanian mercenaries ca. 338 B.C. BMC 5; SNG Munich 5, pl. 7.249. Cf. SNG Copenhagen: Sicily part 1 pl. 5.237, ca. 340 B.C.

This time the head inside the helmet is that of a bearded male. The shape of the cheek-piece could be similar to that on the helmet in York, with two curves to the front edge, but there is no sign of a hinge on the coin. The ear-hole and the neck-guard are also similar; the latter certainly does not have the deep form with the front projection found on other Italian helmets of the 4th century (e.g. on the helmet in Paestum or Naples 5791 - pp. 165-7 and 167). There does not seem to be a nose-piece or crest.

Such then is the meagre evidence for the Chalcidian helmet on the coins of the 5th and 4th centuries. Presumably it was because this type of helmet was never associated with any god or hero in particular, that no large body of illustrations exists for it in this medium; the Cyzicene type is very much the exception for Athena, and the Campanians may have intended to emphasise their ordinary human status by depicting a non-heroic helmet on their coinage.

CHALCIDIAN HELMETS IN ATTIC VASE-PAINTINGS

The conclusions which follow were drawn from the study of drawings similar to those used for the Attic helmets. Since the number of Chalcidian helmets in this section is extremely large, and there is a considerable amount of repetition in such a presentation, the results are summarised here in tables instead of figures and tables.

Late Archaic Period

The conclusions are based on the study of 298 helmets on 130 vases. The vast majority of the helmets are simply represented as being worn; one is being put on (no. 489), and two are being crested perhaps (nos. †410b and †643: both by Makron). Only two are shown in the rest position on the back of the wearer's head (nos. 106 and 442, both by the Tyszkiewicz Painter: on an Amazon and a Giant respectively): contrast the popularity of this position for the Corinthian helmet. Thirty-six helmets are being carried and not worn, 13 have been set down and six hung up:

Table 29

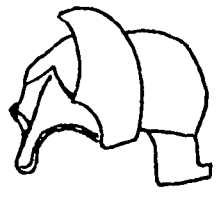
		Total
(a) held by the nose-piece	- nos. 106, 149, 150^3, 482, 487^2, 488, 489, 490^3, 491^2, 494, 619, 650 and probably 637 and 651	20
(b) held by the cheek-piece	- nos. 4a, 149, 150, 185b, †410b, 475, 482^3, 485, 493	11
(c) held by the neck-guard	- nos. 10, 46b, 486	3
(d) held by the cheek-piece and the neck-guard	- nos. 487, †643	2
(e) on the ground	- nos. 8, 489, 491	3
(f) on a shield	- nos. 6, 10, 150^5, 487, 534, 647	10
(g) hung up, usually on a hook	- nos. 36, 144, 149, 470^2, 491	6

Since the presence of the 'bridge' beneath the offset-line connecting the neck-guard and the cheek-piece might be thought to be the deciding factor in establishing representations of the Chalcidian helmet, we may survey the various ways in which the offset-line is represented by the vase-painters.

Table 30

		Total	%
(a)	- the clearest representation of Chalcidian (nos. 8, 25b, 26^2, 28, 106^2, 128, $150a^9$, 185b, 401, $406a^2$, 442, 482^3, 487, 489, 490^4, 491^2, 493, 638?, †645, 650)	37	14
	- plus locks (nos. 4a, 470^2 prob, 532, †643)	5	
	- plus a spiral at the front (no. 146b)	1	
(b)	- the offset-line is or can be assumed to have been continuous, but there is no 'bridge' above the ear-cutting (nos. 25a, 26b, 27, 60b, 108, 128^2, $133a^2$, 269, 303, 394, 396, 447, 477b, 484, 487, 489^3?, 492, 500a, †630, 635, 647?)	25	9
	- plus locks (nos. 150b, 472)	2	
(c)	- the offset-line is drawn at the front and back, but is not continuous or straight (no. 148b)	1	5
	- plus locks (no. 534)	1	
	- plus locks at the front and a spiral at the back (no. 472)	1	
	- plus a spiral at the front and back (no. 409)	1	
	- plus a palmette and volutes at the back (no. 110)	1	

			Total	%
		- plus a spiral at the front (nos. 1^2, 131a, 149^2, 272, 317, 391, 408, 647)	10	
		- plus a spiral at the back (no. 42)	1	
(d)		- the offset-line is drawn at the front only (nos. 4b, 109^3, 488)	5	
		- plus a spiral (nos. 27, 104, 128 prob., $133a^2$, 149, 301, †410b, 443, 484^4, 485^2, 487^2, 491^2, 494, 516, 619)	22	9
		- plus a palmette and volutes (no. 110 prob.)	1	
(e)		- the offset-line is drawn at the back only (nos. 28, 42a, 267a, $271a^2$ & b^2, 396^2, 439, 441, 442, 446^2, 449, 475, 500a, 518, 618, 623)	20	
		- plus locks at the front (nos. 6, 10^2, 33a, 268, 269 prob., †412^3, 439^3, 471^9, 472, †499, 512, 517)	25	17
		- plus a spiral (nos. 32, 121^2, 440, 449, 486, 651?)	7	
(f)		- there is no offset-line drawn (nos. 28, 36, 109^2, 121, 133a, $146a^3$ & b^2, 185b, 305, 314^2, 398^4, 401, 475?, 478, 482^2, 484, 485, 565, 624, 625)	29	10
		- plus locks (no. 486)	1	

		Total	%
(g) 	- in frontal/three-quarter views		
	arch drawn (nos. 51, 394, 395, 509)	4	2
	arch not drawn (nos. 268, 441)	2	

Notes: 1. Twenty helmets are omitted because of damage. (Nos. 1^2, 24, 53, 60a, 127, 128, 140b, 141, $271a^2$, 387, 394^2, 398, 412, 438, 445, 624, 637.)

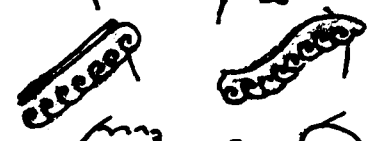
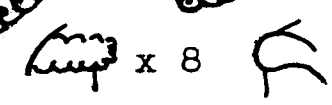
2. Two (nos. 46b and 144) were inadequately recorded and therefore also omitted.

3. Seventy-four helmets cannot be categorised for various reasons, usually, for example, because the raised cheek-piece obscures the front area.
(Nos. 25a & b, 28, $33a^2$, $37b^3$, $42a^2$ & b, 52a & b^2, 53, $137b^2$, $140a^2$ & b, 144, 145b, $267a^5$ & b, 268^3, 272, 274, 308^4, 310, †312, 394, 395^2, 402, 403^2, $407a^4$?, 408^2, 409^2, 439, 444^6, 445^2, †499^2, $500a^2$, 501, 513, 515, 556, 629, 642, 646, 652.)

It is obvious from the variety of detail included in Table 30 that the vase-painters were not strictly limited to a single, canonical representation of the Chalcidian helmet which would tally with our definition of it as promoted by Kunze. Indeed, in some cases one may be left wondering if a helmet is Chalcidian at all. For example, one would happily have classed the helmets on nos. 513 and 652 as Attic, if the painter had included an obvious frontlet; the deep neck-guard on the first and the palmette and spiral on the second would be more at home on an Attic helmet. The Tyszkiewicz Painter who is credited with no. 513, also painted no. 442, on which there appears a useful contrast between a "typical" Chalcidian helmet and one which seems closer to the Attic, but again there is no frontlet. It is on the criterion of the frontlet that I have assigned these helmets on the vases to one or other type. Perhaps one could have created a new group comprising those which fall between the two extremes.

The 'locks' of hair which decorate 41 of these Chalcidian helmets come in a similar variety of shapes.[60]

Table 31

4a		
6		
10		
33a		
60a		
137b		
150b		
268		restored
269		
274		
407a		x 3
†412		x 3
439		
470		
471		x 8
472		
486		
†499		
512		
517		
532		
534		
†643		

Surprisingly in only two instances are the locks depicted close in under the offset-edge, i.e. in a form in which we might believe that the artist had in mind something similar to the engraved locks or tongues on the original helmets (nos. 150 by Douris and 532 unattributed). For the rest, the locks are clearly something which project forward from the front of the helmet, either in a rounded mass, as on nos. 137b, 471 and 472^2, or with scalloped edge, as on nos. 33a, 269, 274, $407a^3$, †412^3, 439^3, 471^8, 472, 486, 512 and 517. Nos. 6 and 534 both have a dilute wash; nos. 4a, 60a and 472 have dots. Of special interest are nos. †499 and †643, like scales, by the Kleophrades Painter and Makron, 10^2 with rows of dots and dilute glaze by Douris, and 470 with a wave pattern along the bottom and a dilute wash by the Brygos Painter. Douris was particularly fond of these locks of hair;[61] 20 are attributed to him (and one to his manner: no. 137b) in this sample. They are also painted in number by the Brygos Painter (7: nos. 6, 33a, 439^3, 470^2), the Foundry Painter (4: nos. 4a, 268, 269, 517), and the Harrow Painter (3: no. 472^3). It is noticeable that these artists did not limit themselves to only one method of depicting the locks. The most detailed are also by their hands, while the simpler are painted by the Painter of the Paris Gigantomachy (no. 274), the Dokimasia Painter (no. 486) and the Syriskos Painter (no. 512). Finally, with regard to these locks one may note that they are variously associated with long nose-pieces (18), with short nose-pieces (11), with a point (4), and with a straight front edge (1); five lack any edge below the locks, and two are damaged.[62]

Spirals were added to 37 helmets at the front, to 11 at the back and to one (no. 409) at both the front and the back. Those with the front spiral bring to mind the group of Attico-Chalcidian originals from South Italy which were mentioned earlier (pp. 167-70), and suggest that a helmet

of similar shape may have actually existed in Greece already in the Late Archaic period.

Details of the nose-pieces are presented in Table 32.

Table 32

		Total
(a)	- with a long nose-piece	122
(b)	- with a short nose-piece	41
(c)	- with a point	40
(d)	- with a straight line	37
(e)	- held (and so partly hidden)	20
(f)	- hidden/damaged/lost/no line	38

The majority of the Chalcidian helmets in the survey have a nose-piece of some sort, 183 out of 298, while another 40 have a point along the front edge, and 37 run straight across the wearer's brow. (Only on a very few helmets with locks does the artist ignore this line altogether). A few artists notably Douris and the Brygos Painter take pains to show the details of the edge of the nose-piece (e.g. no. 36), the eye-edge (e.g. nos. 4a, 6, 401, 499 and 509), or both (e.g. nos. 10, 51, 470). A variety of shapes is found; one may note especially the frontal view of one nose-piece on no. 395, .

All the Chalcidian helmets in the sample have neck-guards. The angle between the bottom line and the front edge varies through almost all the possible permutations of straight and rounded, without, it seems, having any great significance. On the whole, the profile of the bottom-edge at the centre back is summarily treated by the vase-painters; on a few a concave edge is drawn, e.g. nos. 108, 442, 449 and 652 (cf. no. 27). Only on 50 of the helmets is there an inner line to mark the top of the bottom-

edge itself (as on no. 532) or both that edge and its extension up the side of the ear-cutting (as on no. 534). In addition, however, this detail can also be picked out on those helmets which have the central area of the guard filled in with dilute (as on nos. 6 and 128 - cf. no. 638) or black glaze (as on a further 24). As on the frontlets and neck-guards of the Attic helmets, it is noticeable that a reserved strip is also often left down what would be the centre of these neck-guards, presumably simply because the painter has to distinguish that edge from the black glaze background.On six helmets the neck-guard is all black along with the rest of the helmet (i.e. on nos. 146[2], 305, 401, 565 and 625). Only four helmets are given special decoration in this area; they are nos. 36 and †643? (scales), no. 51 (chequerboard) and no. 438 (a dotted grid). The odd detail of an ear is found on one helmet hung up on no. 144.

Of the 298 Chalcidian helmets in the sample only two do not have cheek-pieces (nos. 443 and 488). Details of the rest are presented in Table 33.

Table 33

	Total
(a) in raised position	164
(b) in lowered position (incl. those held i.e. 13)	119
((a) & (b) on no. 26 are counted as (a))	
(c) unknown	13
(d) in raised position with hinge	22
(e) in lowered position with hinge	13
(f) both cheek-pieces shown	84
(g) fixed cheek-pieces (incl. those held i.e. 12)	94
(h) hinged cheek-pieces (incl. those held i.e. 1)	189

Note: A word of explanation is required about the numbers in Table 33 (a), (b), (g) and (h) and Table 34 (Fixed and Hinged).

Table 33 (a) in raised position		164
ADD (e) in lowered position with hinge	+	13
ADD those considered to be equivalent to (e)	+	12
TOTAL for Table 33 (h)		189
SUBTRACT one of the last which is held	-	1
SUBTRACT those whose shape cannot be determined	-	6
TOTAL for Table 34 Hinged		182

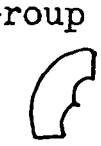
Table 33 (b) in lowered position		119
SUBTRACT (e) in lowered position with hinge	-	13
SUBTRACT those considered to be equivalent to (e)	-	12
TOTAL for Table 33 (g)		94
SUBTRACT those which are held	-	12
SUBTRACT those whose shape cannot be determined	-	2
TOTAL for Table 34 Fixed		80

Although only 22 helmets with raised cheek-pieces actually display a hinge, it can be assumed that all of those in the raised position are of the hinged type. In addition to the 13 with a hinge in the lowered position, I have treated as hinged another 12 examples, where the shape or the decoration suggests that this might be the case. They are on nos. 6, 25, 26^2, 32, 127, 150, 406, 470^2, 472 and 647. When both cheek-pieces are represented on a helmet, it is somewhat surprising to find that the shapes do not correspond in all cases, as, for example, on nos. 4b, 26, 51, 509 and 515. On other occasions, however, these helmets with both cheek-pieces are useful for showing the difference between the inside and outside surfaces of the pieces, as, for example, on nos. 4b, 108 and 439.

Table 34 illustrates the instances of the different shapes of fixed and hinged cheek-pieces.

Table 34

Fixed	on nos.	Total
Group I	- 27, 106^2, 121^2, $133a^2$, 146^2, 149, 267, 272, 305, 391, 398^4, 442, 449, 482^2, 484^6, 485^2, 486^2, 487^3, 490^4, 565, 623, 624^2, 625, †645, 650	46
Group II	- 131a, 146^4, 185b, 303, 317, 447, 489^4, 491^4, 492	18
Group IV	- 128, 401?	2
	- with rounded back-edge: 104, 149, 409, 440, 446, 494, 516	7
Others	- 121 , 128 , 518	3
	- 408, 532, 619	3
	- 36	1

Hinged	on nos.	Total
Group A	- 1^4, 4b, 25^4, 26^3, 27, 32, $33a^3$, 51, 53^2, 60b, 108, 110^2, 133a, 140^3, 148b, 150^2, 267^5, 268^5, 269^2, 271^5, 310, 314^2, 396^2, 402, 408^2, 409^2, 439^5, 441^2, 442, 444^2, 445^2, 449, 471^9, 472^2, 475, 477b, 478, †499^3, $500a^4$, 501, 509, 512, 515, 556, 629, †630, 635, 638, 646, 647, 652	104
Group B	- 8, 10^2, 42^5, 46c, 60a, 127, 128^2, $133a^2$, 141, 144^2, 145b, 150^6, 267, 274, 396, 406, $407a^4$, †412^2, 446, 472, 513, 517, 534, 647	41
Group C 	- $37b^3$, 52^3, $137b^2$, 308^4, 394^4, 395^3, 470^2 618?	22
Others	- 6 , 109 & ^{4},	15
	†312 & 444^4 , 403^2 ,	
	406 , 642	

The helmets which are being held and therefore are partly obscured in this area, have been excluded from these figures. Kunze's Groups I and II are well-represented, but III with ram's head pieces is not found at all on the vases in my sample, and IV occurs only in doubtful cases or in a form with a more rounded back-edge. Group V may be illustrated by no. 518. The hinged ones break down into three main groups: A with the front edge concave both near the eye and near the mouth;[63] B concave near the eye but straight beside the mouth; C concave near the eye and the mouth but straight at the chin. We can, therefore, identify in the vase-paintings not only the fixed cheek-pieces which Kunze isolated on the real helmets, but also some of the hinged types discussed above. Group A probably represents the cheek-piece found on the helmet in York and Naples 5791 (above pp. 165-167), Group B those on the helmets in the Villa Giulia and Florence (above n. 25). Group C, however, does not survive on an original Chalcidian helmet. The unusual shape of the cheek-piece on nos. 406, 408, 532 and 619 could possibly reflect the form found on the helmet in Paestum (above p.165-7).

The central area of the cheek-pieces on these helmets on the LA vases is regularly decorated either simply with black glaze (141 times), or dilute glaze (5 times) or an inner edging (17 times without further detail). This can occur on the inside or the outside of the piece. On 8 helmets the cheek-piece is all black with the rest of the helmet (same cat. nos. as listed for black neck-guards plus no. 149 with a reserved spiral and no. 301). Additional patterns are found as follows:

Table 35

		Total
dot within a circle	- no. 650	1
dots within edging	- no. 51	1
two dots	- no. 408	1

dots on edge of central area	- nos. 10, 53, 110, 638	4
scales	- no. 36	1
snake	- nos. †312, 445, 513, 629	4
lion	- nos. 470, 534, 652	3
lizard	- nos. 53, 445, 501?	3
female panther	- no. 150	1
human figure	- no. †643	1

Details of the crests on the LA Chalcidian helmets are provided in Table 36.

Table 36

		Total
(a) with no crest or mounting	- nos. 128, 150, 395 484^2, 490^4, 494	10
(b) with low crest but no mounting	- no. †312	1
(c) with high crest	- nos. 8 (probably), 51, 108 (bird), 128 (snake), 438 (probably), 534 (double)	6
(d) with low crest in mounting (transverse,	nos. 394, 441)	276
(e) with a single plume		1
(f) lost		4
(g) dots in the crest hair		69
(h) edge-strokes		23
(i) long hair-lines		4
(j) segments		4
(k) triple dots	- no. 46b	1
(l) black hair	- no. 482^2	2
(m) purple hair	- no. 438	1
(n) edging along top of hair	- no. 104 (black), 128 (red)	2

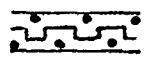
Three helmets are interesting for the odd depiction of the front of the crest: nos. 149, †499 and 509. Two, both by Makron, may be shown being crested, on nos. †410b and †643.

The mountings take a similar variety of forms to those on the Corinthian and Attic helmets, being essentially combinations of lines and dots and bands of glaze. The more intricate exceptions are rare:

Table 37

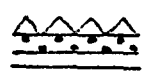
- nos. 52^3, 150^4, 394^4, 395^2

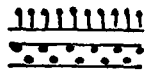
- nos. 10, $37b^2$, 308


- nos. 51, 150^2

- no. 10

— by Douris


- no. 440 — by the Eleusis Painter


- no. 638 — by the Berlin Painter

If one actually compares the mounting patterns on the Chalcidian helmets with those on the Corinthian, one finds a few additional variations (about a dozen in this sample) which were not represented there (e.g. on nos. 110 or no. 269). In addition, some patterns which were not found on the Corinthian helmets until the EC or CL periods, appear already in LA on the Chalcidian (e.g. EC patterns (29) to (32) and CL pattern (37)), so that any conclusions made on the basis of one helmet-type may well, it seems, be thrown slightly out of step by the study of another. The most popular patterns for LA Chalcidian helmets are (6), (5), (7) and (1) in decreasing order.

Table 38 illustrates the range of decoration applied to the LA helmets.

Table 38

	Total
(a) black glaze, all over helmet - nos. 146^2, 149, 301, 305, 401, 565, 625	8

			Total
	black glaze, on crown only	- nos. 33a, 268, 269, †312, 403, 441^2, 442^2, 472^2, 509, 513, 532	14
	, on crown with white, added red or reserved circles	- nos. 33a, 42^2, 46b, 53^2, 106, 140, 150^2, 272, 439^2, 445^3, †499^3	19
	, on crown with red spiral	- no. 629	1
(b)	dilute wash all over	- nos. 128 and 638	2
(c)	red wash on crown only	- no. 128	1
(d)	dots on crown	- nos. 110 (along front offset-edge), 310, 493, 619	4
(e)	scales	- nos. 8, 36 (all over), 51 (dotted), 128 (dotted), 150^8 (dotted and), 534 (dotted)	13
(f)	chequerboard on crown	- nos. 6, 268, 470^2	4
(g)	palmettes	- nos. 110^2, 652	3
(h)	snake	- no. †643	1
(i)	in frontal area	- nos. 8 (red snakes), 51 (dilute wash), 133a (dots), 150 & 269 (black), 408 (dots)	6
		- nos. 150^4 (eyebrows), 394 (palmette over eyebrows)	5

While the treatment given to the crown may simply be due to the vase-painter's desire to provide more patterning on the figures on the vase or to improve the balance of red and black in his picture, it may also reflect the situation in real-life where the helmets were decoratively treated by paint or modelling.

One can compare the painted patterns on the sculpture from Aegina with the chequerboard of (f), or with the snake of (h) the incised snakes on some of the original helmets mentioned above. Similarly the eyebrows are known from the originals - note especially the added palmette on no. 394 - but it is perhaps surprising that the popularity of these features on the real Chalcidian helmets is not reflected in the art. The dilute wash provides a good imitation of the bronze colour, but the scales are puzzling since one assumes that they would have been attached to a soft material back-ground not to a bronze helmet as such. Do they merely reproduce a painted pattern on the originals perhaps?

In Table 39 are listed the wearers or owners of the LA Chalcidian helmets.

Table 39

		Total	%
Ordinary Figures		167	56
	acrobat	1	
	in ambush	3	
	arming	28	
	departing	16	
	fighting	46	
	Greeks v. Persians	2	
	in the hoplitodromos	36	
	pursuit	1	
	Pyrrhic dancer	1	
	setting out	3	
	statue	1	
	without further context	27	
	helmet alone	2	
Heroic/Mythological Figures		131	44
	Ares	1	
	Athena	1	
	Giants	25	
	Hephaistos	2	
	Amazons	22	
	Greek in Amazy	1	
	Heroes	17	
	Lapiths	18	
	Achilles	15	
	Aeneas	1	

Ajax	3
Akamas/Demophon	2
Hektor	6
Iolaos	2
Kaineus	2
Memnon	1
Menelaos	7
Neoptolemos	3
Paris	1
Telamon	1

It is immediately striking how many of these are ordinary, mortal hoplites, arming, fighting and in the hoplitodromos especially - 167 (56%) out of the total of 298. One may contrast the results of the similar survey of the LA Attic helmets. Also, Athena is shown here only once; one recalls a similar lack of representations of her in this type of helmet on the Greek coins. Instead, Chalcidian helmets are well-represented here on a wide range of heroic and mythological figures, noticeably Giants, Amazons and Lapiths, Achilles, and after him, Menelaos and Hektor.

The vase-painters of the 298 LA Chalcidian helmets are listed in Table 40.

Table 40

		Total
Douris	- nos. 10^{2}, $37b^{3}$, 51, 52^{3}, 60a & b, 150^{10}, 308^{4}, 394^{5}, 395^{3}, 402, $407a^{4}$, †412^{4}, 471^{9}, 509	52
Douris, manner of	- nos. 28^{4}, $137b^{2}$	6
Douris, vaguely akin to	- no. 485^{3}	3
Berlin Painter	- nos. 25^{4}, 26^{3}, 108, 110^{2}, $185b^{2}$, 303, 398^{5}, 447, 477b, 492, 515, 518, 556, †630, 635, 638, 647^{2}	29
Brygos Painter	- nos. 6, $33a^{3}$, 42^{5}, 149^{3}, 439^{5}, 470^{2}, $500a^{4}$	23

		Total
Ptr. of Paris Gigantomachy	- nos. 271[6], 274, 387, 391, 408[3], 409[3], 444[6], 637	22
Foundry Painter	- nos. 4[2], 24, 133a[5], 268[5], 269[2], 517	16
Antiphon Painter	- nos. 484[6], 490[4], 491[4]	14
Antiphon Painter, manner of	- nos. 642, 651	2
Eucharides Painter	- nos. 27[2], 146[6], 301, 305, 565, 625	12
Proto-Panaitian Group	- nos. 109[5], 121[3], 489[4]	12
Kleophrades Painter	- nos. 53[2], 131a, 272[2], 445[3] †499[3]	11
Makron	- nos. 1[4], 8, 148b, 406[2], †410b, 438, †643	11
Syleus Painter	- nos. 267[7], 446[2], 475[2]	11
Triptolemos Painter	- nos. 396[3], 487[4], 650	8
Tyszkiewicz Painter	- nos. 106[2], 441[2], 442[2], 501, 513	8
Onesimos	- 46b, 482[5]	6
Terpaulos Painter	- no. †645	1
Terpaulos Painter, probably	- no. 128[5]	5
Ptr. of the Oxford Brygos	- no. 140[4]	4
Ptr. of the Oxford Brygos, related to	- no. 144[2]	2
Flying Angel Painter	- nos. 624[2], 629, 652	4
Harrow Painter	- no. 472[3]	3
Syriskos Painter	- nos. 145b, 478, 512	3
Chairippos Painter	- no. 401[2]	2
Diogenes Painter	- no. 314[2]	2
Dokimasia Painter	- no. 486[2]	2

Oinophile Ptr., compared with	- no 403^2	2
Ptr. on the Munich Amphora	- nos. 310, 516	2
Painter of Würzburg 517	- nos. 317, 623	2

With one helmet only:

Colmar Painter	- no. 493	Ptr. of Naples RC132	- no. 443
Eleusis Painter	- no. 440	Ptr. of New York 21.131, near to	- no. 104
Myson	- no. 127	Tithonos Painter	- no. 646
Oedipus Painter	- no. 141	Troilos Painter	- no. †312
prob. Ptr. Florence 3984	- no. 36		

Unattributed	- nos. 32, 449^2, 488, 494, 532, 534, 618, 619	9

Douris by far surpasses all the others in depicting this helmet. His work is generally the most detailed, and one special characteristic of his style of Chalcidian helmet is the representation of cheek-pieces of Group C in Table 34; all but the last three in that list are by Douris or in his manner. (No. 618 is unattributed and oddly drawn; no. 470 is by the Brygos Painter, and both the examples are in the lowered position, unlike the Dourian ones which are always raised.)

Related groups of artists can be identified in Table 40. The largest, with 63 helmets between them, is the Circle of the Brygos Painter, comprising the Painter of the Paris Gigantomachy, the Foundry Painter and the Dokimasia Painter as well as the Brygos Painter himself. The helmets by these painters are not identical, however; for example, the Painter of the Paris Gigantomachy is solely responsible for the thirteen helmets which have three lines for the offset-edge over the neck-guard. The second largest group revolves around Onesimos, and includes the Proto-Panaitian Group, the Oinophile

Painter and the Antiphon Painter, as well as the Eleusis Painter and the Colmar Painter. Finally, of the painters in the Syleus sequence, all but the Gallatin Painter can be found in the list, and a total of fifteen helmets is involved.

Early Classical Period

The conclusions are derived from a study of 119 helmets on 67 vases. Although the LA sample contained almost twice as many vases, there were approximately two and half times as many helmets.

There is even less variation in the positioning of the Chalcidian helmets than in LA: only one is being put on (no. 495); one is on the back of the head (no. 419); one is carried by the neck-guard (no. 13) and one by the side with the cheek-piece raised (no. 156); one is on the ground (no. 473) and one is hung on a hook (no. 39). An extraordinary detail is depicted by the Geneva Painter, for one of the helmets on no. 70 is pierced by a spear at the front.

Unusual portrayals occur also among the EC Chalcidian helmets. One might wonder, for example, whether two helmets on no. 281 and two on no. 455 might not be better classed as Attic. The drawing of the front and cheek-piece on one helmet on no. 72 is very odd, and indeed, those on no. 125 can serve well to illustrate the opportunities open to a vase-painter who wished to create highly imaginative variations on the norm. It should be emphasised that the vast majority of the helmets can be readily identified as Chalcidian.

Table 41

	Total	%
(a) - the clearest representation of Chalcidian (nos. 419b^2?, 455 without proper earhole)	3	2.5

	Total	%
(b) - the offset-line is or can be assumed to have been continuous, but there is no 'bridge' above the ear-cutting (nos.66 with double front line, 71a, 125a^2 & b^2 with double line, 278, 454)	8	7
(c) - the offset-line is drawn at the front and back, but is not continuous or straight (nos. 72, 74)	2	
- plus a spiral at the front and back (no. 495)	1	8
- plus a spiral at the front only (nos. 276, 520)	2	
- plus an elaborated spiral at the back (no. 418)	1	
- plus locks and an elaborated spiral (nos. 72, 455^2)	3	
(d) - the offset-line is drawn at the front only	0	3
- plus a spiral (nos. 74, 278, 419b, 495)	4	
(e) - the offset-line is drawn at the back only (nos. 54, 70, 75, 156, 336, 418^2,506 with double line, 573 + 4 dots, 655)	10	
- plus locks (nos. 39, 339a, 454, 504a)	4	
- plus a spiral (nos. 75, 125b, 332)	3	25
- plus an elaborated spiral (no. 125a)	1	
- plus locks and a spiral (no. 418)	1	
- plus locks and an elaborated spiral (nos. 62, 68, 125a?, 125b^2, 418, 503^2, 504b, 505, 542)	11	
(f) - there is no offset-line drawn (nos. 74, 419a?, 456, 495, 571, 672?)	6	10
- plus 3 dots (nos. 279^2, 473^3, 579)	6	
(g) - in frontal/three-quarter views		
- arch drawn downwards (no. 74)	1	2.5
- arch not drawn (nos. 70, 75)	2	

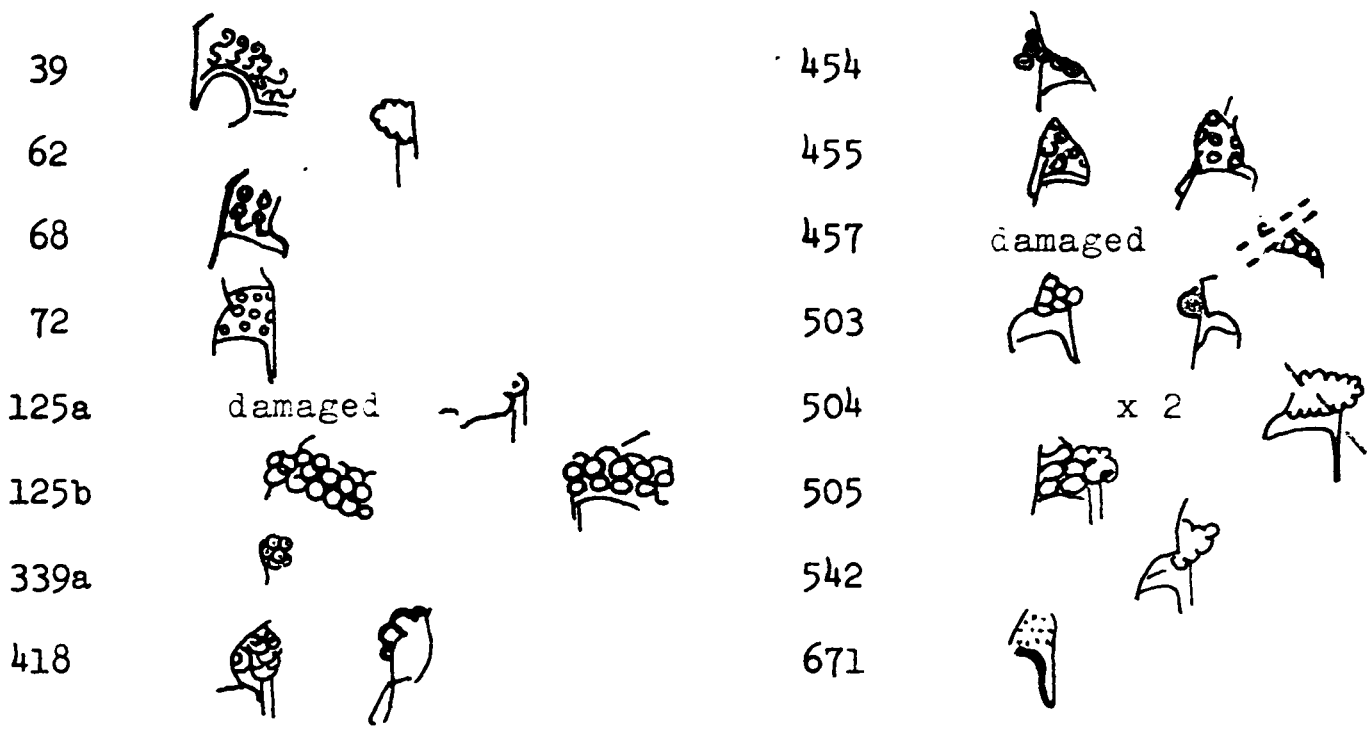
Notes: 1. Thirteen helmets are omitted because of damage. (Nos. 11b, 64, 70^2, 74, 112^2, 125b, 281^2, 455, 457, 504b.)

2. On three helmets the offset-line is concealed (nos. 70, 125b, 459), and on one (no. 680) it is odd.

3. Thirty-three helmets could not be categorised.
(Nos. 13[2], 34a & b, 35, 70, 74[2], 75, 112[2], 113, 114, 207, 220, 319b, 329, 414, 415, 453, 502, 510, 521, 523, 543, 560, 579, 594, 663, 667, 668, 671, †677.)

The ideal representation of (a) is much rarer in EC than in LA, and even (b) is slightly less common. The addition of locks and spirals to these categories is dropped completely; the wide rounded ear-hole is also ignored to some extent. More helmets appear in (c), but under half as many in (d) largely because the front spiral goes out of fashion. More helmets belong in (e) than in LA, but (f) and (g) stand approximately the same.

Table 42



Locks are painted on proportionally more helmets in EC (21), though still not on helmets of categories (d) or (g), nor now also on those in (f). On five examples the locks do not project forward, on nos. 68, 72, 455[2] by the Niobid Painter and no. 39 by the Tarquinia Painter.[64] They are rendered by a scalloped line, circles, dilute dots or dilute glaze, or by spirals. The Niobid Painter and his Group are strongly represented

among the artists: Niobid Painter 11 times, Altamura Painter three times (nos. 418[2], 457), Painter of Bologna 279 three times (no. 125) and the Painter of the Berlin Hydria once (no. 542). Two are by Hermonax (no. 454) and the Providence Painter (no. 671), both pupils of the Berlin Painter, who is unexpectedly absent from the list of LA painters of these locks. As in LA the locks are found in conjunction with all the forms of nose-piece; pointed, straight, unmarked edge, but again primarily with the long nose-piece (13 times).[65]

Table 43

		Total
(a)	- with a long nose-piece	32
(b)	- with a short nose-piece	17
(c)	- with a point	29
(d)	- with a straight line	16
(e)	- held	0
(f)	- hidden/damaged/lost/no line	25

Fewer helmets in EC (only 49) have some form of nose-piece; proportionally almost twice as many as in LA have a point, and the proportion with a straight line is about the same. None of the nose-pieces is used to carry the helmet in EC. The eye-edge is drawn in detail only three times (on nos. 13,220, and 418). On four helmets both the eye- and the nose-edges are shown (on nos. 39, 71a with added clay, 114, 453). In general, the shapes of the nose-pieces are given in less detail than in LA.

As in LA all the EC Chalcidian helmets have a neck-guard, but this is only once (on no. 13) used to hold it. A similar variety in the shape of the front angle is found, with an increase in the number of helmets with this area jutting forward sharply. Note especially no. 112 which also has

the downward projection detected on some of the originals above. The profile of the bottom-edge is occasionally drawn clearly rounded (e.g. no. 453) or straight (e.g. no. 459), concave (e.g. no. 220) or stepped (e.g. no. 54). A few neck-guards appear to be very heavy, e.g. nos. 220, 459, 505, 594. The inner lines now appear on proportionally three times as many helmets as in LA, i.e. on 64 helmets. Dilute glaze is no longer employed in the centre, but the black filling-in occurs on about the same number of helmets as in LA(on nos11b, 39, 125^3, 207, 281, 521, 655). Only one is all black with the rest of the helmet (no. 278). Special patterning in this area in EC includes: scales on no. 35?; a star on no. 72; a square on no. 332; a floral design on no. 457; dots on no. 502.

Table 44

			Total
(a)	in raised position		78
(b)	in lowered position		34
(c)	unknown	- no. 112	1
(d)	in raised position with hinge	- nos. 35, 418^3, 505, 655	6
(e)	in lowered position with hinge	- no. 39	1
(f)	both cheek-pieces shown		27
(g)	fixed cheek-pieces		33
(h)	hinged cheek-pieces		79

Six of the EC helmets (nos. 66, 74, 125b, 281^2, 680?) lack cheek-pieces, i.e. proportionally a lot more than in LA, and none is held by the cheek-piece. Oddly, a hinge is drawn on no. 66 despite the fact that it lacks a cheek-piece. Of the others which have hinges only one (no. 39) is this time in the lowered position. Proportionally fewer hinges are drawn than in LA. More helmets have raised (i.e. hinged) cheek-pieces, and fewer

lowered (i.e. fixed) ones. There are also less with both the cheek-pieces shown. A lack of consistency in the shaping of the near and far pieces can still be detected, e.g. on nos. 220, 456, 523, and the contrast between the inside and outside surfaces is visible, e.g. on no. 278.

Table 45

Fixed	on nos.	Total
Group I	- 74^2, 125a?, 278, 418, 419^3, 454, 504 without earhole, 520	11
Group II	- 71a, 72, 112, $125a^2$?, 279^2, 455, 473, 495, 573, 579	12
Group IV	- 418	1
Others	- 125b & , 495^2	4
	- 473^2 (cf. LA no. 36)	2
	- 74, 125b and 276 (damaged)	3

Hinged	on nos.	Total
Group A	-13, 39, 62, 74^2, 75^4, 114, 319b,329, 339a,414, 415, 418^3, 419, 455, 457, 502, 504^2, 506, 523, 542, 571, 579, 594, 668, 671	32
Group B	- 11b, 34^2, 68, 72, 112, 113, 336, 456, 503^2, 505, 510, 521, 543, 663, 667, 672, †677?	19
Group C	- 54, 207, 453?, 655	4
Group D	- 35, 220?, 455^2	4
Others	- 70^6 & 74 , 125^4 , 278 ,	14
	332 , 454 (cf. LA 403^2)	
	- 13, 64, 112, 156, 459, 560 (damaged/hidden)	6

Among the fixed cheek-pieces Group III is still not represented, Group IV is hardly so, and there are now about equal numbers of Groups I and II, whereas in LA the former outnumbered the latter by more than two to one. Among the hinged cheek-pieces, although there are still more of Group A than of Group B in EC, the proportions have changed when compared with LA so that Group B is slightly commoner.[66] Cheek-pieces of Group C are, however, much rarer, and a new group, D, may possibly be distinguished. On the whole, there are more unusual forms in EC than there were in LA.

There is more use made in EC of dilute glaze (6 times) and inner markings (12 times) than of black glaze (37 times) on the cheek-pieces when compared with LA. On only one helmet (no. 278) is the cheek-piece all black with the rest of the helmet. The additional patterns in EC are:

Table 46

		Total
scales	- nos. 13, 72, 339a (dotted), 455, 504[2], 505, 506 (dotted)	8
snake	- nos. 34a, 35, 114, 453, 455, 523, 560, 663?	8
lizard	- nos. 479, 667	2
flower	- no. 455	1
crosses	- no. 72	1
zig-zag	- no. 13	1

The scales, snakes and lizards are, therefore, more popular than in LA; the flower and crosses are quite new and the LA preference for dotted patterns is dropped.

Table 47

		Total
(a) with no crest or mounting	- no. 279	1
(b) with low crest but no mounting	- nos. 70[2], 672	3

		Total
(c) with high crest	- nos. 13^2 on snake mounting, $125a^2$ with low mounting also, 207, 414	6
(d) with low crest in mounting (transverse, no. 75)		108
(e) with a single plume		0
(f) lost	- no. 504	1
(g) dots in crest hair		9
(h) edge-strokes		10
(i) long hair-lines (sometimes in groups)		16
(j) segments (marked by long or short lines)		25
(k) triple dots	- no. 655	1
(l) white hair	- no. 672	1
(m) dilute wavy line in hair	- no. 506	1
(n) edging along top of hair	- no. 207	1

There are some changes in the portryal of the crests on the Chalcidian helmet between LA and EC. The number of low crests remains proportionally about the same;buthigh crests are, surprisingly, more common. There is a much greater change in the details added to the crest-hair: while the numbers of helmets with edge-strokes (h) remain about the same, those with dots (g) are reduced, and the emphasis shifts to hair-lines (i) and segments (j).

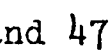
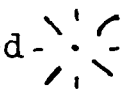
The range of intricate patterns for the mounting in LA (i.e. beyond the basic variations on dots and lines) disappears completely in EC. Only one or two patterns are not met with on Corinthian helmets (e.g. on nos. 457 and 473 ). Patterns (6), (5) and (7) remain popular, along with (29).

Table 48

		Total
(a) black glaze, all over helmet	- nos.278 (reserved spiral at front), 680 (+red  & fillet)	2

			Total
	black glaze, on crown only	- nos. 11b, 112[2], 281[2], 418	6
	, on crown with reserved circles	- no. 125[2]	2
(b)	dots on crown	- nos. 279[2], 473[3], 573, 579 (all along offset)	7
		- nos. 663, 668	2
(c)	scales	- nos. 71a and 207 (dotted) 502 (alternately black & reserved)	3
(d)	chequerboard	- nos. 72, 504	2
(e)	dotted lozenge	- nos. 64 (alternately black), 70, 339a	3
(f)	elaborated spirals	- nos. 13, 35, 62, 68, 72 114, 125[5], 220, 418[2], 455[3], 457, 503, 504, 505, 521, 542	23
(g)	spiral of dots	- no. 278	1
(h)	dolphin	- no. 418	1
(i)	stripe	- no. 125b	1
(j)	H	- no. 506	1
(k)	in frontal area	- nos. 35, 125a & b, 281, 418 (all black)	4
		nos. 72 (crosses), 125b (leaves above dots)	2
		no. 207 (panel)	1

In the EC period the helmets are no longer given a wash in dilute glaze or red, and even the use of the black glaze is reduced except for simply emphasising the crown area. The dots along the offset-edge appear to be an alternative to the more usual line marking that edge. The seven examples are painted by two artists, the Leningrad Painter (nos. 279[2] and 473[3]) and

the Alkimachos Painter (nos. 573 and 579; also no. 668); the former was a pupil of Myson and worked in the Mannerist workshop; the latter Beazley described as at times influenced by the Pan Painter who was also a pupil of Myson. Scales on the crown are less common, the chequerboard is about as popular in EC as it was in LA, but the dotted lozenge pattern is new. The major innovation of the EC period is the elaborated spiral pattern on the crown; twenty of the listed cases are by related artists, the Altamura Painter (5), the Niobid Painter (9), the Painter of Bologna 279 (5) and the Painter of the Berlin Hydria (1). Only three other artists are involved in this motif, an Earlier Mannerist, the Painter of Bologna 228 and the Oionokles Painter, so that it seems to be very much a particular characteristic of the Niobid Group alone. The decoration in the frontal area of the EC Chalcidian helmets is less varied, and it is noticeable that eyebrows are no longer drawn. The leaves on one helmet on no. 125b would appear to be borrowed from the Attic helmets.

Table 49

			Total	%
Ordinary Figures			32	27
	arming	1		
	departing	3		
	fighting	8		
	in the hoplitodromos	3		
	with Nike	2		
	pursuit	2		
	setting out	1		
	at tomb	1		
	without further context	11		
Heroic/Mythological Figures			87	73
	Athena	4		
	Giants	10		
	Amazons	23		
	Greeks in Amaz^{y}	8		
	Heroes	14		
	Lapiths	5		
	Satyr	1		
	Seven ag. Thebes	7		

Achilles	5
Ajax?	1
Akamas/Demophon	2
Kaineus	2
Menelaos	3
Neoptolemos	2

In contrast with the LA period, the EC has fewer ordinary warriors in Chalcidian helmets. The range of non-specific heroic/mythological figures now includes a satyr and the Seven against Thebes, but the list of named heroes is shorter, though still headed by Achilles. Athena alone of the Olympian gods is given a Chalcidian helmet at this time, but only on four occasions.

Table 50

		Total
*Niobid Painter	- nos. 62, 68, 72^2, 339a, 455^4, 503^2, 504^3, 505	15
*Painter of Bologna 279	- no. 125^{11}	11
*Altamura Painter	- nos. 35, 54, 418^5, 457, 521	9
Amphitrite Painter	- nos. 74^7, 510	8
Pistoxenos Painter	- nos. 332, 419^4, 495^3	8
*Geneva Painter	- no. 70^6	6
Alkimachos Painter	- nos. 573, 579^2, 667, 668	5
Alkimachos Ptr., manner of	- no. 523	1
Leningrad Painter	- nos. 279^2, 473^3	5
Ptr. of London E489	- no. 112^4	4
Ptr. of Yale Lekythos	- nos. 329, 543, 663	3
Penthesilea Painter	- nos. 11b, 66, 71a	3
Providence Painter	- nos. 336, 456, 671	3
Earlier Mannerist	- no. 13^2	2
Hermonax	- no. 454^2	2

Pan Painter	- no. 278[2]	2
Sabouroff Painter	- no. 34[2]	2
Painter of Bologna 228	- nos. 114, 453?	2
Stieglitz Painter	- no. 502	1
Stieglitz Ptr., probably	- no. 414	1

With one helmet only:

Aristomenes Painter	- no. 680	Oionokles Painter	- no. 220
Charmides Ptr., related to	- no. 113	Oinanthe Painter	- no. 207
Deepdene Painter	- no. 571	Painter of Athens 1826	- no. 672
Ethiop Painter	- no. 459	* Ptr. of Berlin Hydria	- no. 542
Florence Painter	- no. 520	Painter of Florence 73140	- no. 506
Follower of Makron	- no. 156	Syracuse Painter	- no. 415
Inscription Painter	- no. 594	Tarquinia Painter	- no. 39
Mykonos Painter	- no. 319b	Villa Giulia Painter	- no. 560

Unattributed	- nos. 64, 75[4], 276, 281[2], 655, †677.	10

This table lists the <u>painters</u> of the EC Chalcidian helmets. The largest group of artists interested in drawing this type of helmet at this date is the Niobid, which is responsible for 42 helmets in all (asterisked). Other relationships can be made out, but these do not seem seriously to affect their drawing of the helmet beyond what has been said already. The strong LA Dourian penchant for this helmet is not continued by his followers in EC, and even the Berlin Painter's pupils, the Providence Painter and Hermonax, provide only five examples between them.

Classical Period

The conclusions for this period are based on 58 helmets on 48 vases. There are, therefore, about half as many helmets in this period as there were in EC. All the Chalcidian helmets depicted on the CL vases in the sample are worn, except for one on the groundline on no. 83 and four which are carried: no. 232a by the cheek-piece and the neck-guard; no. 498 by the nose- and cheek-pieces; no. 699^2 by the cheek-piece. One on no. 375 is actually worn back on the head. The range of possible positions for the helmets which was evident in the LA and even the EC periods, has, therefore, been maintained, but only for a small minority of cases.

Table 51

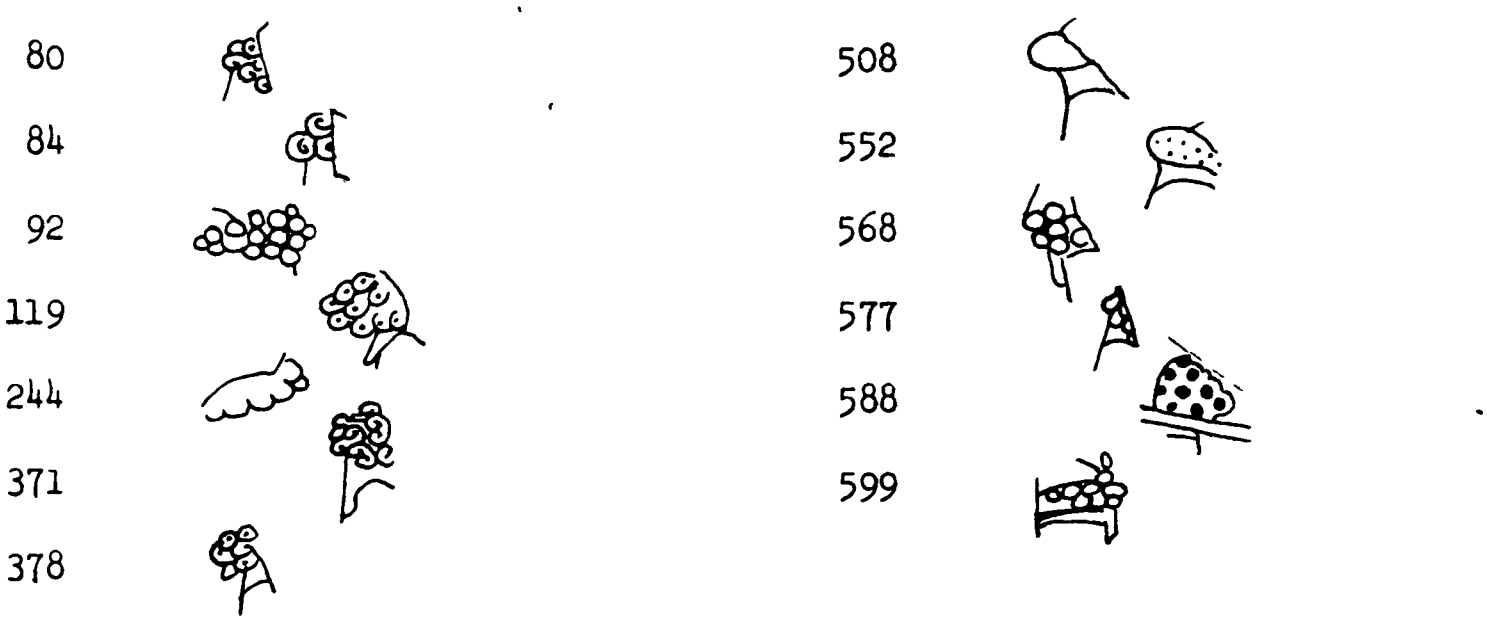
	Total	%
(a) - the clearest representation of Chalcidian (nos. 498, 699^2 both with a slit only at the side)	3	5
(b) - the offset-line is or can be assumed to have been continuous, but there is no 'bridge' above the ear-cutting (nos. 83, 116?, 232a?, $\dagger 424^4$, 497^2 without earhole)	9	15.5
(c) - the offset-line is drawn at the front and back, but is not continuous or straight (nos. 76 plus a 'hook', 89, 98, $\dagger 424$, 561 + double front line, 567 odd, 583^3?, 584, 697)	11	
- plus a spiral at the back (nos. 88,375 with double front line)	2	29
- plus an elaborated spiral (nos. 78,82a with double front line, 369)	3	
- plus locks and a spiral at the back (no. 599)	1	
(d) - the offset-line is drawn at the front only (nos. 79, 235b)	2	3
(e) - the offset-line is drawn at the back only (nos. 288, 289)	2	
- plus locks (nos. 244, 371, 378, 552, 568, 577, 588)	7	22

	Total	%
- plus locks and a spiral (nos. 80, 92, 508)	3	
- plus locks and an elaborated spiral (no. 84)	1	
(f) - there is no offset-line drawn (nos. 86, 287, 570)	3	7
- plus locks (no. 119)	1	
(g) - in three-quarter view		
- arch drawn (no. 462)	1	2

Notes: 1. One helmet (no. 578) is damaged: one (no. 85) is obscured.
2. Seven could not be included above (nos. 29a, 93, 287^2, 346, 689, 692).

Compared with the EC, the CL helmets include proportionally twice as many cases of categories (a) and (b), but the large ear-hole may still be ignored; locks and spirals are again not added to these. There are many more helmets in category (c), about the same in (d), though none has the earlier spiral at the front. The proportions represented by (e), (f) and (g) are only slightly smaller than in EC. The general trend, therefore, over these three periods has been away from the precise representation of the Chalcidian helmet as seen in (a) to the variant forms of (b) and especially (c) and (e). Helmets in categories (f) and (g) have remained a small part of the whole.

Table 52



The number of helmets with locks (13) increases again in the CL period, as compared with the EC, and again they do not occur in categories (a), (b), (d) or (g). All the CL examples appear to project forward from the front of the helmet, and they are formed from a similar range of circles, dots, spirals and masses with either a scalloped or the older (LA) smooth edge. The locks are not painted by any one dominant group of artists as they had been in EC. Two are by the Eupolis Painter (nos. 244 and 378) and a third is probably by him too (no. 119), but these do not conform to one particular method of drawing. Polygnotos painted the locks on no. 84, and an artist in his Group those on no. 92, but it is with the latter, not the former, that those by the Kleophon Painter on no. 599 have some resemblance. Finally, one may note the dissimilarities between the locks by the Achilles Painter on no. 588, those in his manner on no. 552 and those by his pupil, the Phiale Painter, on no. 577. In this period, although the locks are found in association with the full range of nose-pieces and front edges, it is with the short, not the long, nose-piece that they are commonest.[67]

Table 53

		Total
(a)	- with a long nose-piece	5
(b)	- with a short nose-piece	17
(c)	- with a point	18
(d)	- with a straight line	11
(e)	- held	1
(f)	- hidden/damaged/no line	6

In the CL period as compared with the EC, about the same number of helmets have any form of nose-piece, but most are now short; more have a point or

a straight edge (50%). On 9 helmets the eye-edge is marked out, but the side of the nose-piece is marked as well only on one (nos. 79, 88, 92, 375, 462, 567, 583, 584, 599 and no. 346). Half of these are attributed to painters who can be associated with the group of Polygnotos. Over the three periods studied, then, there is a general trend away from the carefully delineated nose-piece towards the simpler pointed or straight front edge.

Once more all the Chalcidian helmets have neck-guards, but this time one is held by its (on no. 232a). On nearly all the helmets the corner at the front of the neck-guard is marked by straight lines, not curves (but cf. no. 244), and the forward and downward projection detected on EC no. 112 can now, I think, be seen also on at least six helmets (on nos. 84, 92, 93, 116, 375, 567), two by Polygnotos, two by artists in his Group and two by the Dinos Painter, a pupil of the Kleophon Painter whom Beazley saw as a younger member of the Polygnotan Group. The profile of the bottom-edge is usually rounded - the only roughly concave one being on a piece which Beazley thought might be a late work of the Painter of the Woolly Satyrs (no. 462). The Christie Painter produces odd forms of the neck-guard without the bottom ledge on nos. 76 and 78. The inner lines on the neck-guards are again commoner; this time on 46 helmets. (On one helmet by the Eupolis Painter (no. 378) and another probably by him (no. 119) these inner lines are even carried up and over the top of the ear-cutting.) The decoration applied to the neck-guard in the earlier periods is ignored completely in the Classical.

Table 54

	Total
(a) in raised position	43
(b) in lowered position	15

	Total
(c) unknown	0
(d) in raised position with hinge	0
(e) in lowered position with hinge (no. 232a)	1
(f) both cheek-pieces shown	24
(g) fixed cheek-pieces (incl. those held, i.e. 3)	14
(h) hinged cheek-pieces (incl. those held, i.e. 1)	44

All the CL helmets have <u>cheek-pieces</u>, and four are held by them (nos. 232a, 498, 699^2). On no. †424 one helmet even has both raised cheek-pieces and one lowered one. (The latter is ignored in Tables 54-5.) Only one hinge is given detailed treatment on these helmets (and one might disagree with the interpretation of it). It is clear that the vase-painters progressively paid less attention to such small points, even though the number of raised (and consequently hinged) cheek-pieces steadily increased over the three periods in question. On the other hand, while fewer helmets were drawn with both cheek-pieces visible in EC, the proportion in CL is greater than that in LA. A discrepancy between the contours of the far and near pieces can still be detected occasionally, as for example on nos. 29a, 85, 462 and possibly 497^2. The contrast between the treatment of the inside and outside surfaces can be seen on nos. 84 and 288.

Table 55

<u>Fixed</u>	<u>on nos.</u>	Total
Group I	- †424^4, 561	5
Group II	- 78, 497^2	3
Group IV	-	0
Others	- 83 , 375 , 567	3
<u>Hinged</u>	<u>on nos.</u>	
Group A	- 29a, 79, 82a, †86, 92, 93, 119, 288, 289, 378, †424, 462, 552, 568, 583, 588, 689, 697.	18

Hinged	on nos.	Total
Group B	- 76, 84, 85, 88, 98, 235b, 369, 371, 508, 570, 577, 578 odd, 584, 599, 692.	15
Group C	- 80, 244, 346	3
Group D	-	0
Others	- 89 , 116 (cf. EC 454), 287[3] .	5

These figures do not include the four helmets which are held by the cheek-piece, nor two (hinged) on which the shape of the piece cannot be determined because of damage (no. 583[2]). Neither Groups III nor IV are now represented among the fixed cheek-pieces, and Groups I and II are barely so. The unusual form on nos. 375 and 567 finds its best parallel in hinged form on the 5th century Thracian helmet from Sborishté mentioned above (p. 172). There are proportionally more helmets in Groups A to C than in EC, and Group B has increased again in relation to the others.[68] Group D is no longer represented, and indeed its status as a Group in EC may well be questioned.

The trend already noted in the EC period away from the application of black glaze in the centre of the cheek-piece and towards more use of simple inner lines, is continued in the CL: the black centre occurs on only 11 helmets, while the edging is found on 22. Neither an overall use of the black nor the central use of the dilute glaze is evident.

The patterns on the CL cheek-pieces are:

Table 56

		Total
scales	- no. 462	1
snakes	- nos. 80, 84?, 85, 88, 93?, 289, 346, 371, 577, 583?, 689, 692?	12

		Total
dots	- no. 570	1
bear	- no. 92	1
star ✳	- no. 561	1
3 leaves on edge	- no. 29a	1
chevrons	- no. 78	1

One can note here a steady increase over the three periods in the number of snakes on cheek-pieces; the dots recall those on the LA; the bear, if such it is and not a lion, is striking; the leaves seem to be mistakenly applied as if to the frontlet of an Attic helmet.

Table 57

		Total
(a) with no crest or mounting	- ? no. 498	1
(b) with low crest but no mounting		0
(c) with high crest	- no. 567	1
(d) with low crest in mounting (transverse, no. 462?)		56
(e) with a single plume		0
(f) lost		0
(g) dots in crest hair		6
(h) edge-strokes		15
(i) hair-lines	- no. 583? in groups	1
(j) segments		20
(k) white hair	- no. 599	1
(l) horns	- no. 462	1
(m) 3 circles and a spiral	- no. 232a	1

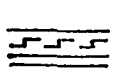
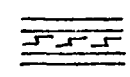
High crests are now very much the exception. The EC preference for hair-lines is reversed, and, while the number with dots in the hair remains the same, those with edge-strokes and segment-lines increase enormously. A few special patterns along the crest-mounting are introduced in this period, i.e.  on nos. 244 and 378 by the Eupolis Painter (cf.  on no. 92 by an artist in the Group of Polygnotos) and on nos. 346 and 371 by the Barclay Painter. Patterns (6) and (5) continue to be popular.

Table 58

		Total
(a) black glaze	-	0
(b) dilute wash on crown	- no. 85	1
(c) dilute dots	- no. 84	1
(d) scales	- no. 583 (dotted)	1
(e) chequerboard	- no. 583	1
(f) lozenge	- nos. 462, 583	2
(g) elaborated spirals	- nos. 78, 82a, 369	3
(h) florals	- nos. 76, 85	2
(i) palmettes	- no. 375 (1 front and back and 3 on side)	1
(j) in frontal area	- nos. 76, 85 (black)	2
	- no. 78 (dilute)	1
	- no. 232a	1

The reduced use of the black glaze observed in EC is carried in the CL period to the point where it no longer is found on the helmets in the sample at all, and the dilute wash occurs here only once. The scales, chequerboard and lozenge patterns are about as common as in EC, although it should be noted that three of the cases cited for the CL period appear on one vase by Aison. After the frequent appearance of elaborated spirals in the EC works of the Niobid Group, this motif becomes less popular among the CL artists. The interest shown in decorating the frontal area remains about the same in CL as in EC.

Table 59

		Total	%
Ordinary Figures		25	43
	departing 5		
	fighting 5		
	in the hoplitodromos 3		

			Total	%
	with Nike	1		
	Pyrrhic dancers (female)	3		
	setting out	2		
	at tomb	1		
	without further context	5		
Heroic/Mythological Figures			33	57
	Athena	2		
	Giant	1		
	Amazons	8		
	Greeks in Amazy	13		
	Heroes?	2		
	Lapiths	5		
	Achilles	1		
	Iolaos	1		

The proportion of ordinary figures with Chalcidian helmets increases in the CL period after the drop in the EC, and now includes even female Pyrrhic dancers, but the heroes and mythological figures are nevertheless still in the majority. They are more limited in scope, though the association with Achilles noticeably survives even now, as does that with Athena and the Giants, Amazons and Lapiths. Greeks fighting Amazons become surprisingly common.

Table 60

		Total
*Group of Polygnotos	- nos. 88, 89, 92, 93, 369	5
Marlay Painter	- no. 699[2]	2
Marley Ptr., compared with	- no. 287[3]	3
*Polygnotos	- nos. 84, 116, 561, 584	4
Aison	- no. 583[3]	3
*Christie Painter	- nos. 76, 78, 85	3
Eupolis Painter	- nos. 244, 378	2
Eupolis Painter, probably	- no. 119	1
Barclay Painter	- nos. 346, 371	2

		Total
*Dinos Painter	- nos. 375, 567	2
Eretria Painter	- nos. 29a, 508	2
*Kleophon Painter	- nos. 98, 599	2
Naples Painter	- nos. 288, 289	2
Ptr. Louvre Centauromachy	- nos. 80, 570	2
Phiale Painter	- nos. 498, 577	2
Achilles Painter	- no. 588	1
Achilles Painter, manner	- no. 552	1

With one helmet only:

Alexandre Group	- no. 82a	Ptr. of Munich 2335	- no. 568
Ariana Painter	- no. †86	?late Ptr. Woolly Satyrs	- no. 462
*Guglielmi Painter	- no. 235b	*Peleus Painter, manner	- no. 79
Hasselmann Painter	- no. 689	Persephone Painter	- no. 697
Ptr. of Berlin 2536	- no. 232a	Polydektes Painter	- no. 578
Ptr. of Munich 2332	- no. 692		

Unattributed - nos. 83, †424[5], 497[2] 8

The Polygnotan Group (asterisked) provides the main body of material for the CL Chalcidian helmets in the sample, with not only Polygnotos himself and the undetermined artists, but also the Christie Painter, the Kleophon Painter and his pupil, the Dinos Painter, the Guglielmi Painter and a vase in the manner of the Peleus Painter (both once only). Even within the examples painted by these artists there is considerable variation in the portrayal of the helmet; only the Christie Painter keeps to a consistent type of Chalcidian on nos. 76, 78 and 85. Since Polygnotos "came from the school of the Niobid Painter" (Beazley), whose Group was responsible for a large number of the EC helmets, it should perhaps come as no surprise

that the Polygnotan Group is dominant here.

Late 5th and 4th centuries

None of the vases of this date in the survey illustrate Chalcidian helmets. But, note the helmet on Late 5th cent. no. 569 which was treated as Attic, on the basis of its similarity to the helmet worn by Athena on the Niobid Painter's name vase (no. 126).

CONCLUSION

The Chalcidian helmet has, then, been reviewed in the original and in art. The originals were particularly numerous with examples from both the west and the north, but few from Mainland Greece itself. They ranged in date from the late 6th century B.C. to probably the late 4th. In contrast, the sculptured helmets belonged to the 5th century (down to ca. 430 B.C.) with only rare examples from the 4th. They were illustrated on works from Aegina and Olympia, and, in Athenian art on the Delphi Treasury, the Parthenon Frieze and the Hephaisteion. The Attic grave reliefs do not depict this type of helmet at all regularly. On a Lycian monument it appeared at Xanthos. Examples on minor works were few in number and mostly of 5th century date also - only the gem was later. Origins ranged from possibly Magna Graecia (twice), through Athens and Melos, to the north and east (again Lycia). The even rarer evidence from coin-types, likewise, confirmed the wide range both in date (Late Archaic and third quarter of 4th cent.) and place (east and west). Finally, the Attic vases emphasised the popularity of the Chalcidian helmet there, at least from ca. 500 to ca. 425 B.C. Surprisingly, not a single, later example was represented in the sample. One might suspect that by the 4th century this helmet was being

worn in the west (in S. Italy), perhaps still in the east (in Lycia) and in the north (in Thrace and South Russia), but its popularity in Greece itself had waned.

The wide ear-cutting and the 'bridge' above it have been seen as the characteristic feature of the Chalcidian helmet. On the original helmets these were easily identified, and one could even distinguish an Italian helmet from a Northern one according to the treatment given to the bronze around the ear- (and eye-) holes and at the centre front. In sculpture one immediately detected inaccuracies or variations in the portrayal of the ear-hole. At Aegina (on O.XI) and on Pelops and Oinomaos at Olympia the hole was ignored. The Athena at Olympia lost the 'bridge', and the Herakles and O.V from Aegina showed the back offset-edge meeting the ear-cutting at a lower level than normal. That the correct form was not unknown to the sculptors can be seen from the Boston head from the Hephaisteion. Inaccuracy might, perhaps, be pardoned on the small statuette, but this variety in the representation was amply displayed also on the vases, where the accurate depiction of the ear-hole was actually exceptional. Unless we suppose that these representations are reflecting an otherwise unknown variant, which has, by chance, not survived, then we must admit that artistic licence is an important factor here.

A nose-piece need not always be a feature of a Chalcidian helmet, and the general trend, detected in both the originals and the art, seems to have been away from a long nose-piece towards a short one or a central point or a simple, straight edge. In South Italy the originals of Classical date favour a point or sometimes a straight edge (e.g. the Castel Sant' Angelo helmet and the Attico-Chalcidian Group). In the north, a small, pointed nose-piece was preferred. The Late Archaic sculptures (the Delphi

Herakles, Aeginetan O.IX and O.XI) display the long nose-piece: O.X has a point, but low down on the bridge of the nose. The Karaburun painting, the Cyzicene coin and the Attic vases show that a straight edge was already an alternative in the early 5th century, i.e. before the Olympian Athena illustrates it clearly for us in Early Classical. The vases also give us an indication of the pointed edge in LA: it increases in popularity in EC and again in CL which tallies with the appearance of it on the Amazon rider and the Hephaisteion head about that time. In general, the evidence from the vase-paintings can be used to show that the nose-piece is less important by CL than it was in LA, and that the short piece gradually replaces the long in popularity. It turns out, then, that one cannot use the form of the front edge for dating the original helmets at all precisely. The alternative treatments of the centre are contemporary and not consecutive developments.

Neck-guards, on the other hand, are always present on Chalcidian helmets. Although a basic form exists, great variety is seen in the art in the way the parts are represented, e.g. the front edge may be straight or curved, the back profile concave or convex, etc., so that little significance can be attached to the various shapes. The only feature of note is the forward and downward projection seen behind the ear-cutting on helmets from both the west and the north, though the length and shape of the rest of the neck-guard are not the same in these two areas. This feature was detected on the Hephaisteion head, ca. 430; it occurs only once on an EC vase and six times on CL ones (by a connected group of artists), so that a date for its appearance in Athens at least may be sought ca. 450-425 B.C. The helmets in Groups II and V from the north, which also show this trait, should probably, then, be seen as contemporary or later examples which take over a feature invented first elsewhere.

Cheek-pieces are a regular part of the Chalcidian helmet. Only two LA and six EC helmets lack them on the vases. They may be lacking on sculpture now because they were originally attached separately. It was on the basis of the shape of the fixed cheek-piece that Kunze distinguished the Late Archaic Groups I-IV. Group V was added here. When hinged cheek-pieces first caught on (perhaps ca. 490-480), the shapes were replaced by others which we could define on the vases as of Groups A-C (D?). The change from fixed to hinged was not, it seems, immediate, and a period of overlap can be traced in the art. Groups I and II are found on vases in LA (Group II on the Late Archaic coin also), but less often later. The appearance of Group II on the Duvanli phiale at the end of the 5th century confirms the longer life enjoyed by this form in the north. Group III was not normally represented in the art, though its transfer into a hinged shape was seen on the eleventh helmet in the Attico-Chalcidian Group; Group IV was only found in questionable situations, on the LA-EC vases, the Delphi Herakles and the bronze statuette; Group V appeared only once on a LA vase, where it was worn by Menelaos, and perhaps on the Karaburun painting. The hinged cheek-pieces increase in number progressively on the vases, although the hinges themselves are equally progressively ignored. Group A can be compared with the originals on the York and Naples helmets: it also appeared on the Amazon rider and perhaps the coin of the Campani. Group B which becomes commoner in EC and CL on the vases, may reflect the development of Group IV into a softer, more rounded form, as attested also in Etruria. Group C is not associated with any original Chalcidian helmet, but it is found on the so-called Thracian helmets (see below, pp. 297-301). One suspects that some of the loose cheek-pieces of this form may perhaps be from a Chalcidian helmet instead. It is strongly associated with Douris in LA and becomes

rarer later. Group D appeared only on the EC vases and is probably not to be treated separately at all. Other representations portray the Paestan type (in LA) and the Sborishté type (in CL), so that, all in all, the art seems to capture most of the variations available in real-life (and more). As for the idea of using the cheek-pieces of Groups A-C for dating purposes, the evidence from the vases should warn us to be wary - all are present from LA through to CL, at Athens at least.

Crests are regularly attached to the Chalcidian helmets in art, and there was some evidence for their fittings on the originals also. Even transverse ones are known from the originals, e.g. the Castel Sant'Angelo helmet, as well as the gem and a few vases. A crest is not attested on Aegina O.V and O.X, nor, it seems, on the south figures on the Parthenon Frieze, the Karaburun painting, the phiale, the 4th century coin and a very few vases after LA (only about a dozen altogether). High crests are unusual for this helmet: there was possibly one on O.XI, and others were drawn on a few vases, surprisingly especially of EC date. On the vases one could follow the relative popularity of the details applied to the crest-hair; thus dots were commonest in LA, hair-lines in EC and edge-strokes and segments in CL. In the other media such details are rarely visible now, but hair-lines were shown on the Late Archaic/Early Classical statuette and the Late Archaic coin. A grooved, white crest adorned the helmet of the Amazon rider. The mountings are almost exclusively known from the vase-paintings, where the patterns are similar to those on Corinthian and Attic helmets, with a very few innovations. Elsewhere, one meets only a zig-zag mounting on the statuette, and a dotted zig-zag on the Cyzicene coin.

The decoration of the crown and sides of the helmet was an important

feature of the original Late Archaic helmets studied. The application of eyebrows at the front belongs similarly to this period, as the vases confirm. But, the Italian helmets, e.g. the Attico-Chalcidian Group, also showed a continuing desire for pattern, figural or floral, and the Tithorea cheek-piece and Thracian fragment remind us that such elaboration was not confined to the western Greek area. In art, there is little indication of such decoration. In sculpture only the Aeginetan helmets of O.V and O.X still carried traces of painted patterns (zig-zag and lozenge). Even the Amazon rhyton simply had red on the metal parts of the helmet and violet on the cheek-pieces, presumably to indicate the lining. The vase-paintings begin with much use of the black-glaze, sometimes diluted, to cover the crown, neck-guard or cheek-pieces, but this declines in time, and is probably a painter's choice, not a reflection of reality. Scales, chequer-board and lozenge in these areas seem to reflect the same treatment as that at Aegina, but their exact interpretation is uncertain. A popular pattern on the crown is an elaborated spiral which resembles those on the Attic helmets on vases and coins. It is strongly associated with the artists of the Niobid Group. On the cheek-piece, figured decoration remains popular throughout, with the snake especially as a device. The 'locks' of hair are found only on the Attic vases and may well be a purely Athenian addition. The spiral off the offset-edge at the front resembles the spiral/volute of the Attico-Chalcidian Group, and it was suggested that something like those originals could have already existed at Athens in the Late Archaic period. However, helmets with this feature drop from 12% of the total in LA to 5% in EC and disappear altogether after that, so that the probable discrepancy in date would seem to bear against the idea of any connection. One feature which cannot be detected on the vases, is the development of a ridge down

the centre of the crown from front to back. It occurs on four of the Attico-Chalcidian Group and on O.X at Aegina and the Hephaisteion head, so that again the hope of helping to date the Attico-Chalcidian examples through the artistic representations seems elusive.

The wearers of the original helmets were, no doubt, real hoplites (or at least real warriors). In art, the Chalcidian helmet was also presented on riders (e.g. the Amazon, Bellerophon and the figures on the Parthenon Frieze), apobatai (again on the Frieze and on the phiale) and a trophy (on the gem). In sculpture mainly heroic/mythological figures were represented: only perhaps on the Parthenon Frieze and the Nereid Monument were ordinary figures depicted wearing it. Similarly in the minor arts, only the Greek in the Lycian painting, the trophy and the coin of the Campani illustrate the ordinary status of the helmet. On the vases, after being associated more with ordinary figures in LA, it switched to being associated more with mythological ones in EC and CL. One noted, nevertheless, the unimportance of Athena. Finally, on the vases we may emphasise that less than 1% of the helmets portrayed, depicted the Chalcidian type pushed back on the crown of the head, i.e. in the position regularly found for the Corinthian helmet. One wonders whether these instances are mistakes made by the painters, or a true reflection of reality.

e. THE ILLYRIAN HELMET

This type of helmet can be dealt with quite briefly since it reached its peak in the preceding period and was not a major type in the Classical as far as Mainland Greece was concerned. It owes its misleading name to the fact that many helmets of this type have been discovered in the Balkans;[1] however its origin in the Peloponnese, probably in the early 7th century,[2] has been demonstrated by Kunze.[3] It can be seen as a natural progression from the older Kegel-helm, and itself can be divided into three stages of development of which only the last concerns us here.[4]

Characteristic of the Illyrian helmet in general are a close-fitting crown, a straight edge above the face without a nose-piece, long cheek-pieces also with a straight edge at the face-opening and, most especially, the two ridges which mark the area of the crest-fitting on the crown. The crest itself which lay between these ridges was fixed at each end, at the front to a large stud and at the back to a loop usually set vertically. The late form of the helmet appeared about the middle of the 6th century, existed alongside the middle form for a short time in the third quarter of the century and then continued alone into the fifth and possibly even the 4th.[5] The characteristics mentioned above are still to be found in the late form, but peculiar to the helmets of this time are a neck-guard which juts out at a right angle and is separated from the cheek-piece by a long slit in wedge-shape, a neat pattern-band all along the bottom edge and the hole in the corner of the cheek-piece for the chin-band. Moreover, the helmets in this late phase can be further subdivided into two groups: in the first which lasted down to the last quarter of the 6th century, the pattern along the edge is created by individual, tiny nails (sometimes of

silver) hammered into the bronze between raised fillets; in the second which dates from the last quarter on, the pattern is stamped into the bronze which is itself generally thicker and heavier.[6] It is this second group of helmets in the late form in which we are interested. The list of surviving examples which follows is essentially drawn from the information provided by Kunze; a few have been added which were not known to him, and no doubt many more could be included if the material from the areas to the north of Greece were readily accessible.

Catalogue

1. Athens, N.M.6556. From the Acropolis. Lipperheide, 559; de Ridder, Acrop no. 252; Schröder, 340 Beil. 16.2 and 11.5; Kukahn, 54 no. 24; Ol Ber VI 129 n. 15, 138 n. 35, 145, VIII 134. H. 19 cm.
   Inscribed 'Αθηναίας . Dated by Kunze (p. 145) to probably still a little before 500 B.C.

2. Athens, N.M.7634. Lipperheide, 91; de Ridder, Acrop no. 484; Schröder, 342 Beil. 16.1; Kukahn, 54 no. 25; Ol Ber VI 139 n. 36, VIII 134.
   H. 23 cm.

3. Athens, N.M. Car.171. From Dodona. Carapanos, 102 pl. LVI.10; Ol Ber VIII 132 and 134. Left cheek-piece only. H. 11 cm.
   Inscribed MO . With Chalcidian-type of ear-hole and cut later to take a hinge.

4. Location unknown. From Koutselion, near Kastritsa in Epirus. AD 23 (1968) Chron 292. H. 23 cm. now.

5. Lugano, Frhrn. v. Schoen Coll. From the Alpheios valley at Olympia. R. Lullies, Eine Sammlung griechischer Kleinkunst (Munich, 1955) 78f.

no. 248 pl. 81; Ol Ber VI 139 no. 32, VIII 126 n. 12. H. 23 cm.

6. Newcastle-upon-Tyne, the Greek Museum, 566. From the area of Thessaloniki at the time of the First World War. GAA 6-7 and 9.

7. Olympia, B5315. From 5th century fill in the S-E quarter, east of the S-E building. Ol Ber VIII 126 no. 48 pl. 72, 132-3. H. 23 cm. now. With Chalcidian-type of ear-cutting instead of the point. Terminus ante quem provided by pottery in the fill of about or shortly after the mid 5th century (p. 133).

8. Olympia, B5531. From late debris in the S-E quarter. Ol Ber VIII 126 no. 47. Part of a cheek-piece only. Max. H. 7.7 cm. Up to 2.5 mm. thick.

9. Olympia, Old Inv. Br. 6935. From north of the Prytaneion. Olympia IV 171-2 no. 1030 pl. LXII; Lipperheide, 90; Schröder, 342 Beil. 16.3; Kukahn, 54 no. 20; Ol Ber VI 139 no. 34 pls. 53-4. H. 22 cm.

10. Olympia, Museum M40. From a well on the site of the new museum. Ol Ber VIII 125 no. 46 and 132. (The promised publication by Yalouris in AM apparently did not take place.) H. 19.5 cm. now.

11. Paris, Louvre, MND 1074. From Zeitenlik near Thessaloniki. Albania 2 (1927) 32 ff. figs. 6 and 8 left; Ol Ber VI 144-5, VIII 135. Dated by Kunze to the first decades of the 5th cent. (p. 145).

12. Paris, Louvre, MND 1075. From Karaburnaki near Thessaloniki. Albania 3 (1928) 62 no. 1 64 fig. 49; Kukahn 55 no. 40; Ol Ber VI 144-5, VIII 135. Dated by Kunze to the second half of the 6th cent., although the other contents of the grave belong in the first quarter of the 5th. Apparently no pattern along the edge.

13. Private Collection. From Zeitenlik. Albania 2 (1927) 33ff. figs. 7, 8 right, 9 and 10; Ol Ber VI 144-5, VIII 135. Dated by Kunze to the first decades of the 5th cent. (p. 145).

14. Vienna,K.M. VI4972. From the Franz Trau Coll. AM 21 (1896) 6 n. 2 (Furtwängler); Schröder, 342 Beil. 11.4 and 7, and 15.5; AA 1920 6 (Schröder); AArchHung 5 (1955) 50 (Mozsolics); Ol Ber III 107 n. 1, V 176, VI 139 no. 35 145-6 pl. 55 and fig. 105. From Olympia. H. 27 cm. With Chalcidian-type of ear-hole. Inscribed with the name of Verzan, son of Grabon (?). The date of the dedication is put by Kunze about the end of the 5th cent., but he prefers a date before ca. 450 rather than after it for the manufacture of the helmet itself (p. 146).

From beyond modern Greece:

15. Belgrade, National Museum. From Trstenik. Stipčević The Illyrians (supra n. 3) 176 bottom right. H. 29 cm. Dated to the 5th cent.

16. Budapest, Mus. f. Bild. Künste. AArchHung 5 (1955) 50-1 fig. 13 (Mozsolics); Ol Ber VI 138 n. 34 (could be from Greece), 141, 146, VIII 134. Formerly Delhaes Coll. With a Greek inscription.

17. Location unknown. From Mati in Albania. M. Korkuti, Shqiperia Arkeologjike (Tirane, 1971) pl. 32.

18. Oxford, Ashmolean Museum, acc. no. 1885.464. From Pantikapaion. JHS 5 (1884) 62 ff. pl. 46.2 (Gardner); Schröder 342 Beil. 15.4; Ol Ber VII 72 n. 16, VIII 132 and 135. H. 14.5 cm. now. The lower parts have been cut away and a piece of metal added at the front to serve as peak or neck-guard. Kunze describes this helmet as 'later', the museum dates it to the 5th or early 4th cent.

Without provenance:

19. West Berlin, Lipperheide 32. AA 1905 17-8 (Schröder).

20. West Berlin, Lipperheide 33. AA 1905 17-8 fig. 5 right (Schröder).

21. Cambridge, Fitzwilliam Mus. GR B. 5. H. 23.5 cm. (Pl. 2a)

22. Harvard Univ., Fogg Art Mus., 1972.55. The Frederick M. Watkins Collection, catalogue of the exhibition 31 Jan. - 14 Mar. 1973 28-29 no. 8 with refs. to others (Mitten). H. 24.3. W. 17.3. D. 22.8. No pattern along the edge - only an incised line. Corinthian influence in eye-corner projections and offset-edge at back. At the front this edge turns up beside the crest-ridges and forks in a manner reminiscent of snakes' heads. (Cf. no. 24.) Dated ca. 500 B.C. and a northern Greek origin suggested.

23. Market, Basel. Kunstwerke der Antike, Münzen und Medaillen A.G.: Auktion XXVI 5-10-63 10 no. 15 pl. 4 early 5th cent.; Ol Ber VIII 132 n. 19 and 135. Could be from Macedonia (p. 133). H. 21.5cm.

24. Market, Lucerne. Antike Kunstwerke, Ars Antiqua A.G.: Auktion IV 7-12-62 28-9 no. 119 pl. 39 ca. 500; Ol Ber VIII 133 n. 19 and 135. Could be from Macedonia (p. 133). H. 27 cm. Influenced by Corinthian helmet with an offset-edge at the back and pointed eye-corners (cf. no. 22).

25. New York, Met. Mus., acc. no. 35.11.2. BMMA 30 (1935) 133-4 figs. 1-2. end of 6th cent.; Kukahn, 55 no. 45 pl. 5.8; Richter, Hdb Gk Coll 34 pl. 21.i; Ol Ber VI 146 n. 55, 148 n. 61, VIII 133 n. 19, 135. H. 21.7 cm. Corinthian influence seen in offset-edge (cf. type 2) and treatment of points at sides. Heraldic lions engraved on forehead.

Commentary

It is an astonishing feature of all of these late Illyrian helmets that there is little variation in shape or decoration. Only a very few borrow details which we would associate with other types of Greek helmets, e.g. the Chalcidian ear-cutting on nos. 3, 7 and 14,[7] the (Chalcidian-) Corinthian offset-edge and eye- or ear-edges on nos. 22, 24 and 25. The appliqué decoration found on some of the 6th century helmets[8] is no longer evident, and only no. 25 bears any decoration beyond the simple stamped beading.

The re-use and re-designing of the cheek-piece in Athens (no. 3) and the helmet in Oxford (no. 18) give some indication of the possible changes which could be made to the standard type to bring it into line with later fashions (i.e. for a movable cheek-piece) or local taste (i.e. for a Maiotic type of helmet; cf. the cut-down Chalcidian helmets mentioned in the previous section). Another cheek-piece which is housed in Thessaloniki Museum[9] can be explained as a further development in this trend. The basic shape and the punched border suggest that the piece comes from an Illyrian helmet. However, the central area is filled with a figure of a winged Victory dressed in a swirling peplos and carrying a shield and a spear. The style of the relief is that of the 4th century. Above her, flowing locks of hair are indicated in the bronze. At the side there is no sign of the pointed slit which is typical of the late form; the beading merely peters out at the level of the base of the Nike's shield. It is possible that this cheek-piece was made as a single piece to be fitted by means of the two holes near the upper edge to a helmet of Illyrian type. On the other hand, the way in which the design at the top (both the hair and the wings) appears to be abruptly cut off by the present edge makes it also

possible, and perhaps more probable, that this item had been cut into its present form out of a helmet with which it had been originally made in one piece. Such an elaborately decorated helmet would have been a far cry from the late form studied so far.

ILLYRIAN HELMETS IN ATTIC VASE PAINTINGS

There is no perfect or ideal illustration of an Illyrian helmet in the vase-paintings covered by my sample, nor are there any illustrated in ABFH or ARFH. There are, however, a very few helmets drawn on vases in the sample which may reasonably be interpreted as being of the Illyrian type. They are reproduced in Fig. 59, and detailed in the following table.

Table 61

Cat. no.	Period	Worn by	Painted by
514	(LA)	Menelaos	Berlin Painter
66	EC	Amazon in Amaz.^{y}	Penthesilea Painter (Furtwängler)
58	CL	Lesser Ajax	Codrus Painter
97	CL	Greek in Amaz.^{y}	Orpheus Painter
359	CL	Departing Warrior	Peleus Painter
368	CL	Departing Warrior	Cassel Painter
462	CL	Giant in Gig.^{y}	?very late Painter of the Woolly Satyrs
524	CL	Menelaos	Polygnotos
583	CL	Amazon in Amaz.^{y}	Aison

First of all, one should note that most of these belong in the period between ca. 450 and 425 B.C. Since no. 514 is a late piece of the Berlin Painter from the 460s, the first two are really both Early Classical. So, in fact, all of these illustrations date from a period in which, on the basis of the surviving evidence of original Illyrian helmets, one might think that this type was only regularly worn in Northern Greece.[10]

Secondly, only two of the warriors with this helmet are ordinary figures.

How close are they in any case to the Illyrian type? They do all have low crests fitted from front to back along a close-fitting crown, and the opening around the face is basically square, but, having said that, one must acknowledge that they do not conform precisely to what one might have expected for an illustration of an Illyrian. No. 514, although it has a slit at the side, appears to have an offset-line at the back at the level of the front edge and a more substantial neck-guard edge than that on the originals of the late form. Indeed, from no. 66 on these helmets have large neck-guards of the standard shape for Attic or Chalcidian or Thracian helmets in the paintings. Moreover, the 'border' around the face on no. 66 seems to grow in size on the later examples to become a single, separate unit which encompasses both the front and the cheek-pieces on all but nos. 462 and 583 on which the front edge-line is continued across the cheek-piece. This impression of a helmet constructed with an independent front section can be paralleled on two of the Chalcidian helmets (on nos. 72 (EC) and 78 (CL)), and the front is also depicted as projecting from the crown on an unusual helmet in three-quarter view on no. 428 (CL) (Fig. 59, below; Pl. 10c). On those three examples nose-pieces are also marked at the centre, and just this detail can be seen surprisingly on four of the helmets in Figure 59 (nos. 58, 359, 368 and 524). Not only the nose-pieces are unusual. Some of the cheek-pieces are more rounded or straight at the bottom than one would expect for a portrayal of Illyrian helmets of the late form. Finally, the decoration requires comment. While it is regularly to be seen in the front band and on the cheek-piece, i.e. precisely in the positions in which the decoration was applied to Illyrian

helmets in the 6th cent., the shapes are now based on stars or dots, not animals or palmettes. Animals do occur, but filling the whole of the space on the side of the crown on nos. 66 and 58. In short, none of these nine helmets on the vases gives us a straightforward and readily identifiable picture of an Illyrian helmet, although no. 514 probably comes fairly close.

How then are we to explain these helmets in Fig. 59? Have the nine artists merely invented a new form from their imagination? One may note that of these painters the Painter of the Woolly Satyrs was in the Niobid Group from which school came Polygnotos, to whose Group in turn the Peleus Painter belonged. The strong similarities between the nine, however, suggest that more than imagination or incompetence was involved, and, considering that there is at least some resemblance to a real helmet, the Illyrian type, one may reasonably propose that one stimulus was a memory of an earlier real helmet or a report of a helmet now worn regularly only in the areas further north. In either case the features which seem assimilated to other types, in particular the neck-guard and nose-piece, may perhaps be explained by such a theory. On the other hand, there may be a case here for wondering whether the Illyrian helmet may not have had a longer life in Athens at this time. The helmets which have survived have shown that experiments were being made to make the Illyrian more like the Chalcidian or Corinthian. It seems possible that developments along these lines are reflected in the vase-paintings. A helmet with a separate frontal unit could have been made, and it could have been from a helmet of such a form that the cheek-piece from Grevena came.

THE ILLYRIAN HELMET IN OTHER MEDIA

As far as I know the Illyrian helmet is not represented in sculpture in the Classical period.[11] Nor is it to be seen on Classical gems or rings. The only place where this type of helmet is represented regularly is on the coins of the 5th century kings of Macedon.[12]

Catalogue and Commentary

The series begins on the reverse of the tetradrachms and light tetrobols of Alexander I (ca. 498-451).[13] The helmet here is worn by a head (of Ares?).[14] There is no offset-line marked, and the join of cheek-piece and neck-guard is emphasised by a small notch or slit. On the light tetrobols of Perdikkas II (ca. 451-413)[15] which continue this reverse type, the head which had only been shown as a nose and eye, is omitted. The offset-edge is now indicated, but the slit or notch remains the same.[16] Finally, the light tetrobols of Archelaos I (413-399)[17] present us with a clear picture of the Illyrian helmet assimilated to the Chalcidian, i.e. with not only the offset-line but also the wide, round ear-cutting. Subsequently this reverse type was discontinued, the place of the light tetrobol being taken, Kraay thought, possibly by bronze coinage.[18]

No doubt the choice of this helmet for the reverse of these silver coins was a deliberate one made by the Macedonian kings for possibly propaganda purposes. As we know from the find-spots of the originals this helmet was popular in the north, and the type would have served as well as the Corinthian or Attic helmets on the coins of Corinth and Athens for identifying the source of the coinage.[19] Perhaps it was simply in imitation of these other dies that the helmeted head was first chosen, for, according to Kraay,

the light tetrobols were not aimed at the foreign market, but were for internal use only.[20]

Further north from Macedonia one Illyrian helmet was represented on the late 5th century silver phiale found at Duvanli.[21] It is worn by one of the apobatai. The frontal part and the cheek-piece are marked off from the rest of the crown; the neck-guard edge is discernible, but it is not differentiated from the upper part by any offset-line. An inner line runs around the cheek-piece, while four dots decorate the front piece. It is not crested.

This Illyrian helmet, then, is depicted in a similar manner to those on the Attic vases, except that it has not acquired a more substantial neck-guard or crest. The patterned area at the front is very similar, and perhaps rather than thinking of a piece-made helmet, one would do better to imagine an applied, decorative strip here. A number of the Illyrian helmets excavated at Sindos displayed sheets of gold foil around the facial area, e.g. on helmet no. 8562 from grave 25. This one was dated ca. 540, others later in the 6th century, but it seems quite possible that the idea continued into the 5th century and is reflected both here and on the vase-paintings.

CONCLUSION

The Illyrian helmet is known for the Classical period largely through originals from Greek sanctuary sites and from the north. There is little evidence of it in the art except perhaps on a few EC and CL Attic vases, on the Duvanli phiale and on Macedonian regal coinage of the 5th century. Both sources, the originals and the art, suggest the manufacture of hybrid forms which borrow some Corinthian or Chalcidian features. Despite its

popularity in the north, it cannot have been a major type for the Classical Greek hoplite.

f. THE THRACIAN HELMET

INTRODUCTION

For a discussion of the use of the name, Thracian, and its inappropriateness for this type of helmet, see Appendix B. Even though the adjective is inaccurate, one is, of course, left with the problem of what to call this type of helmet so that it may be clearly distinguished from the other Greek types. To try to introduce a new name at this late date which would more accurately reflect its probable development from and relationship to, a variety of caps including the tiara, and other Greek helmets, seems unfeasible. Regional names, however misleading, have become the norm for helmets, and the term, Thracian, may as well continue to be used for this particular type, so long as it is understood to be based on the fact that the type was popular in the North, though not solely in Thrace, and not on Schröder's misconceived notion of its being derived from caps worn by Thracians. The situation, then, becomes similar to that of the Illyrian helmet which is believed to have originated in the Peloponnese, but which because of its popularity in Illyria at a later date, has acquired its equally misleading epithet.

THE THRACIAN HELMET IN ATTIC VASE-PAINTINGS

In view of the variety to be found in the forms of this type of helmet it seems to be best to consider first the representations of it in the vase-paintings instead of in the originals which have survived because they are not very precisely dated as yet. At least for the fifth

century the evidence provided by the vases appears to offer greater scope for detailed analysis. The helmets in question are illustrated in the accompanying tables which are based as usual on the catalogued vases.

Late Archaic Period

The LA examples of the Thracian helmet in the sample number only 8 on 5 vases (Fig. 60).[1] At least 6 of them display a very similar, high, rounded crown which on nos. 149 and 269 includes the additional feature of a spiral at the front; this gives the appearance of rolled-up, soft material instead of hard bronze. The spiral also occurs on no. 649, but it runs off the front peak, and the bowl of the helmet is much lower;[2] was the artist perhaps a little puzzled by the description of the helmet given to him? The shape of the helmet on no. 137b is closer to some of the EC forms which will be discussed later; it is by a painter who was working in the manner of Douris and so is likely to be later in date than the other LA examples.

The peaks over the face also vary between the last mentioned vase and the majority of the LA ones, on which it tends to run out almost horizontally from a starting-point near the ear. On the last two vases it becomes even longer, and is provided with a black centre. The unusual forms of the peak on no. 269 strongly recall the brims on a variety of petasos worn on other vases by Perseus,[3] Theseus,[4] Hermes,[5] and Talthybios.[6] One has the impression that the painter is trying to portray something new and unfamiliar by utilising comparable features from elsewhere with which he is already familiar. On no. 649 there is a trace of the squared end over the ear which appears more clearly on no. 137b, and which will be commoner later.

The neck-guards vary only in the minor details, being small and neat

with an out-turned lower edge. Black glaze is added on nos. 269, 444 and 649. The ear-cutting between the neck-guard and the cheek-piece is ignored on 444; a connecting piece of metal, as on some Chalcidian helmets, is to be seen on nos. 149 and 269.

Two cheek-pieces (on nos. 269 and 444) are similar to Chalcidian shape A, and another four to Chalcidian shape B; shape C with an extra cutting for the mouth is found on no. 649. This piece is also given an internal edging which follows the outer contour; the same occurs on one of the helmets on no. 444, while the black glaze fills the central area of nos. 269 and 444 (once with two reserved circles). A hinge is depicted on one helmet only on no. 444.

Peculiar features include the application of a nose-piece to no. 649, and the extension of the black glaze in the manner of locks beyond the front of no. 269. All but one of the helmets, in fact the last mentioned on no. 269, are provided with a crest along the crown from front to back. (This makes the helmet on no. 269 look very like a cap at first glance, but the features below the level of the brim betray its helmet nature.) The mountings for the crests range from one to three bands with dots, and smaller dots appear in the crest-hair on nos. 149, 444 and 649. Edge-strokes appear on nos. 444 and 649.

Three of these helmets are worn by Giants (on no. 444), two by Lapiths (on no. 269) and the remaining three by ordinary warriors (no. 149 actually sits on a shield and is not worn).

No. 137b is, as stated above, painted in the manner of Douris. The Brygos Painter is credited with no. 149, and two artists within his Circle are responsible for nos. 269 and 444, i.e. the Foundry Painter and the Painter of the Paris Gigantomachy. This no doubt helps to explain the

basic similarities between these six helmets. Finally, no. 649 is by the Antiphon Painter. A date within the 480s and 470s is likely for all these examples, therefore.

These helmets help to illustrate the earliest form of the Thracian helmet when it is first represented by the Athenian vase-painters. The spiralled crowns resemble the form of the Persian tiara as it is depicted at this time on the vases.[7] In addition, the high rounded forms of no. 444 recall the second type of Scythian cap on earlier black- and red-figured vases.[8] If the tiara actually took a high form at the beginning of the 5th century, then the possibility of some borrowing from both these types of head-gear seems very likely. If, however, the vase-painters were actually at fault and copied the Scythian cap for Persians as well, because they were as yet not completely familiar with the tiara, then it seems that the Thracian helmet bears closest resemblance to the Scythian cap alone. Perhaps a more accurate name would be the Scythian helmet!

Early Classical Period

The 101 EC Thracian helmets from 60 of the vases in the sample are illustrated in Figures 61-67. Of these 72 are worn, while the remaining 29 are depicted as follows:

Table 62

		Total
(a) held by the cheek-piece(s)	- nos. 71b, 125a, 151, 157, 160a, 161, 165, 323, 342, 504a?, 545, 707, 709	13
(b) held by the neck-guard	- nos. 13, 154[2], 321, 322, 541, 703	7

		Total
(c) held by the cheek-piece and the neck-guard	- nos. 158, 161, 324, 339a, 706?	5
(d) on the ground	- no. 126	1
(e) on a hook	- no. 544	1
(f) on a stool/block	- nos. 156 and 660	2

The cheek-pieces which are held on these vases, would be separately attached on the original, possibly by hinges, under the front peak. One may wonder how secure the hold would be for this type of helmet; is the painter merely copying a pose familiar for other types with fixed cheek-pieces, or should the cheek-piece be considered as more fixed than movable?

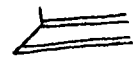
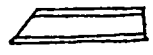
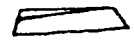
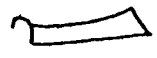
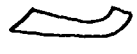
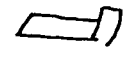
The high, rolled-up crown which we may class as form I, and which was seen on LA nos. 149 and 269, is no longer found. Form II, as on LA no. 444, is only recognisable perhaps on no. 544. The majority (58) of the Thracian helmets of the EC period belong to a new variety, form III, which is characterised by a band on the crown between it and the crest-mounting. It takes a few different shapes which can be seen, for example, on nos. 11b, 34a, 54, 70 and 165, depending on the interest and care of the artist; e.g. on no. 332 the change in angle is suggested by shading instead of a single line, while on the helmets of the Agrigento Painter the band intrudes on the crown area and the contour of the helmet is distorted by it (e.g. on nos. 63 and 323). Another 32 helmets have what may be termed form IV, i.e. a simply rounded skull-piece and a common mounting, as for example on nos. 68 and 72. These are particularly associated with the early and late phases of the Niobid Painter's work, with the Penthesilea Painter and the Painter of Bologna 279. Since they occur alongside other forms on the same vase, however, there are no grounds

for thinking of them as of different date. (Any doubt about their being Thracian is dispelled by a look at the form of the front peak.) Finally, six helmets may be described as of form V, i.e. with a more pointed crown. They are on nos. 13, 62, 156, 332, 416b and 541. It is presumably because of the shape of the crown that they have either a plume or no crest at all. Nos. 332 and 416b are by the Pistoxenos Painter, but otherwise there do not appear to be any strong connections between the artists. (N.B. four helmets which have suffered damage in the relevant area (nos. 35, 71b, 125b, 504a) have not been assigned to these categories.)

The extremely long peaks and the brims of the LA helmets are not found on the EC vases. Instead 60 end in a spiral at the end nearest the ear, 19 in a squared termination, and a further 16 in a variety of ways listed below. (N.B. four (nos. 35, 66, 125b, 504a) were damaged at this point, and on two (nos. 125b and 126) the raised cheek-piece conceals the termination.) The lower edge over the face varies from absolutely straight to slightly curved, but the difference is unimportant.

Table 63

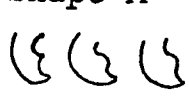
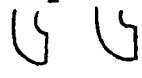
		Total
With spiral:	basic	45
	two lines above	6
	no line above	5
	two lines above and below (no. 160b)	1
	upper line rises at centre front	3
With square:	basic	12
	two lines above	1
	two lines above and below	3
	black glaze centre (no. †457[2])	2
	odd (no. 156)	1

Others:	nos. 13 , 54  , 160a & 460[2]  , & 541 	6
	no. 161 (encircling)	1
	nos. 277, 342 & 706 , 709 & 151 & 660 	6
	nos. 70 & 452  & 510 	3

The shape of the neck-guard is basically the same as that on the LA helmets, i.e. small with out-turned lower edge, sometimes with the vertical edge at the ear also shown as everted. The range of designs employed to depict this part in the EC period can be readily understood by looking at the sketches. Decoration applied to this area is rare: e.g. black centres on nos. 65[3], 71a, 125b and 451; black edging on no. 125a; a cross on no. 35; a palmette and a flower on no. †457[2]. The LA exception seen on no. 444 where the cheek-piece and neck-guard meet closely and leave no gap as an ear-cutting, becomes the norm on the EC Thracian helmets. Large, rounded cuttings only occur on nos. 63, 157 and 660, and slits of various widths on perhaps another 20.

All but five of the EC Thracian helmets (i.e. nos. 65[2], 68, 125b and 505) are provided with cheek-pieces. Ten are damaged, six partly hidden and twelve held and so also partly hidden;[9] the remaining 68 fall roughly into the same shape-categories as were applied to the cheek-pieces of the Chalcidian helmets, although these include some new, minor variations.[10]

Table 64

		Total
Shape A 	- nos. 13, 65, 71a, 126, 158, 160b, 332, 339a, 340, 455[3], 541	13
Shape B 	- nos. 35, 54, 72	3
Shape C	- nos. 11b, 34a, 62[2], 63, 66[5], 125b[3], 154[2], 156, 161, 221, 277, 321, 322, 330, 331, 335, 341,	48

		Total
	- 342, 343, 416a[6], 416b, 418[4], 451, 452, †457[2], †458, 503, 505, 510, 660, 703	
Others	- nos. 124 , 125b , 126 , & 544	4

As we shall see later it is shape C which is regularly thought of as being typical of Thracian helmets, and the vase representations here certainly seem to reflect this. However, the moustache in relief on several of the original pieces is only found on two of the painted helmets (on no. †457), and there it is not clear whether a real moustache on the wearer's face might not be intended. Black and dilute glaze edging is common, but a large area of black in the centre of the cheek-piece occurs on only nine helmets. The other forms of decoration at this period are a satyr with a horn (no. 66), a sphinx (no. 71a), a panther (no. 416b) and scales on the inside and outside surfaces (no. 72 and no. 455). The first two are by the Penthesilea Painter, the last two are late pieces by the Niobid Painter and the panther is by the Pistoxenos Painter. Just as the decoration increases in EC so too does the representation of the hinge; on 19 helmets a hinge is indicated and a further four (nos. 72, 125b, 126, 455) are portrayed raised (illogically in three cases above the peak!). On the second example on no. 62 the Niobid Painter may even have added one of the rivets which fixed the hinge to the cheek-piece.

Twenty-two helmets do not have a traditional form of crest running from front to back along the crown: on no. 707 one sees the only instance of a crest on a hooked stilt; on no. 156 a wheel carries a crest of normal shape, and on no. 416a one helmet has its crest not on the crown but on the horn which rises from the side of it. In addition, ten lack any form

of crest (nos. 13, 66, 70, 126^2, 154^2, 416a, 541 and 544): of these nos. 70, 126, 154^2 and 416a are important for clearly showing that the projection along the crown on form III goes with it and not with the crest-mounting; on no. 13 and on one helmet on no. 126 a button-like knob is attached to the top. Such buttons serve to fix plumes on five helmets on no. 416; other plumes are shown on nos. 62 (from a ring), 161, 332 and 455 (from a more elaborate cylinder). These crestless and plumed helmets are, however, the exception, and for the majority of the EC Thracian helmets a traditional crest is attached by a simple mounting of one to three bands with or without dots. Only no. 660 displays a more varied pattern, . The smaller dots and the edge-strokes in the crest-hair of the LA helmets also appear on the EC ones, 7 and 12 times respectively. New details include hair-lines (13 times), segment-lines (27 times) and very rarely (only 3 times) an extra line through the centre of the hair following the outer contour. (Of course, these details sometimes appear together on the same helmet, e.g. on no. 71a.)

Apart from the crest many of these helmets are given extra decoration on the crown itself, especially by artists in the Niobid Group. The ornamentation may be presented most easily as a list:

Table 65

		Total
(a) with a spiral on the neck-guard edge	- nos. 13, 35, 62, 70, 126, 451, †457, †458, 460, 503^2, 541	12
(b) with a spiral on the side	- nos. 416^5	5
(c) black	- nos. 62, 418, 451	3
(d) scales	- no. 505	1

		Total
(e) dolphin (or equivalent)	- nos. 63, 65, 66, 124,125a, 125b, 157, 165, 340, 341, 418^2, †458, 460, 504a, 707	16
(f) Pegasos	- no. †457	1
(g) centaur	- no. †457	1
(h) with horns	- no. 72, $416a^2$	3
(i) wreathed	- no. 544	1
(j) with florals	- at the side: nos. 62, 65^2, 68, 70, 71a, 72, $125b^3$, 126^2, 158, 221, 324, 339a, 339b,343, 455^4, †457^2, 503^2, 505, 541, 706	29
	- at the back: nos. 221, 324, 339a, 339b, 505	5
	- at the front above: nos. 68, 72, 126^2, 339a, 339b, 445, †457^2, 504a	10
	- at the front below: nos. 62, 221, 324, 503, 505.	5

Some interesting conclusions can be made concerning the artists of these Thracian helmets by studying the decoration applied to them. For example, the three helmets in category (c) were painted by the Niobid Painter (early in his work), the Altamura Painter and the Blenheim Painter respectively, all of whom are very closely related according to Beazley. In category (e) only five of the helmets were not painted by artists in the Niobid Group (i.e. nos. 63 the Agrigento Painter, 66 near the Penthesilea Painter, 157 and 165 Hermonax, 707 the Aristomenes Painter). And finally the florals of category (j) are heavily associated with the Niobid helmet, for those at the back are all by the Niobid Painter himself, as are those at the front

below (three in his early and two in his middle period), and those at the front above are by the Niobid Painter in his late/very late period except for no. †457 which is by the Altamura Painter. Even the examples of florals at the side of the helmet include only three by artists outside this group (viz. no. 71a by the Penthesilea Painter, no. 541 by the Euaichme Painter and no. 706 by the Sabouroff Painter). The Niobid Painter and his Group certainly seem to have adopted the Thracian helmet readily and created for it a particular style of their own.

A list of the wearers or owners of the EC Thracian helmets follows:

Table 66

			Total	%
Heroic/Mythological Figures			60	59
	Ares	3		
	Giants	10		
	Greeks in Amazy.	16		
	Heroes	14		
	Seven against Thebes	6		
	Achilles	1		
	Ajax	1		
	Lesser Ajax	1		
	Kaineus	1		
	Memnon	2		
	Menelaos	3		
	Neoptolemos	1		
	Nestor	1		
Ordinary Figures			41	41
	arming	11		
	departing	14		
	fighting	8		
	with Nike	2		
	woman	4		
	without further context	2		

The ordinary wearers of this helmet are outnumbered by the heroic/mythological and divine ones. The artist was quite happy, therefore, giving this recently adopted, everyday type of helmet to the legendary warriors of the past and imaginary figures. One notes also the omissions from the

list, in particular Athena and Amazons. Similarly, Achilles does not appear to have any strong association with this type of helmet at this time.

A list of all the artists to whom these EC Thracian helmets can be attributed, follows:

Table 67

		Total
*Niobid Painter	- nos. 62^2, 68, 72, 124, 126^3, 158, 221, 324, 330, 339^2, 340, 343, 455^4, 503^2, 504^2, 505^2	26
*Niobid Painter, manner of	- nos. 341, 519	2
Penthesilea Painter	- nos. 11b, 71a & b, 161^2, 544,	6
Penthesilea Painter (Furtwängler)	- no. 66^6	6
*Altamura Painter	- nos. 35, 54, 418^4, †457^2, †458, 460^2	11
Pistoxenos Painter	- nos. 332^3, 416a^7 & b	11
*Painter of Bologna 279	- nos. 65^3, 125a & b^6	10
Agrigento Painter	- nos. 63, 322, 323	3
Deepdene Painter	- nos. 160 a & b, 545	3
Hermonax	- nos. 157, 165, 709	3
Sabouroff Painter	- nos. 34a, 331, 706	3
Euaion Painter	- no. 154^2	2
Providence Painter	- nos. 452, 703	2

With one helmet only:

Amphitrite Painter	- no. 510	Follower of Makron	- no. 156
Aristomenes Painter	- no. 707	*Geneva Painter	- no. 70
*Blenheim Painter	- no. 451	Leningrad Painter	- no. 151
Cleveland Painter	- no. 277	Oionokles Painter	- no. 335
Earlier Mannerist	- no. 13	Ptr. of Bologna 228	- no. 321
Euaichme Painter	- no. 541	Ptr. Syracuse 23510	- no. 342

Unattributed - no. 660 — 1

As already pointed out, these Thracian helmets are popular with the Niobid Painter and the painters working near him; half of the total are by them (the painters marked by an asterisk). The five Mannerist helmets (i.e. no. 13 by an unspecified Earlier Mannerist, no. 151 by the Leningrad Painter, and nos. 63, 322 and 323 by the Agrigento Painter) may serve to illustrate something of the Thracian type when not dependent on the Niobid style. Of the two followers of Douris, the Euaion Painter perhaps comes closer to the LA helmet in the manner of Douris (no. 137b) than does the Euaichme Painter. And if one looks at the helmets by the two pupils of the Berlin Painter, one finds that Hermonax has his own definite style which is slightly different from that of the Providence Painter. The Oionokles Painter, a follower of the latter, develops his own style of peak, cheek-piece and neck-guard on no. 335.

Classical Period

In the Classical period fewer Thracian helmets are portrayed on the vases in the sample than in the preceding EC, for we are dealing with only 68 on 59 vases (Fig. 68-73).[11] Of these, 25 are not worn by their owners, that is about 37% as opposed to the 29% of EC helmets. In addition, the positions in which these helmets are to be found, are even more varied than in EC, as the following list illustrates.

Table 68

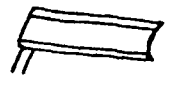
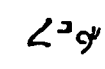
		Total
(a) held by the cheek-piece	- nos. 17, 361, 372, 700	4
(b) held by the neck-guard	- nos. 19, 173	2
(c) held by the cheek-piece and the neck-guard	- nos. 376, 540, 691	3
(d) held by the front peak	- nos. 379, 607, 609, 690	4
(e) held inside the crown	- nos. 16, †351, 357, 710	4

		Total
(f) held (not clear how)	- nos. 20, 171	2
(g) on the ground	- nos. 293, 296	2
(h) in the upper background	- no. 695	1
(i) on the step of a stele	- nos. 604, 605	2
(j) on a shield	- no. 170	1

The commonest form of the crown in EC, i.e. form III with the band along the top, becomes even commoner in CL since it is depicted on 48 of the helmets (71%). The minor variations in the drawing of the band which were mentioned with regard to the EC helmets, also appear here. Form IV with a simple, rounded crown occurs 12 times (18%), and form V with a pointed top seven times (10%). The latter is therefore slightly more common than in EC where it constituted 6% of the examples, the former is much rarer. There does not appear to be any strong connection between the artists who are credited with the helmets of forms IV and V, which might have helped to explain the varieties as an artistic convention. Sometimes one suspects that form IV especially has been created by the carelessness or incompetence of the painter (e.g. no. 173, 527 or 691), but this explanation will not suffice for other cases (e.g. no. 20, 171 or 582). As in EC form V tends to inspire a plume or hooked stilt instead of a low crest, but note the exception on no. †428. Neither form I nor form II is depicted in this period. (One helmet on no. 96 is obscured in the relevant area and has not been included in the categories.)

As in EC the drawing of the peaks includes a number of unusual shapes; however, even more (69%) can be considered as having a spiralled end, and only seven (10%) as squared. (N.B.Three (nos. 238, 461, 582) are obscured and two damaged (no. 462[2]), and so not included in the following table.)

Table 69

		Total
With spiral:	basic (N.B. 3/4 view on no. 462)	25
	two lines above	12
	no line above	5
	two lines below (no. 19)	1
	upper line rises at centre front (incl.no.602)	4
With square:	basic	4
	two lines above	2
	with spiral inside (no. 469)	1
Others:	nos. 81 , 82a  , 92 , & 528	4
	nos. 604 & 609	2
	nos. 87 , & 605 	2
	no. 583 (possibly a Chalcidian hybrid; note the nose-piece)	1

The neck-guards follow much the same pattern as on the LA and EC helmets; a few oddities are noticeable, e.g. the heavier form on no. 41, the tiny form on no. †423, the unique forms on nos. 87 and 604, and the particular profile of the lower edge on no. 20. There is perhaps more emphasis now on a forward and downward projection of the front corner under the ear, e.g. on nos. 56, 81, 82a, 116, 283, 360, 582^{2}, 585 and 609. Something of this could already be detected on the EC vases, e.g. on nos. 66, 125a, 324, 339b, 505 and 707, but it seems to be more characteristic of the CL period. The limited range of decoration added to this area in EC is further reduced in CL; only nos. 173 and 540 have some black glaze applied to them. As in EC most helmets allow no space between the cheek-piece and the neck-guard at the side; on perhaps 23 there is some kind of slit, but a wide opening

is only seen on nos. 583 and 695. (The former has already been mentioned above as displaying features which suggest a closer relationship with the Chalcidian type.) Finally, we may note the large ear which projects from the side of no. 462; one might question whether this really belongs to Ares, the wearer of the helmet. Is it to be imagined as a decorative piece added to the helmet itself?

Roughly the same percentage of CL helmets lack cheek-pieces as EC (i.e. on nos. 116, †423 and 582). Twelve of the cheek-pieces on the other helmets are damaged or partially hidden, while one (no. 372) is hidden by the hand which holds it.[12] The remaining 52 fall into the following groups according to their shape:

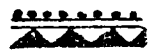
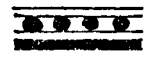
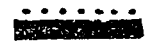
Table 70

	Total
Shape A - nos. 16, 238, 357, 461, 528, 695	7
Shape B - nos. 17, 376, 540	3
Shape C - nos. 19, 41, 55b, 56, 99?, 170, 173, 283, 284, 293, 296, 360, 363, 379?, †428^2, 462^2, 469, 524, 527, 551, 582^2, 585?, 602, 604, 607, 609, 687, 690, 691?, 700, 710	34
Others - nos. 81, 82a, †351, 373 ⋃, 461 & 582? ⋃, 462 ⊔, and 583 ○.	8

Of the three main shapes, therefore, C is again the commonest and is depicted on 50% of the helmets which is roughly the same as in the EC period. No moustaches are shown on these cheek-pieces, and the added detail and decoration are rarer than in EC; for example, less than a quarter have edging marked within the outline, and black in the centre is found only on no. 695. The figural decoration only extends to a 'panther' on no. 41 by Polygnotos and a snake on nos. 293 and 296 by the Mannheim

Painter. Similarly hinges are far less often depicted, for, although three helmets have the cheek-piece in the raised position (on nos. 238, 461 and 582), there is only something like a hinge drawn on no. 527; 'rivets' occur on no. 528, and added yellow in the hinge area on no. 20.

In the sampled Thracian helmets of the CL period 16 (23%) are not provided with the usual form of crest; that is about the same percentage as in the EC period. This time there are more instances of hooked stilts, on nos. 376, 582 which is developed into a bird-form, and 583; the first and second are by artists in the Group of Polygnotos, the third by Aison. One crest is borne on a wheel-like ring (on no. 462), four take the form of single plumes (on nos. 293, 296, 361 and †428) and eight lack any crest or plume altogether (nos. 283, †428, 462, 540, 582, 602, 607 and 690). None of the CL helmets has the button-like knob of some of the EC. On no. 20 one finds the extra features of side-crests attached to scaled wings and behind them long, narrow feathers. Shorter, thicker feathers occur on no. †351 which is attributed to the Academy Painter and is probably to be dated later in the period, ca. 425-00 B.C.

The crest-mountings show a little more variety than in the preceding period, e.g. on no. 16  (cf. no. 357), both by the Hephaistos Painter, and on nos. 171 , 583  , and 710  . Red is used for the mountings on two of the white-ground lekythoi (nos. 605 and 609).

The details applied to the crest-hair itself include the dots (7 times) and the edge-strokes (14 times), both of which are more common than in EC, the segment-lines (possibly 20 times which is slightly more than in EC), and only once hair-lines (on no. 528) which is in sharp contrast to the EC situation. In addition, there was a band of red originally on the outer edge of the crest-hair on no. 710,and on no. 20 the central crest

had yellow edge-strokes and a meander on a white ground.

The CL helmets tend to be given less additional decoration on the crown itself than was the case in the EC period. A similar list to that presented in Table 65 helps to illustrate this.

Table 71

		Total
(a) with a spiral on the neck-guard edge	- nos. 82a, 92, 94, 461[2], 527, 528	7
(b) with a spiral on the side	- no. 17	1
(c) dolphin	- nos. 94, 379, 469, 582	4
(d) Pegasos	- no. 360 (white on yellow/ orange)	1
(e) lizard?	- no. 90	1
(f) griffin	- nos. 96, 540 (on black)	2
(g) blob	- nos. 376, 691	2
(h) striped	- no. 238	1
(i) with feathers	- no. 582	1
(j) with wings	- no. 582 (cf. no. 20)	1
(k) with a wash	- nos. †423, 527, 690 (modelling shape)	3
(l) with florals	- at the side: nos. 16, 41, 173, 357, 461, 527, 528, 604, 605, 607?, 609, 695	12
	- at the front above: nos. 94, 461	2
	- at the front below: nos. 20, 528	2

As with the EC helmets one can make some conclusions concerning the artists of these CL Thracian helmets by considering the above extra

features on them. For example, the preference among painters in the Niobid Group for a dolphin on the side is paralleled in the CL period by the Group of Polygnotos to which are attributed all the cases listed in category (c) above. This is surely largely the result of the fact that Polygnotos himself, according to Beazley, came from the school of the Niobid Painter. Similarly, while in the EC list the examples of figural decoration were associated with the Niobid Group, so in the CL the figures in categories (c) to (f) can be associated with the Polygnotan Group through Polygnotos himself, the Hector, Kleophon and Lykaon Painters, and unspecified artists in the Group. The floral decoration in (1) is much reduced compared with the EC range, but that as we saw was largely based on the work of the Niobid Painter and his Group. This decoration on the side does not appear to have interested the Polygnotan artists to the same extent; only no. 41 is by Polygnotos, and no. 461 in the manner of the Peleus Painter, and neither displays the extravagance of the Niobid floral. At the front there is perhaps more evidence to suggest an artistic tradition; only the example on no. 528 is not by Polygnotos or an artist in his Group. But one should still note that there are no instances of the floral at the back which the Niobid Painter alone in EC had adopted. Instead, one can point to a number of examples of side-florals, simple palmettes, which attracted three of the later Mannerists, namely the Hephaistos Painter (nos. 16 and 357), the Duomo Painter (no. 173) and the Painter of Oxford 529 (no. 695). However, they seem to have picked on this detail themselves, for one does not find it on the EC Thracian helmets of the Earlier Mannerists mentioned above.

The CL Thracian helmets are worn or owned by the following figures:

Table 72

			Total	%
Heroic/Mythological Figures			42	62
	Ares	2		
	Athena	1		
	Giants	5		
	Amazons	2		
	Greeks in Amazy.	15		
	Heroes	2		
	Lapith	1		
	Achilles	5		
	Ajax	1		
	Lesser Ajax	1		
	Hektor	1		
	Kaineus	2		
	Kodros	1		
	Menelaos	2		
	Neoptolemos	1		
Ordinary Figures			26	38
	arming	3		
	departing	8		
	fighting	3		
	with Nike	1		
	at tomb	5		
	woman	1		
	without further context	5		

Almost the same percentage of ordinary warriors have this type of helmet in the CL period as in EC, and again the majority occur in departure scenes. Achilles now stands out in the list of individual heroes, and Amazons and Athena appear, though the Thracian helmet is clearly not the painter's first choice for them.

The CL helmets were drawn by the following artists:

Table 73

		Total
*Polygnotos	- nos. 20, 41, 77, 96, 116, 283^2, 284, †428^2, 524, 585	12
*Group of Polygnotos	- nos. 17, 19, 56, 92, 94, 379, 582^4	10
Achilles Painter	- nos. 170, 171, 363, 551, 609, 690, 710	7

		Total
Achilles Painter, manner of	- no. 602	1
*Peleus Painter, manner of	- nos. 373, 461[3]	4
*Lykaon Painter	- nos. 360, 376, 540	3
? very late Painter of Woolly Satyrs	- no. 462[3]	3
Alexandre Group	- nos. 81, 82a	2
Bird Painter	- nos. 604, 605	2
*Guglielmi Painter	- nos. 87, 99	2
Hephaistos Painter	- nos. 16, 357	2
Mannheim Painter	- nos. 293, 296	2
Shuvalov Painter	- nos. 238, 700	2

With one helmet only:

Academy Painter	- no. †351	*Hector Painter	- no. 469
Aison	- no. 583	Heimarmene Painter, connected with	- no. 528
Barclay Painter	- no. 361	*Kleophon Painter	- no. 90
Codrus Painter	- no. 55b	Ptr. Leningrad 702	- no. 527
*Curti Painter	- no. 95	Painter of Oxford 529	- no. 695
Duomo Painter	- no. 173	Washing Painter	- no. †423
Group of Palermo 16, connected with	- no. 691		

Unattributed - nos. 372, 607, 687 3

Half of the helmets are painted by artists who are associated with Polygnotos; these are marked by an asterisk. As a result the popularity of the Thracian type in this group may be compared with the similar situation in the EC Niobid Group. The helmets connected with the Achilles Painter form a smaller group; the shape of the cheek-piece is often characteristic for these, e.g. on nos. 170, 363, 551 etc. The Later Mannerists have already been mentioned above for their florals; they share a similar shape for the helmet as a whole

(cf. nos. 16, 173, †351, 357, and 695) which can be compared with the earlier ones especially by the Agrigento Painter.

Late 5th cent.

As always when it comes to Attic vases of the late 5th and 4th centuries the illustrations of armour become exceedingly rare, and here we are looking at only four Thracian helmets on three vases, so that one cannot talk in terms of percentages to reach any useful conclusions. The helmets in question are drawn in Figure 73. All are worn by their owners. Those on nos. 464 and 465 may be classed as belonging to form III, although the crowns are now more close-fitting and lower, and the general impression is different. The helmet on no. 431 in contrast continues the tradition of form IV and may be compared with the CL helmets on nos. 81, 373 and 461.

The peaks are also responsible for the different feel of these helmets; none of them actually flares outwards above the forehead. Instead they follow the line of the crown downwards and lie close over the wearer's brow. An indication of this change can perhaps be detected on one or two of the CL helmets, e.g. on nos. 81, 82a, 372 and 582. On no. 465 one may also note that the upper line of the peak runs up to just below the front of the crest, i.e. further up the crown than has been at all normal up till now. The variation in the termination of the peak over the ear is still seen here; no. 431 has the squared form, while those on no. 464 are spiralled and a complete circle is formed on no. 465. This circle is surely a part of the peak and not to be thought of as a stunted type of round cheek-piece.

The neck-guards maintain the basic shape with out-turned lower edge

on no. 464, and out-turned, front and lower edge on nos. 431 and 465. Only the latter shows any hint of a possible extension of the angle towards the front. The guards on nos. 464 and 465 also have the small size which is particularly common on all helmets drawn in this period and later. None is decorated, and ear-holes are not provided between the neck-guard and the cheek-piece; a small gap does appear on one of the helmets on no. 464 and on no. 465, however.

Cheek-pieces are drawn on all but no. 465. Their shapes are essentially the same; the surprising thing is that they do not belong in any of the three main categories, A, B or C, but are comparable to the unusual shape of some of the CL cheek-pieces, as, e.g., on nos. 81, 82a, †351, 373 and 461. All three are simply edged; there is no additional decoration nor any sign of a hinge.

All four helmets have the basic crest on a low mounting. The designs on the mounting itself continue the CL range of bands with dots or squarer sections or red (?black) filling. Of the internal details given to the hair itself, the hair-lines alone appear, on three of the helmets on nos. 464 and 465.

Despite the lack of extra decoration on the neck-guards or cheek-pieces, the crowns are not left completely plain: a spiral is created from the back on one helmet on no. 464; both of the helmets on that vase have a tendril off the peak at the side; and the whole of the crown on no. 465 is covered in large dotted scales, a pattern which occurred only once before on a Thracian helmet, on EC no. 505.

Three of the helmets (on nos. 464 and 465) are worn by Giants, one (on no. 431) by a warrior in a fight. The former have been regularly associated with this helmet throughout the 5th century. The ordinary

warrior continues to be in the minority.

The painters of these helmets are not related to each other in any significant way and little can be said about them. Obviously the two helmets by Aristophanes on no. 464 are very similar, in fact, not only to each other but also to his Attic helmets on the same vase from which they can be distinguished only by the projection along the top of the crown. No. 431 is in the manner of the Woman Painter, and no. 465 was considered by Beazley to be related to the Pronomos Painter.

4th century

The Attic vases in my sample only supply us with two 4th cent. helmets on two fragments (Figure 73, below). Both are worn. That on no. †102 seems to follow on from the late 5th cent. helmets on nos. 464 and 465 above, and accordingly can be considered to be of form III, although the indentation below the crest at the front is now considerable. The helmet on no. 435, however, is completely unexpected and extraordinary, for, as it seems, a tall, rounded hook has been applied to the top of a simple, close-fitting crown. The spear, unfortunately, conceals the important point of contact, but it would appear that the support for the protuberance runs down the back of the crown as well. Ridiculous and impossibly far-fetched one would say, for there has been nothing like this among the previous helmets since the high, bulging forms of the LA period, but with the shape and construction of the recently discovered, iron helmet in the tomb at Vergina in mind,[13] one is forced to take this development of the Thracian helmet seriously.

The peak on no. †102 also seems in line with the late 5th cent. development discussed above, with a simple form of the spiral at the end. That on no. 435, on the other hand, has more in common with the Attic frontlet,

since it stands up vertically from the crown. That it has some form of knob or button at the end, and not the wearer's ear, may be deduced from its position on the head.

Again, while the neck-guard on no. †102 seems to follow a normal line from the late 5th cent. examples, that on no. 435 is striking for the lack of any indent at the back, any indication of the edge turned up, and for the presence of the very obvious forward projection. Cheek-pieces are omitted from both helmets. Only the helmet on no. †102 has a crest on a dotted mounting along the top - the one on no. 435 hardly requires such an extra. The crest-hair is marked with segment-lines and edge-strokes. A single line on the crown of no. †102, roughly following the front outline, is the only sign of decoration on these helmets.

The first helmet is worn by a Greek in an Amazonomachy, the second by a fighting warrior. The first fragment has not been attributed to a painter. The second was said by Beazley to belong with vases which are "not so close to Group G". Schefold attributed it to the Hippolytos Painter in the early Kerch Period, i.e. about 375 B.C.[14]

Summary

There is no need here to repeat the many comments made in the preceding text. However, I think it is important to emphasise the development of the shape of the crown of the Thracian helmet as it has evolved in the Attic vase-paintings. The earliest examples were of forms I and II with a high, rounded top which we related to the second type of Scythian cap and the tiara as they were depicted at the same time in the first quarter of the 5th century. For the rest of the century, however, it was form III in particular, with some examples of forms IV and V, which characterised the

Thracian helmet. Form III continues to appear in the 4th, but only then does a form with a high, hooked top appear. This may seem to recall the original form of a century before, but it is, in fact, different in concept, and we shall call it form VI.

THRACIAN HELMETS IN SCULPTURE

Catalogue and Commentary

Thracian helmets are not at all common in works of sculpture of the 5th century B.C.

1. There is a very badly damaged terracotta head of a warrior from the Athenian Agora which may date from ca. 460. Agora T 3253, possibly from an akroterion. Hesp 23 (1954) 61-2 pl. 14a, H. (now) 21.3 cm., W. 13.2 cm. (H. Thompson); Richter, Hdb 94 fig. 115.

Little of the front and the crest-mounting now survive, but, on the basis of the height of the crown area, the volute-ended peak and the neck-guard, one may propose that this was originally a Thracian helmet of possibly form III. The crown is off-set from the thick-edged neck-guard, and there were probably cheek-pieces once attached in the holes in the cheeks (though it is unlikely that they were raised as Homer Thompson suggested). Traces of purple paint were reported, and one can easily make out the Pegasos which adorns the side of the crown, and the meander on the crest-mounting - both apparently in the red-figure technique.[15] Considering the material and the technique employed, it seems natural to compare this helmet with those on the red-figure vases; the Pegasos decoration was not often encountered, only on EC no. †457 and CL no. 360 (a closer parallel); the true meander is rarely found

on any of the helmets in the sample, but one may recall its use on other mountings in art (cf. the crests discussed in Appendix A).

2. Another Thracian helmet is clearly depicted on the frieze from Bassae in the British Museum (ca. 395 B.C.). Hofkes-Brukker & Mallwitz, 63-4 H9-521. Cf. the drawing by Schröder 335 fig. 15.
It is worn by a Lapith in the Centauromachy. This helmet is of form III with the raised, crest-like ridge along the top of the crown; the neck-guard resembles that on the terracotta head above, save that the front edge seems to be continued up and over the obvious ear-cutting; it is not clear in the illustrations just how the peak terminates in front of this, but there is no volute; below this point is attached a cheek-piece of shape B. There is no sculptured decoration.

With this example of a Thracian helmet from Mainland Greece in mind, one may briefly consider next a number of helmets illustrated in Lycian sculpture of the early 4th century.

3. Block no. 1393 of the west frieze of the Inscribed Pillar at Xanthos depicts part of a warrior (probably on a horse) about to spear his enemy. Xanthos I pl. XXXIII; AA 1968 225 fig. 38 and 227-8 where Borchhardt calls the helmet 'Attic'.[16]
Unfortunately the front of the head is lost, but from what remains one can, I think, make out a Thracian helmet of form III with the trace of a volute at the side.

4. On the Nereid Monument of ca. 380 B.C. there appears a form of helmet which comes extremely close to the Thracian type of form IV.[17] At least it cannot be classed as Chalcidian or Attic, for it lacks the ear-cutting of the former and the projecting frontlet of the latter.

It can be seen on slabs 852[18] and 859[19] of the first frieze, and 866,[20] 869[21], 870[22], 878[23] and 882[24] of the second frieze. Its most peculiar feature is the peak which appears to be concave and to end in a very simple curved form (not a real volute) at the side, as on one vase, late 5th cent. no. 431. Sometimes it rises like a few of the peaks on EC, CL and Late 5th cent. vases, or like the offset-line of the Chalcidian helmet at the centre front. The cheek-pieces usually take a shape with a straight front edge, i.e. ⋃ , or rarely a sickle-shape.[25] The former, of course, can be paralleled on Attic vases of the second half of the 5th century, but the latter is not at all normal for the Thracian form.

5. The reliefs from the slightly later Heroon at Limyra (ca. 370 B.C.) display a more readily recognisable form of the Thracian helmet, that is in form VI with the high, hooked crown. IstMitt 17 (1967) pl. 14.2 and AA 1970 374 fig. 25 (both Borchhardt); Borchhardt, 51-2, 64 figs. 12-13 pls. 20-22.

At least 7 of the 16 hoplites in the phalanx on the block from the west frieze wear this helmet; the second figure from the left in the front rank seems rather to wear one of form V.[26] All but three of these are crested. It is noticeable that were it not for the different shape of the crown the Thracian helmets here would be indistinguishable from the Attic ones beside them; the forms of the neck-guard and the peak/frontlet are the same. The cheek-pieces on six of the helmets are of shape C with an indentation for the eye and the mouth. Another Thracian helmet is depicted on a rider on the block from the east frieze of this Heroon. AA 1970 381 fig. 37; Borchhardt, 57 figs. 14-15 pl. 26.2 and 4. It is similar to the helmets from the west side

with cheek-piece and neck-guard, but it is closer to form II than VI in the shaping of the top. It lacks a crest and the peak is represented less like the Attic frontlet. Borchhardt saw in this rider "ein rein europäisches Gesicht" while those of his companions betrayed their homeland as Persia, Ionia or Asia Minor.[27] There is certainly a difference in form between the Thracian helmet on this figure and those on the hoplites of the west frieze, and one wonders, if this is a Greek mercenary in his Thracian helmet, are the others Lycians in their variation on the Thracian type, or are these simply two, different artists' impressions of the Thracian characteristics.

6. At Kadyanda also a Thracian helmet of form II is worn by the rider of the Rider Monument which Borchhardt dated later in the second quarter of the 4th century. AA 1968 174-238 esp. 215-238.
Since it is seen in three-quarter view, we can see that the peak rises to a point at the centre front and ends in a volute at the side, recalling some of the helmets mentioned above on the friezes of the Nereid Monument.

In Lycian art, then, we find a Thracian helmet of form III possibly on the Inscribed Pillar; a lot of helmets similar to form IV (but without the standard peak of the Attic vase-paintings and the Bassae helmet) on the Nereid Monument; helmets of form VI (and probably one of form V), again without the standard peak, on the west frieze of the Heroon at Limyra; one example of form II on the east frieze with another of the same on the Rider Monument at Kadyanda.

We return now to the Greek Mainland where the Attic grave reliefs provide more examples of Thracian helmets of the 4th century.

7.-8. Two loutrophoroi to Polystratos from early in the second quarter of the century depict small armour-bearers behind (i.e. to the right of) the standing warrior. Athens, N.M. 2563 & 3483. AM 51 (1926) 57-74 esp. figs. 1 and 3 (Blümel); Stupperich, cat. nos. 117 and 140 (with refs.).

Each wears the Thracian helmet on his own head. Both the helmets are of form VI with the high, hooked crown, and both are equipped with neck-guards and, it seems, full face-guards (i.e. not simply cheek-pieces with modelled beards).[28] They differ, however, in the shape of the piece over the brow: one has a prominent, Attic-like frontlet, the other the Thracian peak or channelled brim which is found on originals of this form.

9. A similar scene is portrayed on the lekythos to Euphemos in Copenhagen from about the middle of the century, but here the attendant holds the helmet in his hand. Copenhagen, Glyptothek no. 226. AM 85 (1970) 54-99 esp. 60 and 66f. and pl. 37 (Prukakis-Christodoulopoulos); Stupperich cat. no. 445.

Again it is clear that the crown is of form VI with a simple neck-guard, but with a deep peak (or frontlet?) which ends in a volute over the sickle-shaped cheek-piece. Thracian helmets of this form are depicted on at least two more contemporary lekythoi, but the details are not clear so that little more can be said of them.[29]

In the second half of the century Thracian helmets appear on two major monuments in Athens.

10. On the first, the relief from Eleusis (ca. 350-325 B.C.), it is once more a small figure, a naked boy, who holds the warrior's helmet

for him. Athens, N.M. 834. Conze, no. 1023 pl. 201; Stupperich, cat. no. 38 (with refs.).

The top of the crown is partly concealed by the warrior's left hand, but enough is visible for us to assign this helmet too to form VI. The lower part of the helmet, however, is unusual, for there is a large, rounded ear-cutting between the neck-guard and the (now broken) cheek-piece. In addition, there is an offset-line marked around the helmet, so that this seems to be a hybrid form with the Chalcidian.

11. The stele of Aristonautes may be contemporary or belong towards the end of the century. Athens, N.M. 738. Conze, no. 1151 pl. 245; Stupperich, cat. no. 15 (with refs.); Gk Mus pl. 74 (colour). Aristonautes' helmet was also originally of form VI, although here the rounded point has been broken off. It has a neck-guard and a channel over the face in which a series of large holes has been drilled. Von Graeve[30] rejected Studniczka's suggestion that these held a metal wreath, and proposed instead that a bronze peak had been separately worked and applied here. Such a peak is, I suppose, possible, but one wonders what the effect of the two materials to reproduce one item would have been, and in any case an additional part for the helmet seems unnecessary when one compares the shape here with the originals of form VI discussed later. The cheek-pieces were certainly added separately to the helmet and fixed in small holes at the sides; whether bronze or marble was used for these one cannot tell. The rough treatment of the cheeks themselves suggests that they were of shape C, though of a very slender form which would have hardly protected the face at all.

Despite variations in the form of the front part, these grave reliefs from in and around Athens have been unanimous in showing the Thracian helmet in its form VI. This is also the form the helmet takes on the next example.

12. The rider on the relief from Pelinna in Thessaly of the middle of the 4th century. Philip of Mac, 83 pl. 54.

    It has a long neck-guard, a cheek-piece of shape A and a close-fitting peak which ends in a large volute at the side. The peak, in fact, although it does not project from the skull on top like an Attic frontlet, still does not stick out below in front of the rider's face; instead,it appears to dip down at the centre and to fit closely over the forehead. One recalls the helmet of Euphemos mentioned earlier.[31]

13. The last example of a Thracian helmet in sculpture from the Classical period which I intend to discuss, is to be seen on slab 1015 from the Amazonomachy frieze of the Mausoleum at Halicarnassus, and now in the British Museum. Lullies & Hirmer pl. 215 top; ASCG figs. 208, 211, and 217.[32]

    It is worn by the Greek warrior in the centre and takes us back to helmets of form III. It has a small, neat neck-guard with raised edge, which is set off from the skull-piece by a relief-line which forms a spiral behind his ear.[33] The Attic-like frontlet also terminates in a spiral at the ear, in front of the other. This constitutes the only decoration on the helmet, which also appears to be without a cheek-piece.

Summary

Classical sculpture does provide illustrations of Thracian helmets, but in small number.[34] Form II may be seen on two of the Lycian Monuments

of the first half of the fourth century. Form III appears to be more characteristic of the 5th century, since it only occurs on the Mausoleum frieze in the 4th. Forms IV and V are possibly represented on the Lycian reliefs; form VI definitely is, and it is also well-represented in Athens and Thessaly, from ca. 380 onwards. There was considerable variety in the shapes of the peaks which often took on the characteristics of the Attic frontlet; volutes were optional. Crests were also optional, but one may note that they could be fitted even on helmets of form VI. The cheek-pieces ranged from shapes A, B and C to sickle-shaped and ⋃ . There was a suggestion of a complete face-mask on two of the Attic examples, but no further evidence for this feature at this date was found. Finally, an ear-cutting was depicted on the helmet from Bassae and again later from Eleusis, despite the fact that this is not a normal characteristic of the Thracian type; indeed, the latter came very close to a hybrid form with the Chalcidian type. As for the status of the owners of these helmets, both heroes, e.g. a Lapith or a Greek in an Amazonomachy, and ordinary Greeks or Lycians, both hoplites and cavalry, could be equipped with this type of helmet.

THRACIAN HELMETS IN MINOR WORKS OF ART

Catalogue and Commentary

a) Bronze reliefs

1. Two pieces of bronze relief sculpture of the 4th century show the Thracian helmet worn by a Greek in combat with an Amazon. The first appears on the left shoulder-flap from a bronze muscle-corselet in the British Museum. Walters no. 285. Birchall & Corbett, pl. 45; Cook, GRA 130, 132 fig. 104; LIMC I pl. 498 Amazones 478 a-b, after 350 B.C. (p. 617).[35]

Another is probably worn by the Greek on the right piece, but the damage to this one is so great that only the basic form can be made out; it seems to have been similar to that on the left. Both shoulder-pieces, of course, are now commonly known as the Siris Bronzes, and may be dated to ca. 375-350 B.C. The Thracian helmet represented here is of form III without a horse-hair crest on top. The side of the crown is decorated with the large volute which runs off the (now damaged) peak; a deep neck-guard with raised edge is set in below the back of the crown. There is no cheek-piece over the Greek's beard.

2. Another relief on which it is a Giant who is coming off worse in his fight against Dionysos, is also in the British Museum, but this time on a mirror cover found in a tomb in Elis. Acc. no. 1906.4-25.1. JHS 29 (1909) 161-2, identified as an Amazonomachy (Marshall); Züchner, 50-1 KS69, Corinthian, second quarter of the 4th cent.

This helmet is of form VI, and is fitted with a crest. The crown is offset all the way around by a line which as a result marks off a continuous neck-guard - peak area. The front part projects over his face, while the longer neck-guard fits closely against his neck, and so there is a sort of fold in the metal near the ear. As we shall see, this corresponds well with the originals of this form. The cheek-piece can only just be made out. The relief is probably contemporary with the Siris Bronzes.[36]

b) Mosaic

1. In the Villa of Good Fortune at Olynthos a pebble mosaic showed Achilles receiving the armour brought to him by Thetis and two Nereids on sea-monsters. Olynthus XII 359 ff. col. pl. III; Rumpf, MZ 123 pl. 39.5;

LIMC I pl. 112 Achilleus 526, ca. 420.

The second of these holds a Thracian helmet of form VI made up of mostly white pebbles (with a very few red, yellow and grey ones apparently scattered at random over the crown and cheek-piece) with red for the peak. This peak is actually more like an Attic frontlet since it projects in front of the crown and ends in a circle at the back. The cheek-piece is perhaps to be thought of as of shape A rather than of shape C. The neck-guard is small being little more than a splaying-outwards of the back of the crown. A very odd and inexplicable feature is a down-turned hook, composed of three white pebbles, at the back.[37] Although it was stated above that the few coloured pebbles seem to serve no purpose in the design, it should perhaps be added that a cluster of four grey ones on the front edge just above the peak might be indicative of relief decoration at this point, e.g. a palmette or head of Athena. Robinson suggested a date for this mosaic "somewhere between 420-410 B.C." on the basis of the style of the surrounding patterns. Rumpf preferred a date a little later, ca. 410-390. In either case this mosaic would provide the earliest evidence seen so far for the Thracian helmet with the high hooked crown, i.e. form VI. The fact that it was sited in the Chalcidice, in Northern Greece, may also be significant.[38]

c) Gems and Rings

1. Thracian helmets are rarely represented in this art-form.[39] It is possible that something resembling a Thracian helmet of form IV is worn by a kneeling hoplite on a chalcedony gem from Tarentum of mid 5th century date. Sir John Soanes Museum, London. GGFR 206-7 fig. 213.

The peak at the front is emphasised, the neck-guard and cheek-piece are to be deduced, so that the impression is rather one of a modern cap. Low down at the back of the crown it has a small round 'button'. The whole effect, therefore, is similar to the unusual Thracian helmets by the Pistoxenos Painter on cat. no. 416.

2. A triple-crested helmet is worn by Athena or an Amazon on a gold ring from Sicily, now in the British Museum. Acc. no. 72.6-4.927. Richter, EG 95 no. 313; GGFR 217.3 (colour) 228 pl. 762.
The crown rises up into the hooked top of form VI, with vertical ridges stressing the shape.[40] The locks of hair waving back from the face conceal not only any indication of the neck-guard, but also of a peak or frontlet. It seems to be essentially a triple-crested skull-cap. Richter proposed a date of "perhaps the last quarter of the fifth century", presumably by comparison with the three-quarter views of helmeted heads of Athena on coins of that date.[41] If so, it would constitute another early instance of the form VI top. Boardman preferred to place it in the 4th century.[42]

THRACIAN HELMETS ON COINS

Catalogue and Commentary

1. The silver decadrachms of Syracuse designed at the end of the 5th and in the early part of the 4th centuries by Kimon and Euainetos, include a Thracian helmet of form III (i.e. as seen on the late 5th & 4th cent. vases) at the right in the exergue of the obverse. Kimon's: Kraay & Hirmer, no. 116, ca. 405; cf. Jenkins, no. 438, 405-00 and ACGC pl. 48 no. 814, ca. 405. Euainetos': Kraay & Hirmer, no. 104, ca. 395-380;

cf. Jenkins, no. 440, ca. 390 and ACGC pl. 418 no. 815, ca. 390.
The helmet is seen more clearly on the coins by the second of the two artists. It is crested on a mounting along the crown, has a peak or frontlet, a short neck-guard which is deeper at the side than at the back, and a short cheek-piece. The armour on these coins represents prizes but for what is not clear.[43]

2. A helmet of possibly form III is worn by some of the horse-riders on the obverse of Tarentine staters between ca. 380 and 345. Kraay & Hirmer, no. 309; cf. ACGC pl. 38 no. 676, ca. 370.
It too is crested but lacks the cheek-piece. Later, between ca. 344 and 334 , Taras on the dolphin on the reverse of these staters is shown holding a Thracian helmet of form VI; his left hand is inside the crown, and with his right he appears to be fitting the crest to the top at the front. Kraay & Hirmer, no. 311; cf. Jenkins, no. 495 and ACGC pl. 39 no. 680, ca. 340. The peak is clearly marked, though not its termination at the side; the neck-guard has a raised edge which forms a gentle curve at the front; this is echoed in the outline of the cheek-piece.

3. Finally, there are the helmets of form VI worn by Athena on the coins on Hyele (Velia) about the middle of the 4th century. ACGC pl. 40 no. 701 didrachm, ca. 350.[44]
At first it is depicted in profile, and only the extra bulge on the top distinguishes this helmet from the sequence of Attic ones which has preceded it and was again resumed afterwards. It is crested on a mounting, has a neat, curved neck-guard, no cheek-piece, and a projecting frontlet, the side of which is obscured by the locks of hair which fly back from Athena's face. The side of the crown is decorated with a female centaur

in the fashion common for the Attic helmets on a number of South Italian coins of the 4th century.

4. A short time later Kleudoros signed a coin-type also of Hyele with a three-quarter head of Athena in a similar helmet. Kraay & Hirmer, no. 226 didrachm, ca. 350; cf. Jenkins, no. 473, 360-50 B.C. and ACGC pl. 40 no. 702, ca. 340. Cf. SNG V Ashmolean Museum II, pl. XXI nos. 1258-1262.

The crest is still attached to the central, rounded hook, but the sides this time bear wings. The engraver's name runs across the front above the arched frontlet which is once more hidden at the sides by the goddess's hair. The similarity with the much coarser ring from Sicily, mentioned earlier, is striking. Kraay considered that the design was "ultimately derived from that of Eucleidas at Syracuse" more than half a century earlier.[45] The obvious difference in the type of helmet worn by the goddess on both of these coins from Hyele must surely, however, have some significance, though, so far as I know, this has not been considered by the coin specialists.

The Thracian helmet of form VI, therefore, featured on the coins of Hyele and Tarentum, and form III was shown on coins from Syracuse and perhaps Tarentum. It is to be noticed that this type of helmet does not occur on coins from Mainland Greece in the Classical period.

In the minor arts and coinage, then, as in vase-painting and sculpture, the Thracian helmet has not been associated only with ordinary hoplites; one also found here Greeks fighting Amazons, a Giant, Achilles, Athena and the eponymous hero, Taras.

THE ORIGINALS

A number of Thracian helmets are preserved in museum collections, and some have been excavated recently in Greece. Mostly they belong to the Hellenistic period, and their study lies outside the limits of this thesis, although reference will be made to some of them in the notes. Schröder included a section on the originals in his work,[46] but as stated earlier, he extended the term, Thracian, to an extremely wide range of helmets, some of which are doubtful even as hybrids.[47]

Catalogue and Commentary

I propose to consider these helmets within the context of a resumé of the six forms already distinguished in the vase-paintings and other arts.

Form I which occurred only in the LA vase-paintings, is not represented among the originals, so that all in all there seems to be good reason for questioning these as accurate representations of a real helmet.

Form II with the low, rounded bulge on top, was illustrated on Athenian vases in the first half of the 5th century, but only rarely, and in Lycian sculpture at Limyra and Kadyanda in the first half of the 4th century. At the latter date the form appears to be more developed and to be advancing towards the contemporary form VI. It has not survived as a real Thracian helmet. However, it is possible that three helmets which still exist, may be based on a mingling of this form with another type such as the Chalcidian.

One is in the British Museum, Walters no. 2839. Blacas Collection. No provenance. Lipperheide, 145 no. 246, 5th cent.; Walters, 349; Schröder, 326 Form 1 Beil. 9.1; G & R Life 76-7 no. 222. H. 21. W. 17. Depth 20.

Below the crown which resembles that of form II, it runs into a short neck-guard at the back and down over a ledge into a pointed front-piece. The neck-guard has a forward-downward projection near the ear; the shape of the ear-hole at this point is now unrecognisable, as is that of the apparently fixed cheek-piece which once extended from this area. Three rivets are still attached to the side of the helmet above the offset-ledge just before it peters out over the neck-guard; decorative wings may well have been fitted here, as Schröder suggested.[48]

The second helmet is housed in the Museo Poldi Pezzoli in Milan, inv. no. 2426. No provenance. Schröder, 327 Form 6 Beil. 12.1-2; MEFRA 94 (1982) 9-10 no. 4 pl. V (Adam). H. 21. L.of cheek-pieces: 13.
The lower part this time takes the form of an almost vertical neck-guard set in from the crown and separated from it by a raised band, and a front which between the rising arch of the crown offset-edge and the falling point of the edge over the face, is decorated with an appliqué of a Gorgoneion. The cheek-pieces are of shape A; they have been re-attached with a modern hinge, but the wave pattern above the old one still survives.[49] Palmettes applied to the summit decorated the base of a plume- or crest-holder.
Both helmets may have been made in Italy, probably in the South; the shaping of the lower parts, as well as the decoration, may be compared with Chalcidian helmets from the South.

The third helmet is now in Bari Museum, no. 20890. From Tomb 10 at Conversano. NSc 8th ser. XVIII (1964) 100-176, esp. 161-2 figs. 75.2 and 76, dated on 164 (Martini); AA 1966 267 fig. 9 and 270; Connolly, HER 27 fig. 17; MEFRA 94 (1982) 9 no. 3 pl. IV (Adam). H. 41.
Again, the high crown sets this apart from Chalcidian helmets; it has a vertical, indented neck-guard which reaches down further behind the ear-

cuttings, hinged cheek-pieces of shape A, and a straight front edge over the face. For decoration it has locks in relief across the front, wings masking plume- or feather-holders at the sides, and running from the back to the top a wave pattern attached to a griffin-crest strip. Connolly dated this helmet to the middle of the 4th century: Martini preferred to put the whole tomb group in the last decades of that century.[50]

Form III in its various styles was the commonest form represented in the Attic vase-paintings of the Classical period to the end of the 5th century; it may have been worn by the terracotta warrior from the Athenian Agora ca. 460, and the warrior on the Lycian Inscribed Pillar ca. 400; one of the Lapiths on the Bassae Frieze wears one, ca. 395, and others are worn by Greeks in Amazonomachies from the second quarter and middle of the 4th century, on the Siris Bronzes and on the Mausoleum. On coins it may be represented in the late 5th and 4th centuries at Syracuse, Tarentum and perhaps Hyele. Despite the popularity of this form especially on Athenian vases, and in a further development in the Hellenistic period of which much could be said,[51] only one of the originals fits into this category from the Classical period.

It was found in the reclaimed land of Lake Kopais and is now in the British Museum, acc. no. 1927.10-11.1. From Boiotia. BMQ II (1927-8) 61-2 pl. XXXVIIa, where called Attic; G & R Life 75 no. 217; Ol Ber VIII 83 n.3, where called late-classical; Connolly, TGA 35 no. 20 (drawn with the cheek-pieces of the following helmet).

The crown is drawn up into the ridge which serves to distinguish this form; it was not also crested. The peak splays outwards at the front; it has a very simple, straight edge over the ears at the sides. One can compare this helmet, therefore, with some of those studied on the vases, e.g. EC nos. 151

and 709, CL no. 372 and especially EC no. 277 and CL no. 690. The neck-guard projects forwards at the sides, so that when the cheek-pieces were in place, there would have been no ear-hole. Parts of the hinges for the cheek-pieces are still attached by the rivets on the side of the crown just above the peak. Other rivets (or their holes) can be seen along the lower edge of the peak and down the front edge of the neck-guard (three large ones there). In BMQ it was suggested that these held a bronze lining of which some scraps remain, but whether inside or outside is not stated. This helmet, if made up of two layers of bronze, would be unique, I think. Some form of trimming along the edge seems more likely. The inscription of the Greek word for 'holy' across the front of the peak indicates that this helmet had been dedicated in a sanctuary. A date in the second half of the 5th century was proposed in BMQ, around the middle of the century in G & R Life. Considering that the best parallels for the shape were to be seen in EC and CL vase-paintings, the latter date seems to have more support. The helmet on the Bassae Frieze might appear to be similar, but it has a definite upper limit for the peak and an ear-hole, both of which are lacking on the original.

In the vase-paintings form IV has a rounded skull and only the peak shows that this is not Attic or Chalcidian. The Nereid Monument, ca. 380 B.C., provided the only clear illustrations of this form in sculpture. From the Classical period only one Thracian helmet of this form has survived. It is in Berlin (West), and was part of the Lipperheide Collection, no. 40. No provenance. AA 1905 20f. fig. 7 centre (Schröder); Schröder, 327 Form 3 Beil. 9.3-4; AAG pl. 53. H. 31. W. 21. D. 25.5. (Pl. 2b)
The crown rises to a considerable height which suggests that it was worn with a padded lining which could be drawn up to fit the wearer's head at

a lower level inside.[52] The peak here is sharply angled off the crown and forms an almost horizontal ledge, but like the helmet of form III discussed above, it too ends simply at the side. The neck-guard is little different from that of the form III helmet, and the method of fixing the cheek-pieces is similar. Happily these pieces still survive, re-attached by a modern pin through the original hinge which is secured by three rivets on the side of the crown. The cheek-pieces are of shape C with the cuttings for the eyes and the mouth reinforced with a border. They are also oddly bent outwards towards the base which inspired Schröder to consider that they were designed to fit over a beard.[53] The crown is damaged on top, especially at the right, but there appear to be no fittings for a crest. No date has been proposed for this helmet, but the simplicity of its design and its similarities with the previous helmet support a Classical date.[54]

The pointed shape of <u>form V</u> was portrayed on the EC and CL vases, and perhaps on one of the hoplites on the reliefs from Limyra in Lycia, ca. 370 B.C. No helmet of this form has survived from the Classical period, but there is a group of helmets of Hellenistic date which appear to be derived from the Thracian type in its pointed form V.[55] Instead of having the Thracian peak and neck-guard, however, they have the continuous brim of the Boiotian type. They are further characterised by the projecting ledge which is arched at the front and ends in a volute at the side. The name, Macedonian, has already been applied to this type of helmet by numismatists.[56]

<u>Form VI</u> of the Thracian helmet is extraordinary with a high, rounded hook on top of the crown. It was widely represented in the art of the 4th century, but could be taken back into the late 5th only at Olynthos (although Richter proposed such an early date also for the Western Greek

ring which shows a similar sort of high hook). A number of helmets of this form VI have survived:[57]

1. Boston, Museum of Fine Arts, inv. no. 69.1077. From Western Asia Minor. Comstock & Vermeule, GERB 494 no. 589a, dated to ca. 450; AA 1982 506 no. 11, 4th cent. (Vokotopoulou). H. 27. Top restored.

2. Chicago, Art Institute, no. 1978.297. Possibly from Constantinople. AA 1982 508 no. 14 fig. 20, dated to first half of the 4th cent. because of the almost vertical hook and high [?] neck-guard (Vokotopoulou). H. 35.6.

3. Copenhagen, Nat. Mus., no. 3494. Bought in Constantinople. Lipperheide, 143 no. 503 and 144 no. 504; Schröder, 326 Form 2 Beil. 10.1-2; MEFRA 94 (1982) 12-13 n. 11 fig. 1b (Adam); AA 1982 506 no. 10 fig. 18, probably end of 4th cent. (Vokotopoulou). H. 26.5. W. 22. D. 25.5.

4. Erbach. From Isernia in Samnium. Schröder, 326 Form 2 Beil. 10.3; MEFRA 94 (1982) 13 fig. 1a (Adam); AA 1982 508 no. 13 (Vokotopoulou). H. 25.5. W. 21.2. D. 25.8.

5. Fort Worth, Kimbell Art Mus. Exhibition of the Nelson Bunker Hunt and William Herbert Hunt Collections. No provenance. AA 1982 508 no. 15 (Vokotopoulou); Wealth of the Ancient World (Summa Publications, Beverley Hills, 1983) 112 no. 35, 4th cent.

6. Ioannina Mus., inv. no. 6419. From House H at Vitsa Zagouriou. Search 155 no. 103 pl. 16; AA 1982 497-520, esp. 497-504 figs. 3-13, third quarter of 4th cent. (Vokotopoulou). H. 32.3. Weight 1113gr. Th. 0.5-4 mm.

7. Sofia, Arch. Mus., inv. no. 2676. From Kovachevitsa. Von Graeve, 92 n. 66; Venedikov & Gerassimov, pl. 238, 4th cent.; Connolly, TGA 60 fig. 1; Thrac Treas Cat 59 no. 247 (= Metr. Mus., cat. no. 243) 4th cent.; Danov, pl. 31 fig. 57, end of 5th cent.; Hoddinott, Thracians 106-7 fig. 101 on 104; AA 1982 505 no. 3 fig. 16 (no. given as 2576) dated probably to the second half of the 4th cent. (Vokotopoulou). H. 23.7. H. with cheek-pieces 39.

8. Sofia, Arch. Mus., inv. no. 8246. From Garmen. AA 1982 504-5 no. 2 fig. 15, late 4th cent. (Vokotopoulou). H. 26. Dm. 24.

Note: a further six helmets from Bulgaria are catalogued by Vokotopoulou, but without illustrations, and two hybrids with Chalcidian.

All of these helmets share the same shape; the high, rounded hook on top of the crown which is separated from the combined neck-guard and front brim by an in-curving edge. (The top on no. 2 does not fall so far forward.) However, on nos. 2, 5 and 6 the helmet seems to be made in one piece, while on nos. 3, 7 and 8 the hook itself is made up of two pieces of metal which are riveted to each other and to the lower part of the helmet. No 4 is even odder, since, according to Schröder, there is a vertical join on a line with the gap between the neck-guard and the front-piece. How the join is actually achieved, he does not say. Vokotopoulou simply states that it was made in two pieces.. The brims and neck-guards are all almost vertical with a more or less horizontal edge, lower at the back than over the face. The point where this change in length occurs, coincides usually with a rough earhole, and the front edge of the neck-guard is brought down and forwards, especially on nos. 2 and 6. The cheek-pieces have only survived with no. 7 (although a loose one is associated with no. 3: see

below). They are a very elaborate form of shape C with a deep cutting below the eye and two smaller ones for the nose and mouth. The outer surface is modelled as a moustache and curly beard. The two pieces not only met at the centre of the chin, but also were fixed together there: it is not clear, however, whether this was by means of a hinge which does not now survive or what. The two rivets which secured the hinge for the cheek-piece itself, can be seen on the brim below the edge of the crown. No mention is made of actual hinges on the others, but a triangular metal plate with two of the cut-out pieces of the hinge is still attached to the inside of the Vitsa helmet (no. 6) on each side above the brim. They coincide with small plume-holders on the outside. Additional plume-holders were fitted to the sides of the hook on top of the helmet. They are decorated with a small palmette opposed to a much larger one with 11 out-turned leaves, the two being divided by two double volutes. Traces of similar palmettes survive on nos. 2 and 7, while no. 8 had an ivy-leaf. In addition, nos. 4 and 5 have a plaque with a facing head; the one of a bearded man, the other Athena, applied at the front. No. 6 has only the traces of the silver solder for this feature. Finally, the rim of no. 8 is incised obliquely.

The provenances reported for these helmets cover a wide area, from Italy (no. 4), to the west of Greece itself (no. 6), to Thrace (nos. 7-8) and Turkey (no. 1 and 2-3?). Only no. 6 appears to have been dated accurately by the context in which it was found, but Vokotopoulou suggests a chronological sequence for some of the others, based on a plausible stylistic development. The strong similarities between all eight support the idea of there being little time-difference between them, although the various methods tried for creating the awkward shape of the top suggests a variety of workshops and levels of competence. The use of separate pieces

and rivets need not be a sign of earlier technique, though the helmet might prove less serviceable in battle, since some of the examples of form III of Hellenistic date (supra n. 51) were also made up of individual pieces. The best parallels in the art for the particular shape of the brim and neck-guard exhibited by these helmets are provided by the helmets on the mirror cover and perhaps Aristonautes, which would suggest a date in the first half or middle of the 4th century for its introduction.[58] Apart from the plume-holders on no. 6, there was no evidence for the attachment of crests such as were illustrated both on the mirror cover and the reliefs from Limyra.

In addition to the above, three helmets are preserved which combine the hooked top of form VI of the Thracian type with features of other Greek helmets. The first was found in the man's tomb in the Great Bliznitsa Mound in 1865. Kerch Mus. Gilt bronze. Schröder, 326-7 Form 2 Beil. 12.5; Minns, 379 and 429; Artamonov, 78-9; AA 1982 508 no. 12 (Vokotopoulou). The neck-guard, round ear-cutting, hinged cheek-piece (which was probably fitted back on the wrong way round) and the reinforced eye-edges and nose-piece, all copy the Chalcidian type. A little reminiscent of the volute-ended ledge of the Macedonian helmets referred to earlier, is the formation of the front between the Thracian top and the Chalcidian bottom. The proposed date in the second half of the 4th century was here supported by the other contents of the tomb, including the engraved fragments of the ivory inlay of the sarcophagus.

The second hybrid comes from Bulgaria. Sofia, Arch. Mus., inv. no. 7308. From Assenovgrad. AA 1982 505 no. 4 fig. 17, probably second half of 4th cent. (Vokotopoulou). H. 30.

The neck-guard is lost, but the remains of the ear-cutting and the reinforced eye-edge recall the Chalcidian type. Also reminiscent of the Chalcidian offset-edge are the three ridges (and two grooves) which run around the side of the crown and rise at the centre front. The separately-worked hook itself sits unhappily on top of the tapering crown. One cheek-piece still survives with this helmet. Its design continues the Thracian idea with the moustache and beard modelled on a cheek-piece of shape C.

The last hybrid displays a form VI hook above an otherwise basically Boiotian helmet with its deep, folded brim. Kishinev, Moldavian Museum of History and Regional Geography. Best, 12 and n. 67. pl. 6.

Before leaving the discussion of form VI we must mention the iron helmet which was recently found in the Royal Tomb at Vergina. Treas Anc Mac Cat 51 no. 96A. Max. H. 43; Philip of Mac 227 pl. 129 colour; PBA 65 (1979) pl. XLIII (Andronikos).

It is unusual not least because of the high hook which rises from its crown. Unlike those of the helmets reviewed up till now, it is thin, made of two pieces of iron which rise out of the round bowl of the helmet, and which are covered along their edges by a reinforcing band of the metal. The technique recalls that of the similar, but lower, crest-ridges of the Hellenistic examples of form III of which the Leningrad and Prodromi helmets were also of iron (supra n.51). The inorganic effect contrasts with the smooth lines of the eight helmets discussed above, and yet ties in with the representation of such a helmet on the Attic vase (cat. no. 435) of ca. 375 B.C., even to the continuation of a ridge down the back. The short neck-guard of the Vergina helmet has an oddly raised edge at the back (restoration?) and probably extended further forward originally, as is emphasised on the vase-painting. The front edge also no doubt spread out further below

the projecting reinforcement which runs round to volutes at the sides. This reinforcement again resembles those on the Hellenistic form III helmets, though it is no longer clear whether like some of them, the Vergina helmet had a face-mask in the centre of the volute. It certainly has their head of Athena on the crown at the centre front. The cheek-pieces which have survived, are of shape A with two indentations to the front edge; a ring for a chin-strap is still attached at the bottom corner and the central area, contained within two ridges at the edges, bears an incised scale pattern. The closest parallel for this helmet, therefore, appears to be the iron one in Leningrad from Kerch, at least so far as the material, and the shaping of the cheek-pieces and the front are concerned. However, the differences in the shape of the crown as a whole and the appendage on top show that the Vergina helmet is not to be considered as a close companion piece to the form III helmets, and the Attic red-figure illustration helps to suggest just how much earlier this one could be. The helmet, therefore, cannot be used constructively in the continuing debate over the dating and identification of this tomb.

Finally, before discussing the cheek-pieces which have survived and which may be thought of as having belonged to Thracian helmets, a brief word may be said concerning a few, unusual helmets which may seem to be related to those considered so far in this section. As stated earlier, Schröder included in his discussion four helmets which I do not believe should be classified as Thracian at all.[59] The first is no longer in Vienna and so I have not been able to see it; it could have once been a helmet of form II, but in its present incomplete and damaged state, it seems best to omit it. Likewise the second helmet, from Ruvo, has little to associate it with the Thracian type, and is best considered among South

Italian helmets. The third, despite the presence of the spiral-ended ledge, cannot be easily related to the Classical Thracian helmets; it may be Hellenistic or even possibly Roman.[60] The claim of the fourth to the title, Thracian, must reside solely in its place of finding in Thrace; the design especially with the addition of the two horns on the sides, sets it well outside the usual range of Greek Thracian helmets. In addition to these, Schröder discussed a helmet in Paris which somewhat resembles the soft tiara or Phrygian cap worn over curly locks of hair.[61] The decoration on the back and the neck-guard may suggest a date in the late 4th or early 3rd centuries. Schröder compared it with three more, elaborately decorated helmets, two of which are actually closer to the Chalcidian type, and all of which may be excluded from this study on account of their late date.[62]

And so we come to discuss some bronze cheek-pieces which, because of their shape, may once have been attached to helmets of the Thracian type. They may be broken down into three groups, according to the amount of detail given to the representation of the moustache and beard of the wearer.

The first group is exemplified by two cheek-pieces on which there is no attempt to portray the facial hair.

1. Olympia, B1512. (Left) Ol Ber III 114 and fig. 100 on 113. H. 14.2 W. 14.
2. Olympia, inv. 11343. (Left) Olympia IV 170 no. 1027 pl. LXIII; Lipperheide, 545; Schröder, 328 Form 7 Beil. 9.5. H. 10. W. 7.1 (curved).

These need not have belonged to Thracian helmets exclusively, since as we saw, the Chalcidian type could also sometimes have pieces of this shape, i.e. C, with an opening for not only the eye but also the mouth. Both of these came from Olympia. The first shows only by the row of five rivets along the top edge that it was originally fitted with a hinge at that point:

the six-part hinge still survives on the second along with the plate which was fixed to the helmet proper by two rivets. Both the pieces have a reinforcing border along the eye and mouth edges: it is continuous on the second, but broken at the nose on the first. Below the mouth-opening the first piece also retains three rivets which secured the hinge there; i.e. the two cheek-pieces must have been fastened together on the chin at the centre front. A larger hole in this area on both of the Olympia pieces is probably not for a chin-strap(which would certainly have been unnecessary on the first), but a sign of the intentional damage inflicted by a weapon when the piece was dedicated in the sanctuary. Cheek-pieces which belong in this group were also seen on the helmet in Berlin (form IV).[63]

The second group of cheek-pieces is represented by four right ones and two left.

1. Amsterdam, inv. 1453. Dated by the museum to the 5th cent.

2. Athens, N.M. no. 161. From Dodona. Carapanos, 101 pl. LV.4; Schröder, 328 Form 7 Beil. 9.7; AA 1982 509 no. 1 fig. 21, dated ca. 475-450 (Vokotopoulou). H. 17.6. W. 11.5.

3. Athens, N.M. no. 162. From Dodona. Carapanos 101 pl. LV.1; Schröder, 328 Form 7 Beil. 9.6; AA 1982 509-10 no. 2 fig. 22, dated ca. 450-425 (Vokotopoulou). H. 17. W. 11.

4. Athens, N.M. no. 14894. No provenance. AA 1982 511-2 no. 7 fig. 27 (Vokotopoulou). H. 17.4. W. 10.5.

5. London, Brit. Mus. Walters no. 2844. From Loryma in Caria. Walters, Cat 350. H. ca. 23. The projection beside the nostril and part of the back edge are missing.

6. St. Germain-en-Laye, Musée des Antiquités Nationales, no. 4764.
No provenance. Schröder, 328 Form 7 Beil. 9.9; AA 1982 512 no. 8 fig. 28 (Vokotopoulou). H. 18.8. W. 10.3.

Note: Vokotopoulou also publishes three more from Olympia (AA 1982 511 nos. 4-6 figs. 24-26).

Five of them stand extremely close to each other in shape, and only the second is conspicuously different because the edge below the eye and the bend in the back contour are higher. Vokotopoulou, therefore, suggested that the latter is earlier in date. The design of this group may be a natural development out of the first group towards a more realistic presentation of the facial features hidden by the cheek-piece. The front edge has acquired an extra indentation to accommodate the nostril above the upper lip; the lips themselves and a stylised moustache (long, droopy and out-turned) are indicated in relief; in addition a curving ridge runs down the centre of the cheek-piece to give a rough indication of the upper limit of a beard the hair of which is not detailed, or (less likely) to mark the contours of the cheek-bone. The edge along the back is provided with a broad border, while the edge on the front above the mouth is sharply turned outwards. A five-part hinge at the top seems to have been standard: again it is the second piece which is exceptional in having had originally six parts. The second, fourth and fifth still display a hole in the bottom corner which may have once helped to fasten a chin-strap. According to Vokotopoulou, nos. 2, 3 and 7 show traces on the inside of the attachments used to join the cheek-pieces together.

A fifth century date was suggested for the Amsterdam piece. Moustaches were possibly indicated on the two helmets on the vase, EC no. †457,

but they are by no means a common feature in the Attic paintings. In fact, one may note that when shape C is shown, the painter makes no attempt to draw the projection which models the upper lip on the originals. Presumably the small scale did not permit this fineness of detail in some cases. The very simple method of portraying the moustache and beard on these cheek-pieces may be compared with Late Archaic Aeginetan sculptures, e.g. from the east pediment from Aphaia and especially the related bronze head from the Acropolis at Athens.[64]

Finally, there are two cheek-pieces which, along with those found with the Kovachevitsa helmet and the Assenovgrad hybrid above constitute a third group.

1. Athens, N.M. no. 163. From Dodona. Carapanos, 101 pl. LV.2; Lipperheide, 547; Schröder, 328 Form 7 Beil. 9.8; AA 1982 510-1 no. 3 fig. 23, dated ca. 450-425 (Vokotopoulou). H. 18. W. 13.

2. Copenhagen, Nat. Mus. no. 3495. From Constantinople. Schröder, 328 Form 7 Beil. 9.10; AA 1982 506 (no. 10) fig. 19 (Vokotopoulou). H. 12.8. W. 14.6.

Essentially they are similar in shape to the majority of those in the second group.[65] However, they are distinguished by the elaborate and careful modelling of the hairs and curls of the moustache and the beard. Although Schröder does not say so, it seems possible that the Copenhagen piece may have been associated with the Thracian helmet of form VI which was also bought in Constantinople and is now in Copenhagen. If so, there could be some grounds for suggesting that this third group and helmets of form VI go together: for not only the Copenhagen pieces and the Kovachevitsa helmet, but also the sculptured loutrophoroi of Polystratos[66] might support

this idea. A date early in the second quarter of the 4th century was proposed for the loutrophoroi. Whether the cheek-pieces in this group are later than their less elaborate counterparts in the second group, or simply contemporary, it does not seem possible to say. The tight curls of the hair, snail-like on the Athens piece, but whirling on the Copenhagen and Assenovgrad pieces, and the separation of the long moustache would, one might have thought, be easy to parallel in sculpture, at least in marble if not in bronze. Snail-curls around the face occur in Archaic sculpture, but a good parallel for the rows and masses of curls on the cheek-pieces is actually to be found in an Early Classical bronze fragment of pubic hair from Olympia.[67] In marble, and consequently different in technique and effect, but still useful for comparison, is the head of the old seer from the east pediment of the Temple of Zeus at Olympia.[68] Beards rendered in this way do not feature in later sculpture of the Classical period. If the cheek-pieces of the second group owe their design to a Late Archaic method of depicting the moustache and beard, those in the third group seem to derive from the later Early Classical style; but both one suspects continued to be made to these patterns for a much longer period - indeed, throughout the 5th and 4th centuries.

CONCLUSION

Six forms were identified for the Thracian helmet on the basis of the shape of the crown. Five were defined in the vase-paintings, the sixth in originals and other media.[69]

Forms I and II were discussed in depth in Appendix B, but some points are worth repeating here. The examples of form I were found only on LA

Attic vases; no originals survive, and one may question its existence in reality. The shape was closely related to that of the tiara and the second Scythian cap as they are shown in contemporary paintings. Were the artists copying a rare cap-shape or trying to work from a verbal description or brief view of a new helmet-type? Is it possible that the artists transferred the unusual shape of the cap into a helmet first and were later copied by the armourers?

Form II on LA and EC vases, being essentially a similar shape to I but lacking the spiral, could also be related to the tiara and Scythian cap. It surprisingly is not represented in art again until about a century later when it occurs in Lycia in a slightly different form which seems to be a pointer towards the development of form VI. Hybrids with the Chalcidian type have survived, apparently from Italy, where the name, Apulian, has been associated with this form.

Form III was the commonest 5th century form, and representations of it from both the 5th and 4th centuries appear on a wide range of objects from throughout the Greek World. On the vases there was some variety in its depiction, but it was generally identifiable, even when the ridge on the top did not taper towards the back and so could be confused with the normal crest-mounting. Accordingly one might believe that it originated out of a natural development of the mounting and crown, the result (and aim?) of which was to give height to the helmet as in the case of forms I and II. Indeed, was a helmet of this shape an easier compromise for the metal-worker? Or was the extra ridge over the crown added in order to strengthen the metal? Even here, however, a connection with the tiara might be supported by a few vase-pictures.[70] By the late 5th and 4th centuries the projection at the front edge grows higher in the Attic vase-paintings and the western coins.

It can still be distinguished from form II, though, because its contour is more angular and not rounded.[71] Only one original of this form has come down to us from the Classical period (ca. 450), but a subsequent series of Hellenistic date is also known.

Form IV was recognisable only by its peak because the crown was of a simple, rounded shape similar to those of Chalcidian and Attic helmets. Sometimes in the representations, and in the one original known, the crown rose higher, but still in a simple curve.[72] It was certainly less common than III not only on the vases but also in the other media for it was only seen in sculpture on the Nereid Monument.

Form V was even less common; it formed a very small percentage of the helmets on the vases and was only possibly depicted on the frieze from Limyra. The peak again shows it to be Thracian in type. No originals have been preserved, but it was surely a forerunner of the Hellenistic Macedonian helmet. The pilos may have had something to do with its design.

Form VI was the only form represented by a number of surviving examples and hybrids, with a wide distribution throughout the north, east and west of the Greek World. Only one, however, was closely dated to ca. 350-25 B.C. In art it likewise was widely spread, but approximate dates there were more forthcoming. In an attempt to ascertain the date of its development, we may note that at Limyra ca. 370 B.C. the full form of the hooked top has hardly developed to the point when there is no chance of mistaking it and form II. In the text it was suggested that the Olynthos mosaic might provide the evidence for placing its introduction back in the late 5th century. But the dating of the mosaic, like that of the Western Greek ring mentioned with it, is by no means certain, and Robinson's early date has not met with approval.[73] A survey of the changes in the representation of the tiara

through the Classical period, especially in Attic and Apulian vase-painting, is instructive, for, as at the beginning with forms I and II, so now it seems that the shape of the crown of the Thracian helmet follows a similar course. The tiara, after assuming its floppy form in the second quarter of the 5th century, becomes stiffer and rises higher only in the late 5th and and early 4th, to culminate in the second half of the 4th century in a high, hooked top which coincides not only with form VI of our Thracian helmets but also the shape of the helmet seen on Apulian vases, i.e. the Apulian helmet.[74] The transition to form VI, then, may have taken place towards the second quarter of the 4th century and reached its peak after ca. 350. In such a sequence the mosaic from Olynthos leads the way probably at the beginning of the century, and the coherent group of originals fits in around the middle of the century and later.

The iron helmet from Vergina can perhaps be related to form III for the shape and method of manufacture of the attachment on top which lacks the bulging roundness of the form VI hook. The resemblance to form III can be seen not only in the series of Hellenistic originals, but also can be gauged from the Classical vase-painting. Even an Amazon tiara can display such a top in the late 5th century.[75]

Perhaps, then, one might suggest the following sequence of events. A new type of helmet is created on the basis of the tiara-shape, perhaps at Athens, perhaps among the eastern Greeks. News of it reaches the Kerameikos either after the return of Athenians who have seen it in use abroad or because it is being worn by Athenians at home. The painters learn of it. It is exciting and different, and attracts their (and their patrons') attention. Few examples, however, are initially available for the painters to have <u>good</u>, firsthand knowledge of it, but by word of mouth

and by short glimpses at it, they become more familiar with it. At first, they turn to the traditional forms associated with the tiara itself to portray the new helmet, but, as time goes on, the depiction becomes more accurate and detailed. Forms I and II therefore, represent the preliminary, tentative stages: form III the standardisation of the type within the framework of the more normal Greek types of helmet, to which forms IV and V are assimilated. Form VI reaffirms the relationship with the now stiffened tiara.

The similarity between the tiara and the crown of the Thracian helmet seems, therefore, to be inescapable throughout the Classical period, and not just at its beginning. The peak of the helmet, however, is another of its characteristic features, and it appears to be quite original in design and an independent creation for the helmet alone. It is not absolutely essential, though, and Attic frontlets and other hybrid forms for the lower front area are frequently found in the art of the 4th century, and not just in Italy. The neck-guard and cheek-pieces are not reserved solely for this type of helmet, but share the variety seen on other types. The surviving cheek-pieces of shape C were included in this section because a case may be made for their particular association with the Thracian helmet. Finally, we may note that of the decoration seen on the sides of the helmets on the vases little trace was found on the originals and in other media. The palmettes applied by the Niobid Painter to the back and front of the helmet cannot be paralleled (except on the Hellenistic Prodromi helmet!). Only the terracotta head from the Athenian Agora and the coins of Hyele bore figured decoration on the crown like that on the vases.[76] It is possible that similar figures were once painted on some of the marble sculptures. Could they also have been painted on the original bronze helmets? The

addition of plumes or feathers to the sides of the helmet was not usual on the Attic vase-paintings. Evidence for this practice was found on the hybrid helmet in Bari (form II) and the Vitsa helmet (form VI). It can also be detected on some of the Hellenistic helmets of form III and on the carved helmets of form VI on the Alexander Sarcophagus (cf. the Macedonian helmet of the Lefkadia tomb-painting), so that one may conclude that this habit only reached a peak after the Classical period, when the Thracian helmet itself continued to enjoy considerable popularity.

g. THE PILOS

INTRODUCTION

The pilos was originally a soft, felt cap worn by a variety of workers and travellers, but it was also adopted by hoplites and light-armed soldiers early in the Classical period.[1] By the late 5th century the simple conical shape was being produced in bronze instead of felt for use as a helmet in war. It is for this reason that it is included here, while the petasos and Macedonian kausia are omitted, although they too were worn in battle.

THE BRONZE ORIGINALS

Catalogue

1. Athens, Benaki Museum, no. 8060. From Dodona. Stele 239 no. 3 pl. 71b (Vokotopoulou). H. 26. Dm. 22.5. No holes in sides.

2. Athens, Benaki Museum, no. 8061. From Dodona. Stele 239 no. 4 pl. 72 (Vokotopoulou). H. 26.5. Dm. 21.5. Slimmer cone than no. 8060, with thinner metal. A raised band separates the crown from the rim. A squarish hole at each side.

3. Athens, National Museum, Carapanos Collection, no. 138. From Dodona. Carapanos, pl. LVI.7; Baumeister, 2037-8 fig. 2216; Lipperheide, 134 no. 454, 5th cent.; Stele 239 no. 1 (Vokotopoulou). H.20. Dm. 20. Very thin metal. Distorted and cracked with parts of the rim lost. Rim indented below crown; no band at change of angle.

4. Athens, National Museum, Carapanos Collection, no. 687. Probably from Dodona. Connolly, TGA 60 fig. 4, 4th cent. ;[2] Warry, 45 fig. 8;[3] Stele 239 no. 2 pl. 71a (Vokotopoulou). H. 19.8. Dm. 19.4. Holes on top.

The change in angle between the rim and the crown is emphasised by a broad, steep step. The bottom edge is reinforced, and just above it at each side is a hole.

5. Athens, National Museum, inv. no. 7598. From Hagios Kosmas in Kynouria. MTP 275 n. 90.

6. Berlin (West), Lipperheide Collection, no. 41. From Upper Egypt. Lipperheide, 132 no. 417; AA 1905 20 fig. 7 right and 21 (Schröder); Stele 240 no. 7 (Vokotopoulou). H. 20.5 Similar in shape to no. 4; the two holes at the sides very jagged and punched from the inside out. 5th cent. according to the museum.

7. Ioannina Museum, no. 4633. From near Ioannina. Stele 236-241 figs. 1-2 pl. 70 (Vokotopoulou). H. 22.5. Dm. 19.3. Distorted and cracked. High crown with broad overhang over deep rim. On both sides three holes (one small on either side of a larger one); on one side the large hole is filled in and still fixes the metal piece used to secure a strap. Around the brim is a very lightly incised laurel wreath. Late 5th cent. according to museum

8. Lecce Museum, inv. no. 2688. No provenance. Giovanna delli Ponti, I Bronzi del Museo Provinciale di Lecce (Lecce, 1973?) 59 no. 84 pl. 51, 4th cent. H. ca. 22. Dm. 22. Simple transition from slightly concave sides of the crown into the deep rim below.

9. Lecce Museum, inv. no. 2689. From Rudiae, south of Brindisi. Giovanna delli Ponti, ibid., 59 no. 85 pl. 51, between 4th cent. and end of 2nd cent. B.C. H. 22. Dm. 20. Similar to no. 8, but without the concavity to the sides. A neck-guard has been added below the rim at the back; it reaches down further immediately behind the wearer's ears. Two fragments of a cheek-piece with a hinge are associated with this

helmet, but delli Ponti expressed doubt about their belonging originally. Holes for a chin-strap and apparently a carrying ring on top.

10. Lecce Museum, inv. no. 2691. From Ruvo. Giovanna delli Ponti, ibid., 59 no. 86 pl. 52. H. 17. Dm. 24. Thin bronze; the lower edge damaged. Almost hemispherical not conical, with a splaying brim. A four-spoked wheel riveted to each side.

11. Naples Museum, inv. no. 5691. From Paestum. Lipperheide, 129 no. 382, 5th cent.; Connolly, HER 26 fig. 1, 4th cent. Thickness at rim: ca. 0.5 cm. The smooth outline of the conical crown continues almost uninterrupted into the deep rim: two incised lines mark the transitional point both inside and out. The smooth surface on the summit may indicate the previous existence of a plume- or crest-fitting. (Pl. 3a)

12. New York, Metr. Mus. of Art, acc. no. 08.258.14. From near Piraeus. Richter, GERB 412-4 no. 1540; Richter, Hdb Gk Coll 251 pl. 91g and 308 n. 48, 4th cent.; Stele 239 no. 5 (Vokotopoulou). H. 21. A small overhang between the conical crown and the deep rim. Rivet-holes at sides.

13. New York, Metr. Mus. of Art, acc. no. 08.2.4. From Sicily. Richter GERB 414 no. 1541; Stele 239 no. 6 (Vokotopoulou). H. 20.5. Slightly concave sides. Four holes on the summit for a crest or carrying loop.

14. Vienna, Kunst. Mus. Probably from Southern Italy. Lipperheide, 130 no. 112, 5th cent. The top has broken off and there are some holes lower down. Smooth transition from the slightly concave sides of the

crown into the rim.[4] The Oscan inscription incised along the rim states that "Spedius Mamercius Saepinus dedicated" this helmet.[5]

This list of bronze piloi could no doubt be supplemented by many more: in fact, two more are listed by Julia Vokotopoulou. The provenances are interesting in that the helmets are mostly from Greece itself, especially the sanctuary at Dodona, or from Southern Italy. No. 6 from Upper Egypt is the only glaring exception. The absence of a single example from the Black Sea region suggests that the type was not (if ever) popular there, unlike other Greek types.

Within the basic conical form a variety of nuances can be detected in the crown part and its relation to the lower rim. Only no. 10 stands closer to a hemispherical form than the conical, but it is still included because, as we shall see, it too is represented in the art. The inspiration of the simple shape need not be sought outside the Greek sphere where the felt prototype was already familiar. In Italy the Etruscan Negau helmet may have supplied the need for a helmet which protected the crown of the head but left the face and neck free at an earlier date, but there appears to be no connection between the two types. Later, towards the end of the 4th cent., it may have been the pilos which gave rise to the very high, conical helmet, known as the Messapian type.[6]

It seems to be a characteristic of piloi that they be simple and undecorated; only no. 7 provides the exception to the rule. The wheels riveted to no. 10 may not be merely decorative, but may have served a purpose which a study of the artistic representations may help to explain. A number of the surviving piloi have holes in the sides (sometimes very roughly made) which may be considered as having served to fix the chin-strap which kept this form of helmet on the wearer's head in the heat

of the battle.

Finally, one may note that the dates reported above are of the most general kind, covering the range of the 5th and 4th centuries. None of the helmets appears to have been excavated in a closed context. Only Julia Vokotopoulou has attempted to define the varieties in the shape more precisely in time, by comparing the ratio of height to base diameter for some of the piloi portrayed in art. She concluded that the 4th cent. piloi tend to be slimmer and taller than the 5th cent. ones. Accordingly, she suggested a chronological sequence in which nos. 3, 4, 6, 12 and 13 date from the third quarter of the 5th century, nos. 1 and 7 around 400 B.C. and no. 2 from the 4th century. However, I am not entirely convinced of this, since one cannot check the ratios for helmets which are not supplied with both measurements and I mistrust measurements taken from photographs where the angle can cause distortion.

PILOI IN ATTIC VASE-PAINTINGS

The reference in Aristophanes mentioned above (p. 12) provides a terminus ante quem for the transfer of the felt shape into bronze, but it does not help us to date the first use of the harder material and the change from hat to helmet. In the vase-paintings piloi are worn by figures who are not warriors, and it might be hoped that a difference in shape which would reflect the different material, might be discernible. Unfortunately, this does not seem to be the case, since both a rounded and a conical form are also found in non-martial situations.[7] It appears quite probable, then, that a number of the piloi included in this section were intended to represent the felt cap and not the bronze helmet of the hoplite.

The conclusions which are based on the sketches of 5th and 4th century examples, must be considered as subject to this limitation.

Occasionally, it may be noticed that the rim of the pilos does not run in a perfectly straight line along the side. Sometimes, as on EC no. 339b, it may be thought that the chin-strap is distorting the rim by pulling it down at the point of contact. If so, this could be considered a clear and useful indication of the probable nature of the material, i.e. felt and not bronze. But, of course, even if the felt pilos were regularly distorted in this way, that is not to say that the bronze helmet did not also imitate this feature in its modelling - although it must be admitted that none has so far survived among the originals. (The extra cover over the ears at this point would presumably have been welcome.) On several of the EC and CL piloi this change of angle at the centre of the side becomes more pronounced and even occurs in the line marking the top of the rim; these examples have been omitted from the tables discussed here, but are discussed in Appendix C.

Finally, regarding the identification of the material represented we should consider the artists' use of added white, often with inner details in yellow, during the CL period and the 4th century. It is possible that these piloi are to be thought of as of metal, especially in the battle scenes where the majority of them are worn, but an overall yellow not white would, to our eyes at least, better reproduce the impression of bronze. Felt could also be dyed to a desired colour (even red perhaps on CL no. 596). So the use of an added colour tells us nothing conclusive about the actual material portrayed and reflects little more than the preferences of the artists at the time.

With this major proviso in mind, namely that for the majority of piloi a felt one cannot be distinguished from a bronze, we turn now to a survey of the piloi painted on the Attic vases in the 5th and 4th centuries.

Late Archaic Period

The five piloi here drawn on two vases are essentially conical with a splaying brim which on three examples on no. 266 is not given an upper line to mark the join with the crown (Fig. 74). An oddly shaped piece at the top of two of the helmets on no. 266 probably represents a carrying loop. All five have a circle on the side (dotted on no. 38a), positioned just above the rim; straps over the crown are associated with these circles (a loop reaching to just above the circle on no. 38a, and two red lines into the centre of the circle on no. 266). In addition, each pilos is fitted with straps below (red on no. 266) which not only tie beneath the chin of the wearer, but also loop under his hair at the back of his neck.

No. 38a is associated with Achilles, hanging up above him with his sword, and may be intended as a bronze helmet. The four on no. 266 are worn by heralds who are removing Briseis from Achilles and giving her to Agamemnon. Felt piloi would, therefore, suit both their occupation and their traveller's clothes. But, as Figure 74 shows, all five piloi are essentially the same in shape and fittings, and so, are all five felt or bronze? One factor which might tip the scales in favour of the former is the early date of these two vases, probably in the late 480s or 470s. If the bronze pilos only came into being after the felt variety was already well-accepted, then it seems more likely that these examples, the first in the catalogued sample studied in this thesis, should be of the original

material.

As for the artists they are Makron and the Briseis Painter respectively.

Early Classical Period

In this period we are looking at 15 piloi from 11 vases (Figs. 74-5). Alongside the continuing conical shape, there are about as many with a lower, more rounded crown. The brims continue to splay outwards, some still following the line of the crown, others changing the angle more sharply; no. 468 stands out as peculiar. Unlike three of the LA piloi all of the EC have the join between crown and brim marked by a line (two on nos. 326a, 339b and 669).

On top five of the piloi (nos. 126 twice, 323, 468 and 503) bear small circles indicating solid buttons or carrying loops - which is not clear. It may be noted that four of the examples are by the Niobid Painter; the fifth (no. 323) is by the Agrigento Painter. Another two piloi on no. 125a actually have full crests on the crown, fixed by dotted mountings. These must surely be intended to be of bronze, since felt would scarcely support such crests.

The combination of a circle and straps on the side of the crown as seen on the LA piloi, is repeated here, with some new variations especially in the siting of the circle (cf. nos. 125a, 126 and 339b). An elaborate pattern is created on the side of no. 468 - perhaps suggestive of leather straps with metal studs: the simplest marking of a black blob occurs on nos. 74, 125a and 503 - perhaps an indication of the point of attachment for a chin-strap. The lower straps themselves are actually only painted (in white) on no. 339b. Note again the strap which runs round the back

of the neck. Dilute glaze is employed on two piloi: on no. 333 to shade the outside surface (to show its felt substance?); on no. 126 to shade the inside of the pilos hanging behind the youth's neck and shoulders. Since this pilos has retained its shape in this position, it is probably to be thought of as of bronze.

The owners of these 15 piloi divide almost equally among heroic and ordinary figures, as the following list shows:

Table 74

			Total
Ordinary Figures			7
	departing	3	
	fighting	2	
	at tomb (?traveller)	1	
	without further context	1	
Heroic/Mythological Figures			8
	Akamas/Demophon	1	
	Greek in Amaz.y	1	
	Heroes	6	

It may be noted that, while the majority of these figures may be considered as lightly-armed or in travelling dress, some are definitely protrayed as heavily-armed hoplites with either their round shield or a corselet. That is to say, if one expects a hoplite to be wearing a bronze pilos rather than a felt one, it is possible that nos. 125a (all 3), 468 and 699 at least are of the harder material.

Finally, a list of the painters of these EC piloi:

Table 75

		Total
Niobid Painter	- nos. 126[2], 339b, 468, 503	5
Painter of Bologna 279	- no. 125a[3]	3
Chicago Painter	- no. 326[2]	2
Agrigento Painter (Arias)	- no. 323	1

		Total
Amphitrite Painter	- no. 74	1
Euaion Painter	- no. 333	1
Inscription Painter	- no. 592	1
Painter of Munich 2363	- no. 669	1

Over half of the examples, therefore, can be attributed to the Niobid Painter and his follower, the Painter of Bologna 279. They seem to prefer the rounded form, rather than the conical.

Classical Period

The increase in the number of piloi represented on the vases as seen already between the LA and EC periods, continues in the CL with 24 examples on 23 vases (Figs. 75-6). The proportion of pointed crowns to rounded remains about the same, at roughly half and half. The slight variation in the angle of the brim continues to exist, and the same percentage is provided with two lines instead of one to mark the join between crown and rim (i.e. on nos. 95, 97, 354, 356 and 694). On no. 421 in particular this line is depicted in orange over the white of the pilos.

The loop or button on top of the pilos is now much less common; it is added only on nos. 97 and 354. A full crest on a chequered mounting appears only on no. 584. We may note that that pilos is by Polygnotos who, according to Beazley, came from the School of the Niobid Painter; one may recall the two EC crested piloi which were in fact by the Painter of Bologna 279 in the Niobid Group. A plume, reminiscent of some on Thracian helmets, occurs on no. †356. A longer loop may be drawn on no. 694.

Half of the CL piloi are equipped with either a circle or circle and straps on the side of the crown at varying heights. When the circle rests

on the rim-line it seems to be associated with the chin-straps below, as for example on no. 347, but the purpose of these features higher up remains inexplicable. The black blobs seen on a few of the EC piloi are no longer repeated. The drawing of the lines on no. 365 is unusual to say the least, while the long flap(?) falling from the top of no.688 might be suggestive of soft felt. Doubt may be expressed about the relevance of this pilos among those of warriors, since it is simply shown on a male head. However, the presence of the wreath adorning it suggested a victory possibly in battle, and therefore it was included.[8] The black spots on no. 285 which is worn by a Lapith in a Centauromachy, may even be indicative of a skin material and not felt or bronze. Two piloi (nos. 421 and 599 both by the Kleophon Painter) are painted white, one (no. 596, according to Felten, by the Bird Painter) is red, but as stated earlier these additional colours hardly help us to distinguish a felt from a bronze pilos. White is also used for the lower straps on nos. 354 (by the Hector Painter in the Group of Polygnotos), 365 (in the tradition of the Niobid Painter) and †380 (unattributed); we may recall the white straps on EC no. 339b which was a work very late in the career of the Niobid Painter himself. Dilute glaze occurs for the strap on no. 347.

While the LA and EC examples gave us only one pilos hanging behind the owner's head and the rest all in profile view on the head, in this period we seen two in frontal view (on nos. 354 and 370), one hanging behind the head (no. 694), one hanging from the warrior's hand (which also holds his spear) (no. 365), and one on a wall behind the figures (no. †380). The last three which retain their shape in these positions are probably to be thought of as made of bronze.

The proportion of heroic to ordinary figures wearing piloi in the CL

period changes surprisingly; only a quarter of the total in Table 76 are not ordinary people.

Table 76

			Total
Ordinary Figures			17
	departing	9	
	fighting	1	
	at tomb	3	
	setting out	2	
	without further context	2	
Heroic/Mythological Figures			7
	Alkmeon?	1	
	Greeks in Amaz.^{y}	2	
	Hero	1	
	Lapith	1	
	Thersites?	1	
	Theseus	1	

As in the EC period it is not only the light-armed figure who wears a pilos; on nos. 285, †356, 365, †380, 421, 584, 599, 600 and 694 a pilos is accompanied by a hoplite shield.

The painters of the CL piloi are:

Table 77

		Total
*Kleophon Painter	- nos. 355, 421, 599	3
?early Aison	- no. 370^{2}	2
Danae Painter	- nos. 122, 347	2
Marlay Painter	- nos. 59, 285	2
Bird Painter (Felten)	- no. 596	1
*Curti Painter	- no. 95	1
Eupolis Painter	- no. 378	1
*Hector Painter	- no. 354	1
Niobid Painter, tradition of	- no. 365	1
Orpheus Painter	- no. 97	1

		Total
Painter of Ferrara T480B	- no. 688	1
*Peleus Painter	- no. 576	1
Phiale Painter	- no. 577	1
*Polygnotos	- no. 584	1
Thanatos Painter	- no. 600	1
Unattributed	- nos. 47, †356, †380, 694	4

As has been found previously in the study of helmets on EC and CL vases the interests of the Niobid Group in the earlier period are maintained in the later by artists in the Group of Polygnotos. Here seven of the piloi are by artists in the Polygnotan Group (those marked with an asterisk) and in particular in the subsidiary Peleus Group. However, it is difficult to detect any special stylistic characteristics in the drawing of the piloi concerned.

Late 5th cent.

There is a surprising shortage of piloi on vases of this period in the catalogued sample, especially considering that the numbers pick up again in the next category. However, we do have three examples on three vases to discuss (Fig. 77, top). The two varieties in the shape are still represented here, i.e. the lower and rounded alongside the taller and pointed. The rim on no. 463 is conspicuously close-fitting, but no. 612 still splays outwards. That on no. 616 recalls the EC no. 468 variant. A double line marks off the rim at top and bottom on no. 463; the sketchy drawing of no. 612 creates the impression of a double line at the bottom of that rim also.

A carrying loop is shown on no. 612; perhaps it is by means of this that the helmet is attached to the spear from which it hangs. The arc

drawn near the top of no. 463 might be a similar loop viewed against the side of the pilos: but it is perhaps more likely that this is a variation on the straps drawn on the side of earlier piloi. (Looking ahead to the 4th cent., one may compare nos. 435 and 617 for similar lines at the top of conical piloi.) Also on no. 463 the line between the crown and the brim is broken at the side by a dotted circle which is again presumably to be explained as the fitting for the chin-strap, although that is not indicated on the figure. A strap can be seen hanging down from no. 612.

The association of the pilos with both heroic or mythological figures and ordinary warriors is continued in this period, for that on no. 463 is worn by a god in a Gigantomachy, while on no. 612 the pilos hangs behind a warrior seated at a tomb, and on no. 616 it crowns a trophy. Both fighters can be considered to be heavily armed, since the former is equipped with a shield and the latter wears a linen-corselet. The first two vases are attributed to an artist near the Pronomos Painter and the Reed Painter respectively; the third is unattributed.

4th century

With the eight piloi on seven vases we see here the commonest form of head-covering for warriors in the 4th century vase-paintings under study. All are conical in shape, and only no. 507 may lack the splaying brim. On nos. 103, 433 and 435 two lines are used for one or both edges of the rim. No loops are depicted on the tops, though the inner lines on nos. 435 and 617 might be related to that purpose as discussed above. A circle on the side is only to be seen on no. 617, and chin-straps are ignored. The two piloi on no. 433 are quite exceptional in having cheek-pieces attached below the rim at the sides. On the second at least the drawing of the rim-

edge would suggest that the cheek-piece is formed as a continuous piece out of that edge; i.e. not fixed as a separate item to the body of the helmet under the rim as was the case on Thracian helmets. Unfortunately the accuracy of the drawing cannot be confirmed because none of the surviving originals displays such a feature. One can compare the added neck-guard on the pilos in Lecce (no. 9 above) where the added piece is fixed under the lip of the rim, but the distinction there between rim and neck-guard is clearly maintained.

Five of the 4th century piloi are painted white, and four of those have yellow added for the interior features. Since no. 617 is unattributed and the others are all by Group G (no. 433) or near it (nos. 434 and 436), the use of these extra colours seems to have more to do with the taste of the artist and the time than any attempt to show the nature of the material intended more accurately, whether felt or bronze, as already stated above.

The ratio of heroic to ordinary pilos-wearers is here 1:3 :

Table 78

			Total
Ordinary Figures			6
	fighting (v. Orientals)	5	
	youth at trophy	1	
Heroic/Mythological Figures			2
	Greek in Amaz.[y]	1	
	Hero	1	

All but the youth are kitted out with shields, and so can be termed 'hoplites'. By the 4th century then the association of the pilos with the hoplite was firmly established at least in the vase-paintings, and especially in the work of the artists known as Group G. Five of the piloi here have been attributed to painters related to that Group.[9] No. 103 is by the Painter of Munich 2365, while nos. 507 and 617 are unattributed.

Summary

A few points may be made concerning the relationship of the pictures on the vases to the original piloi discussed earlier. The paintings cannot recreate the fine detail of the change in angle between the crown and the rim, although the occasional use of a double line at that point might suggest a relief line or the slope seen for example on Athens, N.M. 687 (no. 4). Similarly the reinforcement of the bottom edge of that helmet may be indicated in the doubling of the line there on some of the piloi of the second half of the 5th and the 4th centuries. The holes found on the sides of the originals can be equated with the circles and blobs on some of the painted piloi, and explained as part of the fixing for the chin-straps. No obvious explanation of the circles and straps on the sides of the painted piloi presents itself as yet, although the wheel on the Lecce pilos (no. 10) may be compared with them. Are they purely decorative and not functional at all? While both rounded and conical piloi are portrayed on the vases of the 5th century, there does appear to be a case for believing that the former had ceased to be important at Athens in the 4th century. However, the date of the last-mentioned Lecce helmet cannot accordingly be fixed more precisely in the fifth century, because the Attic vases probably do not accurately reflect the situation in Italy at the time. A study of the similar evidence on South Italian vases would be required. Finally, one may briefly refer to the fact that the vases lend support to the idea that some of the original piloi may once have been fitted with extra guards for the cheeks, just as the Lecce helmet (no. 9) still retains its neck-guard.

PILOI IN SCULPTURE

Catalogue

1. The Cairness Stele from Megara and now in the Worcester Art Museum. H. Diepolder, "Eine Kriegerstele aus Megara", MJb 5 (1928) 225-229 fig. 1; JHS 49 (1929) 1-2 (Beazley); Diepolder, 21-2 fig. 3, 420-10; JdI 49 (1934) 52 fig. 4 (Möbius); AJA 41 (1937) 6 fig. 1 (Taylor); MTP 31; IEE 1 327; AK 19 (1976) 24-29 pl. 6.3 (Vasić); Stupperich, cat. no. 554, ca. 420 or later.

2. Relief from the Agora at Cyrene. EAA II 682 fig. 911; Lorenz, 51 pl. 21.3; AK 19 (1976) 24-29 pl. 6.4 with earlier refs.; Stupperich, 166; Ridgway, FS 142-3 fig. 102, for a useful summary of the discussion regarding the relationship between this relief, the Cairness stele and the stele of Lykeas and Chairedemos in the Piraeus Museum.

3. Lekythos, Athens, N.M. 815. Conze, no. 378 pl. 93; Süsserott, 102 n. 55; Johansen, 155-6 fig. 79 about 400; Dohrn, 128 no. 37, early 4th cent.; Stupperich, cat. no. 34, about 420 or shortly after that.

4. Lekythos, Munich, Glyptothek 209. For Chaireas, Eukoline and Onesimos. From Athens. Conze, no. 380 pl. 92; Dohrn, 128 no. 36 pl. 14b with refs., early 4th cent.; Stupperich, cat. no. 481, 410/00.

5. Stele, Athens, N.M. 891. For Mika and Amphidemos. Conze, no. 158 pl. 49; Dohrn, 143 no. 58 early 4th cent.; GRBS 13 (1972) 52 pl. 2.1 (Clairmont); Stupperich, cat. no. 55 ca. 400.

6. Loutrophoros-stele, Copenhagen, Nat. Mus. no. 1626. For Speusandrides. From Athens. Conze, no. 1009 pl. 197; Stupperich, cat. no. 448, towards 400; AM 96 (1981) 165 no. 9 pl. 51.2 (Dehl).

7. Stele, East Berlin no. 1708, Blümel K29. For Sosias and Kephisodoros. Diepolder, 14 n. 4, 27 and 30-31, end of 5th cent.; Lippold, 196 n. 2, ca. 400; Johansen, 33-34 fig. 17, end of 5th cent.; Dohrn, 128 no. 39, 135-136 pl. 14a, early 4th cent.; MTP 32 pl. 12; GRBS 11 (1970) 207 no. 33; Stupperich, cat. no. 375, 410/00.

8. Stele, Paris, Louvre cat. somm. 3063. For Erasippos and Meixias. Diepolder, 10 pl. 2.2; Süsserott, 98, end of 5th cent.; Lippold, 196 n. 14,430-400; Johansen, 33 fig. 16; Dohrn, 128 no. 40 and 135, early 4th cent.; Stupperich, cat. no. 518, towards 400. N.B. the pilos in this instance is partially obscured since it hangs from Erasippos' left palm or wrist or his spear-butt.

9. Lekythos, Leiden, RO 1 A 5. Conze, no. 627 pl. 147; GRBS 11 (1970) 206 no. 32 pl. 14.2 (Frel & Kingsley); GRBS 13 (1972) 54 pl. 2.3 (Clairmont); Stupperich, cat. no. 450, towards 400.

10. Lekythos, Athens, N.M. 810. From Menidi. Conze, no. 1059 pl. 213; Dohrn, 128 no. 38, early 4th cent.; Stupperich, cat. no. 32,ca. 410.

11. Lekythos, Athens, N.M. 2688. Conze, no. 1117 pl. 229; Stupperich, cat. no. 122, 410 or shortly after that.

12. Stele, Athens, N.M. For Lisas, a Tegean. From Dekeleia. BCH 4 (1880) 408-415 pl. 7, end of 4th cent.; Conze, no. 1148 pl. 244; Johansen, 50; Dohrn, 127 no. 32, 133 and 139, early 4th cent.; Childs[2] 283, early 4th cent., said to have been destroyed; Stupperich, cat. no. 204, towards 410.

13. Stele, Boston, MFA 1971.129. For Stratokles. GRBS 11 (1970) pl. 15.1 (detail); GRBS 13 (1972) 49-58 pl. 1 (Clairmont) ca. 390-380; AJA 76

(1972) 353 pl. 74 fig. 6 (Harrison); Comstock & Vermeule, SS 44-45 no. 64, ca. 394; Stupperich, cat. no. 395, 410/00; E. Vermeule, Aspects of Death in Early Greek Art and Poetry (Berkeley & Los Angeles, 1979) fig. 31.

14. Relief, New York, Metr. Mus. acc. no. 40.11.23. Richter, Hdb Gk Coll pl. 73a; Richter, CGS no. 82 pl. 66b, probably late 5th cent.; Dohrn, 127 no. 31, 132ff. pl. 13, early 4th cent. N.B. refs. to Karo and Payne are wrong); MTP 32 pl. 10; GRBS 11 (1970) pl. 14.1 (detail); GRBS 13 (1972) pl. 2.2; Childs^{2} 283, early 4th cent.; Stupperich, cat. no. 497, 410/00.

15. Academy Relief, Athens, N.M. 3708. AA 1931 217-9 figs. 1-3 (Karo); JHS 51 (1931) 187 fig. 4 (Payne); Dohrn, 127, 134, early 4th cent.; IEE 2 88-89 first half of the 4th cent.; Childs^{2} 288 fig. 7; Stupperich, cat. no. 151, about 400 or shortly after that; Philip of Mac 114, pl. 64.

16. Votive relief of Pythodoros, Eleusis Museum no. 51. AM 14 (1889) 398-408 pl. 12 (Brueckner); JdI 40 (1925) 36 (Rumpf); Dohrn, 18 pl. 10a, ca. 415/4; JdI 83 (1968) 145 fig. 15 (Gauer); GRBS 13 (1972) 55-6 pl. 4.1, 413-410 (Clairmont); Ridgway, FS 135 and 156 fig. 99, ca. 420.

17. Stele, New York, Metr. Mus. acc. no. 29.47. Richter, CGS 55 no. 81 pl. 66a, last quarter of 5th cent.; JdI 83 (1968) 146f., ca. 380 (Gauer); Hölscher, 107-8 pl. 9.2; Stupperich, cat. no. 494, end of 5th cent.

18. Relief, Athens, Acrop. Mus. no. 3173. R. Schöne, Griechische Reliefs (Leipzig, 1872) 50 no. 97 pl. 23; MTP 33 pl. 11.

19. Stele, Constantinople, no. 39. From "Pella". BCH 8 (1884) 339-42 pl. 11, first half of the 4th cent. (Heuzey); DS 1445 fig. 3456; Lippold, 176 pl. 64.2, 450-420; E. Akurgal, Die Kunst Anatoliens (Berlin, 1961) 271 fig. 239, 430-420; Lane-Fox, 67, 5th cent.; Philip of Mac 115 fig. 65, end of 5th cent.

20. Stele, Thebes Mus. no. 54. For Mnason. From Thebes. BCH 26 (1902) pl. 7; Pfuhl, fig. 633; Prins de Jong, pl. 103, ca. 400; Rumpf, MZ pl. 37.4, ca. 440-10 (both Pfuhl and Rumpf are inaccurate); AE 1963 (1965) Chron 14; IEE 1 387; CGA 269 fig. 307, ca. 400; Philip of Mac 117 fig. 66. (Pl.18a)

21. Stele, Thebes Mus. no. 55. For Rhynchon. From Thebes. BCH 26 (1902) pl. 8; AE 1920 pl. 1; Pfuhl, fig. 634; Prins de Jong, pl. 104, ca. 380; Rumpf, MZ pl. 37.6, ca. 440-10; AE 1963 (1965) Chron 14; IEE 1 411 (detail). (Pl.18b)

22. Stele, Thebes Mus. no. 56. For Saugenes. From Tanagra. AE 1920 pl. 2; AE 1963 (1965) Chron 14; AAA 1 (1968) 92-96 figs. 1-2 (Kalogeropoulou).

23. Stele, Thebes Mus. no. BE43. For Byille. From Hg. Theodoroi. AE 1963 (1965) Chron 14-15; IEE 1 444.

24. Stele, Thebes Mus. no. 240. For Pherenikos. From Asopia. AE 1963 (1965) Chron 13-14.

25. Stele, Athens, N.M. BE 55/74. For Nikias.

26. Bassae Frieze, London, Brit. Mus., slab no. 541. Hofkes-Brukker & Mallwitz, 80-1 H18-541 and 96 fig. 10a; PKG no. 92a.

27. Inscribed Pillar at Xanthos. Xanthos I 90-91 pl. XXXII top left and V 113 ff. pl. XXXIX and pl. 62; AA 1970 378-380 fig. 33 (Borchhardt).

28. Nereid Monument, London, Brit. Mus. From Xanthos.
slab no. 869: IEE 1 344-345; Childs[3] pl. 7.1. Back row, left figure; front row, left and third from left.
slab no. 878: Childs[3] pl. 9.2.
slab no. 883: Childs[3] fig. 11; cf. EAA Atlante pl. 281 figures nos. 71 and 72 to which add the heads nos. 150 and 151 on pl. 282.
west pediment: Childs[2] 292 fig. 11; cf. EAA Atlante pl. 288.

29. Trysa Heroon, Vienna, Kunst. Mus. E.g. Childs[2] 283 fig. 2, 284 fig. 3, 287 fig. 6; Childs[3] pls. 14-17. The neck-guards occur on interior west B 12, Childs[3] pls. 16-17 and IEE 1 361. Cf. Childs[2] 300 fig. 19 a charioteer in the Seven against Thebes on the exterior south-east wall, 313 fig. 23 Telemachos and Odysseus killing the Suitors on the interior south-west wall.

30. Payava Sarcophagus, London, Brit. Mus. From Xanthos. Xanthos V pls. 32-33, 38, 40-41; AA 1968 229 fig. 41 (Borchhardt).

31. Rider Monument from Kadyanda. AA 1968 219 fig. 35, 224 fig. 37 and 226 fig. 39 (Borchhardt).

32. Stele, New York, Metr. Mus. no. 119. From Tarentum. Langlotz & Hirmer, 91 pl. 137 above, with further refs.

Commentary

The first sculptured piloi appear on Attic grave reliefs of the last quarter of the fifth century, and it is interesting to find that the first two examples to be discussed seem to be made of felt and not bronze. These occur on two related stelai, one the Cairness Stele from Megara, the other a fragmentary relief from the Agora at Cyrene. Both depict warriors

standing at ease in almost frontal view with sword, chlamys, shield and spear at their left side, and a pilos held in their right hand; the Cairness warrior, a bearded, stouter and older man, also wears an exomis. The piloi which they hold, are clearly soft enough to lose their full roundness in this position.[10] And yet, the first seems stiffer than the other, since it looks to be simply flattened, with the line separating crown from brim still distinct, while on the Cyrene stele the cone has collapsed into a number of folds which give a sinuous contour to the bottom edge (along which the stone is broken). The Cyrene pilos is also unusual in that the area between the warrior's thumb and index finger is plaited above with a circular knob below. How one should interpret this rendering is not clear to me, although the knob at least may perhaps be related to circles drawn on the side of the pilos on some of the vase-paintings already considered.[11] A date of about 420 or a little later has been proposed for both of these stelai.

In the period after the production of these down to about 400 B.C. a whole series of grave stelai and lekythoi was created on which warriors are equipped with piloi.[12] The context is one in which the warrior is shown at ease, presumably at home in the company of his family or friends, but about to depart on campaign. An early example may be represented by the lekythos, Athens N.M. 815, on which the pilos worn by the hoplite may still be conceived of as made of felt, since the lower edge curves gently from front to back. He wears a chiton and baldric for his sword, and carries his shield on his left arm. With his right hand he clasps the hand of a woman seated in front of him. Two more women look on, one from each side. Comparable compositions occur on two slightly later monuments, a lekythos in Munich (Glyptothek 209) and a stele in Athens (N.M. 891),

but on these the piloi, still conical and brimmed, appear firmer and may be of bronze. This tauter form of the conical pilos recurs with little or no variation on the remaining examples from the late 5th century. Instead of holding hands with a seated woman, the warrior may do so with an old, standing man as on the loutrophoros-stele of Speusandrides in Copenhagen (Nat. Mus. no. 1626), or a fellow hoplite, as on the stele of Sosias and Kephisodoros in East Berlin (no. 1708) or that of Erasippos and Meixias in the Louvre (cat. somm. 3063). An odd variant occurs on a lekythos in Leiden (RO 1 A 5) on which a youth extends his hand to a seated hoplite who ignores it and instead puts his right hand up to his pilos on his head (in a gesture of despair or simply to put on/take off the helmet?).[13] The hand-shake is also omitted on the last two of these examples, on the lekythoi in Athens (N.M. 810 and 2688). All of these warriors, it should be noted, are hoplites despite the fact that they wear piloi and not more close-fitting helmets, and a chiton (sometimes with a chlamys) and not a breast-plate. Only Onesimos on the Munich lekythos above is not represented with his shield: instead he holds his sword in his left hand.

Contemporary with these more peaceful reliefs are a very few reliefs, grave and other, of warriors in action where again the pilos is represented. The simplest is that of Lisas, a Tegean, whose stele was found at Dekeleia in Attica and was probably worked by an Attic sculptor. His conical pilos, with a deep, splaying brim conforms to the standard portrayed on the previously discussed reliefs. He too has his shield, but instead of a chiton, he wears an exomis. The spear which he presumably carried in his right hand must have been painted on to the surface of the stone. The action consists in his advancing stealthily to his left under the protection of his shield: no opponent is shown. A combat between two warriors, however,

is depicted on two stelai which share a similar composition though not style.[14] They are the gravestone of Stratokles in Boston (Museum of Fine Arts, 1971.129) and the fragmentary relief in New York (Metropolitan Museum of Art, acc. no. 40.11.23). On both it is the fallen warrior who wears a pilos, and in the case of the New York piece at least the curvature of the rim may inspire us to think again of a felt example rather than a hard, metal one. Only Stratokles' opponent is well equipped with chiton, sword and shield: the other pilos-wearer seems to be naked except for a cloak on his left shoulder and to carry only his short sword (and its scabbard).[15] The fourth action-scene is similar, but the victor there is a rider instead of a hoplite, and because of its resemblance to the Relief of Dexileos from the Athenian Kerameikos which is dated to 394 B.C., this relief too may be placed early in the 4th century and so a little later than those considered so far. It is, of course, the relief on the left side (as one looks at the front face) of the base found in the Academy in Athens (N.M. 3708). The pilos is tucked inconspicuously into the bottom right corner, i.e. it has fallen from the head of the naked warrior who sits on his cloak to the left of it and protects himself with his shield from the horse and rider which rear above him.[16] Clearly this pilos is made of stiff material, presumably bronze, since it keeps its high conical shape in this position. It is, in fact, only this conical form which can now be made out for the piloi which are depicted on the last two reliefs to be mentioned here. Both the reliefs concerned are interesting for the numbers of figures portrayed in the fighting but unfortunately both are now too badly damaged for a more detailed analysis of the warrior's equipment to be made. The first pilos occurs on an apparently naked hoplite on the lower register of the votive relief dedicated by the hipparch Pythodoros, perhaps between 413 and 410 B.C. A further two

are worn by two of a group of at least four figures on a fragment of a stele in New York (Met. Mus. acc. no. 29.47) from the end of the century. One wearer is a hoplite in a chiton, the other is more lightly armed with an exomis and a skin over the left arm instead of a shield.

Besides these grave and votive reliefs there is a victory relief from the Athenian Acropolis (Acropolis Museum, no. 3173) which has been dated in the late 5th century. Three piloi are to be seen on it, all set on the top of tree trunks which form the supports for trophies, alongside which stand on one side of the block Nike and on another an armed hoplite. The piloi are of the regular conical shape with a splaying brim. They are all associated with linen-corselets, one also with a chlamys and a shield.

In conclusion, one can say that these, predominantly Attic, reliefs of the late 5th century have represented the pilos in its conical shape with a brim without exception. Only the first three and possibly one or two others may suggest that the material is softer than bronze. No crests, neck-guards or cheek-pieces were detected. Although none of the warriors with piloi wore a corselet, they were in general not light-armed but true hoplites if the definition be based on the presence of the shield.

Outside of Attica such representations are rare. The Cyrene relief has already been noted above because of the Attic influence detected in it. Another comparable piece is a stele thought to be from Pella and now in Constantinople (no. 39). The young hoplite stands at rest with his chlamys flung over his left shoulder, his shield steadied by his right hand and set vertically on the ground beside him, and his sword and spear in his left hand. The conical pilos on his head appears to be of bronze, although its brim does seem to dip down a little lower at the front and back. Again there is no neck-guard, cheek-piece or crest. It too probably dates from

the late 5th century.

Contemporary with this relief and the Attic stelai is a very interesting series of grave stelai from Boiotia.[17] The technique is unusual, since the design has been incised into the polished surface of slabs of a local black limestone. Considering the quantity and quality of the incised details, it seems unlikely that the whole surface was ever painted over (what we see now being only a preliminary sketch); but the roughened background could have taken a contrasting light colour, the effect then being closer to that of black-figure vase-painting. At least ten of these stelai are known,[18] and the design on each follows the same general format of a hoplite charging to the right over uneven ground against an unseen enemy. Stupperich proposed a late 5th century date for all of them, but earlier scholars had supported a wider time-span so that those with more elaborate patterns were placed in the early 4th century.[19]

Having seen only six of the ten, I can comment on the piloi shown on those stelai only. The first point to be made is that without exception it is a pilos and not another form of helmet which is worn by these warriors. On the stele of Mnason (Pl. 18a) which has generally been thought to be the earliest because of its simplicity, the pilos takes the form of a simple cone with a brim, and, strikingly, a curved neck-guard, similar to that on the surviving Lecce helmet (no. 9). The next four, those of Rhynchon (Pl. 18b), Saugenes, Byille and Pherenikos, repeat the same shape (without the neck-guard) but with the addition of two further features. The first is a wreath of olive leaves around the centre, especiably large and branchy on Rhynchon's and Saugenes'. The second is a carrying loop on the summit (with two loose ends on Saugenes'). The last of the six, that of Nikias, reverts to the wreathless variety of Mnason's, but the loop on top is still depicted.

It would appear that because of its neck-guard, Mnason's helmet must be thought of as made of bronze; even if a felt cap were to be supplied with a flap there, it is unlikely that it would take precisely the shape of the neck-guard seen on other types of helmet. As for the remaining five considered, the material intended remains doubtful - a carrying loop and a wreath could presumably be attached to either a felt or a bronze pilos. The consistency in shape and the date in the late 5th century, however, might tip the scales in favour of the latter.

On the large architectural friezes of the Greek Mainland in the Classical period the pilos is rarely represented on warriors. Perhaps the only instance is on the Bassae frieze, ca. 395, where on the central slab of the north or south side a Greek fallen beneath an Amazon's horse wears a pilos.[20] It is conical with a somewhat flattened top because originally it would have been partly obscured at that point by the horse's hoof. Below the inset rim it is provided with a neck-guard the edge of which is turned outwards along the bottom and behind the man's ear: it may be compared therefore with Mnason's pilos and the Lecce helmet (no. 9). It seems possible that the sculptured helmet may once have also had cheek-pieces, but the damage to the surface now makes it difficult to be sure. Like nearly all the Greeks in this Amazonomachy this figure is lightly clad - a cloak runs over his left arm and lower abdomen - and he probably held a sword.

There are numerous examples of piloi represented on tombs and heroa in Lycia in the first half of the fourth century. The earliest of these occur on the Inscribed Pillar at Xanthos. The nearer two of a line of three hoplites are shown in piloi, with shields and spears (the latter are not carved). Both are simple cones with inset rims, but while the farther one is depicted in profile, the nearer is in three-quarter view, since the hoplite

turns from the hips upwards to look out and back. It seems likely that these represent three of the Arcadian hoplites, seven of whom were killed in one day by the Lycian occupant of the tomb.[21]

Surprisingly few piloi can be seen on the Nereid Monument which also stood in Xanthos, but was erected ca. 380 B.C. In fact, none can be made out on the larger (first) frieze as it now survives. On the smaller (second) frieze which depicts the siege of a city, the majority of the helmets seem to have been of the other types. Piloi may be worn by some of the defenders seen within the walls on slab no. 869. They are characterised by their higher, conical crowns and wide, splaying brims. Another may be worn by a defender on slab 878, and two more (including one in frontal view) on slab 883. On the west pediment relief part of a pilos survives worn by one of the warriors running from left to right towards the combat in the centre. He wears a muscle-corselet over a chiton and a chlamys fastened at the neck; he carries a shield on his left arm and probably originally a sword in his right hand. His pilos is again a simple cone with a brim.[22]

The friezes of the later Heroon at Trysa (ca. 370) stand in sharp contrast for there the pilos seems to be the commonest form of head-gear, not only in the battle and city-siege scenes of the west wall, but also elsewhere in the mythological scenes.[23] Over one hundred examples can still be identified despite the poor condition of the reliefs as they now survive. The shape is again a basic cone with an inset rim. The occasional indication of a crest or a neck-guard shows the metallic nature of at least some of the piloi, especially in the siege scenes, where most of the wearers are also equipped with large round shields, and even sometimes a muscle- or a linen-corselet.

In the following decade (ca. 370-360) also the pilos is depicted a

number of times on the friezes of the Payava Sarcophagus from Xanthos. On the east side of the crest-beam four foot-soldiers wear it, two without further dress, two with a chiton and a shield. Below on the curving sides of the lid the charioteers on both sides wear piloi with linen-corselets over chitons and cloaks. These are all simple cones with a rim, but two of those on the crest-beam may have been portrayed with a crest which is hardly distinguishable now. Further down on the body of the tomb itself the relief on the east side shows Payava riding into battle at the head of a representative group of three of his cavalrymen against six (probably originally seven) of the enemy's foot-soldiers, one of whom has already fallen beneath Payava's horse.[24] Of the infantrymen at least five are wearing piloi similar in shape to those already mentioned from this tomb, but two (the first and third from the left) are clearly crested. In addition, the pilos at the far right seem to be fitted with a sickle-shaped cheek-piece (and possibly a neck-guard): it is not clear whether the other three helmets to the left also had such a cheek-piece or not. Two of the pilos-wearers are naked, two wear an exomis, but they all carry the hoplite shield and (originally painted?) spears.[25]

Finally among the Lycian reliefs we find a pilos worn by the hoplite opponent of the rider on the Rider Monument from Kadyanda (second quarter of the fourth century). It too is crested with a neck-guard and sickle-shaped cheek-piece, as far as one can now tell, and its owner wears an exomis and carries a spear and shield.

We may conclude, therefore, that in Lycian sculpture the pilos appears regularly in the first half of the fourth century, worn not only by the opponents of the Lycians but also it seems by both sides in the scenes of the sacking of a city. The shape is always the simple cone with a brim

below which a neck-guard and cheek-pieces may be fitted in the second quarter of the century. The presence of these extras and occasionally a crest indicates that the material is bronze. The wearers generally carry the hoplite shield, and sometimes wear a corselet.

Finally, in this section on the carved piloi in sculpture, we may turn from the east to the central Mediterranean, to look briefly at a limestone grave relief from Tarentum (New York, Metr. Mus. no. 119). It has been dated to the middle of the 4th century, that is a little later than the Lycian material. Only part of a longer frieze now survives: a woman and man are shown at an altar around which hang various pieces of cloth and armour. The man wears a pilos slung behind his neck. Its open shape (conical and brimmed) is retained in this position and so it must be meant to be of bronze. No neck-cord is carved, but it could easily have been painted above the folds of the cloak which is fastened with a brooch at the front. A second pilos is carved between the heads of the two figures; one is to imagine it hanging on the wall in front of a piece of material. It too is conical with a deep brim, and the dark shadow created by the hollowed out bottom part again suggests a hard, metallic object rather than a soft, felt one. Neither pilos bears any extra fittings like a neck-guard or cheek-piece or crest.

PILOI IN MINOR WORKS OF SCULPTURE

Catalogue and Commentary

Three crested piloi are worn by nude warriors in the form of small statuettes.

1. Corcyra Museum, from Aphiona. AM 55 (1930) 186-190 Beil. LXI pl. XII (Bulle); IEE 1 126.

2. British Museum, 1454 (Woodhouse Coll.). Walters, Cat 238 pl. 28; Cook, GRA 129.

3. British Museum, 1074 (Woodhouse Coll.), perhaps from a Greek city of South Italy, according to the museum. Cook, GRA 129 and fig. 103 on 131. The piece in Corcyra Museum and the one in the British Museum which is also said to be from that island (no. 1454), both show a hoplite in the attacking pose which we have already seen on the Boiotian grave reliefs of the late 5th century. However, these two have been given dates which are almost a century apart: ca. 440 for the former, ca. 350 for the latter. The third piece which is also in the British Museum, but without provenance, is thought to be contemporary with the second.

Although the crests are all mounted on narrow bands and grooved to suggest the hair, the pilos below is different on each figure. That of the bearded warrior in Corcyra is a low, rounded cone on which the brim is barely distinguishable except as a thickening of the edge at the back. The separation of the brim from the crown is better achieved on the second figure. The crown itself is still conical but taller, and below at the back it has a very simple, short neck-guard, although it should be pointed out that this in fact hardly reaches the area of the neck below the warrior's hair. In keeping with his active pose, the helmet is seen to be firmly attached by a chin-strap. Finally, the third figure repeats the low, close-fitting form of the pilos with out-turned brim, and no neck-guard or strap. All of these piloi must be of bronze not felt, because of the presence of their large crests.

Another three piloi are represented on small reliefs from the late

5th century.

4. A clay impression from a belt buckle, Athens, Agora T3393. Hesp 24 (1955) 68-9 pl. 31c, end of 5th cent. (H.A. Thompson); Hesp 38 (1969) 242-251 pls. 64-65 (D.B. Thompson); Mini Sculp no. 29; Holloway, 138 above ca. 400.

5. Cheek-piece, Berlin, inv. no. 7863. From Megara. JdI 2 (1887) 15-18 pl. I (von Sybel); Greifenhagen, AK 4 no. 13; PKG no. 153a; Hesp 38 (1969) 246 pl. 65f. (Thompson); IEE 1 331 end of 5th cent.; AM 91 (1976) 199-200 end of 5th cent. (Andriomenou).

6. Cheek-piece, Athens, N.M. no. 166 (Carapanos Coll.). From Dodona. Carapanos, 33 no. 1 pl. 15; JdI 49 (1934) 170 ff. fig. 7, end of 5th cent. (Neugebauer); IEE 1 199; Gk Mus 98-99 no. 98, last quarter of 5th cent.; AM 91 (1976) 199 n. 60, end of 5th cent. (Andriomenou).

The impression from the Athenian Agora depicts a bearded, nude man seated on his cloak in a rocky landscape. He has a hoplite shield, sword baldric, spear and a pilos which rests upright on a ledge in the rock at his side. It has a simple, conical shape with a deep brim which continues the line of the sides. Mrs. Thompson identified this warrior with Odysseus, mourning amid the arms of Achilles.[26] The figure on the bronze cheek-piece from Megara in Berlin has likewise been seen as Odysseus. Again in rocky terrain the warrior sits in a slumped position, this time with his hand to the pilos on his head.[27] This pilos, though of basically the same shape as the last, seems to be more curved along the brim, so, whereas the other was probably of bronze, here we may be dealing with a felt form. The third pilos is worn by the victorious hoplite in a duel on a bronze cheek-piece which was found at Dodona. The only appreciable difference in the shape here is to be seen

in the slightly increased depth of rim, in proportion to the crown. The representation of the pilos, then, on these small reliefs is remarkably uniform in its simplicity, and can be contrasted with the more rounded and crested type looked at earlier in the three statuettes.

How much this is the result of the medium rather than the date of manufacture may perhaps be judged from the appearance of three conical piloi on another relief dating to the middle of the 4th century or later, i.e. perhaps contemporary with the two figures in the British Museum.

7. This relief is worked in gilded silver as the covering of a leather quiver (gorytos) which was found in the antechamber of the Royal Tomb at Vergina. Treas Anc Mac Cat 50 no. 89 pl. 22, 350-325; Acta 50 pls. 18b and 20; Lane-Fox, 87; Philip of Mac 218-219, 221; Search 182-3 no. 160 pl. 28. One may compare the quiver found at Chertomlyk which was dated to the middle of the 4th cent.; Artamonov, 57 pls. 181-182 with reference to three more.

The piloi are distributed almost evenly throughout the field of the upper frieze which represents a fight in the presence of women, children and altars. All three are pointed and seen from an angle which permits the inside of the open cone to be represented elliptically. The brims are marked, and on the central and right hand ones a pattern suggestive of a wreath of leaves is added to the side.

PILOI ON GEMS

Catalogue and Commentary

Numerically piloi are well represented on gems, but generally the scale of the representation prevents the inclusion of precise details. When the whole figure of the warrior is included, the pilos is barely recognisable

by its outline.

1. On a cornelian scarab in London only the head of a young man is depicted wearing a pilos. British Museum, Blacas Coll. 71, Walters cat. no. 508. No provenance. Richter, EG 95 no. 310; GGFR pl. 445. The conical pilos is given careful attention: the brim which does not exactly continue the line of the crown is marked off by a double line; the top bears a carrying loop, and the chin-strap is clearly shown knotted below the man's chin. The dating of this item is problematic. Boardman considered it to be Early Classical.[28] Richter, however, suggested a late 5th cent. date. Both mention Melian coins as comparative material (on which see below) dating from the last quarter of the century. For the later date one may also cite the similarity between this pilos and those portrayed on the Boiotian stelai considered above.

A further eleven piloi are worn by warriors on gems dating from the second quarter of the 5th century to the early 4th century, but, just as very close dates are not easily given to these pieces, so the small piloi depicted are of limited value. Nevertheless, they are still worth including in a collective survey, organised according to their subject-matter.

Two of the gems depict combat-scenes.

2. On a chalcedony scaraboid in London an attacking hoplite spears another who has fallen in front of him. British Museum, Western Asiatic, Oxus 113. From the Oxus. GGFR pl. 851, Greco-Persian, Greek style, second quarter of 5th cent. The attacker wears a small, crested pilos perched on top of his head.
3. On the second, also a chalcedony scaraboid, a naked hoplite fights a Persian horseman. Rome, Villa Giulia. From Bolsena. GGFR pl. 881, Greco-Persian, Bolsena Group, second half of 5th or early 4th cent.

The hoplite's pilos is again conical with a brim, but here the impression given is of two raised bands encircling the helmet. (This, surely false, impression will be seen again later; it can perhaps be explained by the small scale of the detail and the inability of the cutter to separate the crown from the brim by a finer line.)

4. A cornelian scaraboid in London introduces us to a series of gems depicting warriors in crouched positions. British Museum, acc. no. 88.10-19.1, Walters cat. no. 559. From Tarsus. Richter, EG 94 no. 305, second half of the 5th cent.; GGFR pl. 860, Greco-Persian, Greek style, second quarter of 5th century. In this case the warrior crouches in order to put on his footwear. He wears only a chlamys fastened at his neck and a pilos which because of the crest attached to the top, characterises him as a warrior and not just a traveller or hunter. This and the other London gem just mentioned are the only ones to show crested piloi. Boardman classes them both among the Greco-Persian gems in the Greek style of the second quarter of the 5th century.[29]

Three more hoplites are shown crouching behind their shields as if protecting themselves (from missiles?) in the last few moments before an enemy attack.

5. Jasper scaraboid, once Arndt, Al486. From Tripolis. GGFR pl. 534, late 5th - early 4th cent.
6. Blue chalcedony scaraboid, Leningrad 574. GGFR pl. 954, Greco-Persian, Hellenising, second half of 5th cent. or early 4th cent.
7. Agate scaraboid, British Museum, acc. no. 1902.6-18.1, Walters cat. no. 528. From Sparta. Richter, EG 93 no. 304, second half of 5th cent.

All three piloi are conical, and the first and third appear to have the two bands commented on above.

A fourth hoplite may be mentioned at this point, since he resembles the last three in pose but stands with hunched body and bent knees, rather than crouches behind his shield.

8. Jasper scaraboid, Oxford, Ashmolean Museum, acc. no. 1892.1480. From Asia Minor (?). Richter, EG 79 no. 227, 5th to 4th cent.; GGFR 436 no. 290; EGFR 41-2 no. 175 pl. 31, Greco-Persian, late 5th cent.

   His pilos is conical with a splaying brim.

Two gems show warriors standing.

9. Glass scaraboid in Munich. From near Tarentum. E. Brandt, Antike Gemmen in deutschen Sammlungen, i, Staatliche Münzsammlung, München, i (1968) 328 pl. 38; GGFR 416 no. 408. (probably 4th cent.)

10. Chalcedony scaraboid in a private collection. From Smyrna. AG pl. 63.10; GGFR 410 no. 156, late 5th or early 4th cent.

    On the latter the pilos shape can scarcely be made out on the figure's head. On the former, on the other hand, it is held by the hoplite by its carrying loop in his right hand. The opening at the bottom is shown as an ellipse, and the crown is more rounded than conical.

The last two gems with warriors wearing piloi are closely related, since their figures are almost identical in pose.

11. Chalcedony scaraboid, Berlin 316. From Crete. Richter, EG 79-80 no. 229, 4th cent.; GGFR pl. 535, late 5th - early 4th cent.

12. Jasper scaraboid, Boston, Museum of Fine Arts 01.7539. GGFR pl. 537, late 5th - early 4th. cent.

    The warrior stands with one leg raised on a small rock, the elbow resting on the bent knee, his chlamys wrapped around the other arm and a sword in that hand. The man is commonly identified as Odysseus, presumably because of the pilos which he wears on his head (cf. the figure on the impression

of the belt buckle and the Megara cheek-piece above). The piloi, however, are not identical: on the first the brim displays a greater curvature, and a band crosses the side of the crown about halfway up (i.e. this is not the same as the thickened brim-lines met so far). A vestige of a carrying loop can perhaps just be made out on both examples.

13. With these gems from the 5th and early 4th centuries which show a predominantly conical pilos with a brim, and only rarely a crest, or carrying loop, we may compare a bronze ring from Olynthos. Inv. no. no. 31.428. Olynthus X 135-6 no. 447 pl. 26, first half of 4th cent.; GGFR 426 no. 958.

The pilos worn by the figure of Diomedes with Palladion and sword, which it bears, is compatible with the general date suggested. The crown verges on the rounded form, but the two bands are present for the brim.

14. The conical, brimmed pilos can be seen on a clay token found in a 4th century context on the north-west slopes of Kolonos Agoraios in the Athenian Agora. Athens, Agora, MC271. M. Crosby, "Lead and Clay Tokens", The Athenian Agora vol. X:2 (Princeton, New Jersey, 1964) 128 C14 pl. 32; GGFR 234-5 fig. 273.

The crouching warrior with spear and shield comes as no surprise: his adversary, however, is a lion.[30]

PILOI ON COINS

Catalogue

1. Gela, obv. of 2 dr. and 4 dr.

e.g. Kraay & Hirmer, no. 154; G.K. Jenkins, The Coinage of Gela

(AMUGS, II: de Gruyter, Berlin, 1970) 36 the didrachms, with obverses no. 15 etc. to the end of Group I, dated ca. 490/485-480/475, (with the exception of 019), pls. 3-6, and the tetradrachms, pl. 6 101-103.[31]

2. Tarentum, rev. of st.

   e.g. ACGC pl. 38 no. 675, ca. 400.

3. Segesta, obv. and rev. of 4 dr.

   e.g. Kraay & Hirmer, no. 203, ca. 405; ACGC pl. 50 nos. 849-851 obv., rev. & obv., ca. 410-00.

4. Cyzicus, electrum 1/6 st. and st.

   e.g. Boston Cat no. 1509, ca. 460-00, and no. 1552, ca. 400-330.

5. Lampsakos, gold st.

   e.g. Boston Cat no. 1600, ca. 387-330; Kraay & Hirmer, no. 732, ca. 340-330.

6. Birytis, in the Troad, obv.

   e.g. BMC 40 nos. 1-9 pl. 8.1-5, 4th cent.

7. Melos, rev. of st.

   e.g. NC 7th ser. IV (1964) pls. 1.18, 2.28 & 31 (Kraay); Kraay & Hirmer, no. 532, ca. 420-416; ACGC pl. 7 no. 130, ca. 420.

Commentary

Piloi are not very common on coins, and similar problems to those associated with smallness of scale encountered in the last section, present themselves here too. In addition, not one of the cases can be categorically interpreted as an illustration of a hoplite warrior. The piloi, however, deserve at least some mention, even though one cannot be sure that they are not merely caps and not helmets.

Horsemen are depicted wearing piloi on coins from Gela (ca. 480) and Tarentum (ca. 400). Both figures are armed with spears, but the Gelan is nude while the Tarentine is dressed in an exomis. The piloi are different in style, but still conical and brimmed in both cases. The object aimed at by each rider is not shown, and it could equally well be an animal as a human enemy. The two dogs at the feet of a figure on Segestan tetradrachms (ca. 410-00) suggest that he too is a hunter and not a warrior.[32] And yet he is equipped with a sword as well as two spears (or a rough staff?) boots, chlamys and pilos. In any case, his head-gear is worth noting, even if he is a hunter, for it hangs rigidly and horizontally on a neck-strap behind his head. That is to say, it displays the characteristic which up till now has seemed a useful indicator of a hard, bronze pilos instead of a soft, floppy, felt one. Other details are visible: a carrying loop hangs down from the top; a circular 'button' can be made out at the side just above the brim; and the channel of the brim itself is provided with an extra ridge. Would that a hoplite on a coin was equipped with such a clearly detailed pilos!

A number of coins from mints at Cyzicus, Lampsakos, Birytis and Melos, do in fact spotlight a head wearing a pilos, but again one cannot assume that the wearers are intended as hoplites. Numismatists regularly opt for an identification with one or other of the two male Kabeiroi, the younger if beardless, the older if bearded, presumably simply because of the presence of the pilos (in the same way that youths in piloi are often identified with the Dioskouroi).[33] The majority of these piloi are in the form of a straight-sided cone with a deep brim and perhaps a loop on top; an olive wreath is often added. The exception is found on the Melian coins where the sides of the pilos are more convex, the splaying brim is not marked off from

the crown and the fixture on top looks more like a button. This coin-die which is to be dated to the last few years before the destruction of Melos by Athens in 416 B.C., is, of course, the one referred to earlier in comparison with the gem in London above. The two piloi are quite different in design.

CONCLUSION

This survey of the surviving piloi and those represented in Classical art has shown that there are basically two shapes to the type: a rounded and a conical one. The rounded shape has survived in only one example from Southern Italy (no. 10), but it is found also on Attic vases of Early Classical, Classical and late 5th century date, on a possibly 4th century glass scaraboid in Munich from Tarentum and in perhaps less clear cases, on the Olynthos ring of the first half of the 4th century, and the bronze statuette in the British Museum (no. 1074) of ca. 350 B.C. It is not represented in sculpture or coinage.

The second, conical, form is by far the commoner both in the originals and in the art. It can, moreover, be subdivided into two groups according to the convexity of the sides of the crown and the angle of the brim, i.e. at the extremes one can distinguish from although several examples lie in the grey area in between these. When viewing the originals in this light, one might be tempted to think that the straighter form is to be placed in the West, in Italy (e.g. nos. 8, 9, 11, 13 and 14), and the curved form in the Greek Mainland (e.g. the others, with the exception of no. 6 from Upper Egypt). However, this theory cannot be supported by the art. On the Attic vases the curved form of the 5th century is replaced by the straighter in the 4th. In sculpture the Attic grave reliefs of the late

5th century show both forms, the relief from Pella the curved, the Boiotian reliefs the straighter, as do the Academy relief and the Bassae Frieze of the early 4th century. In the Lycian material the curved form predominates, but the straight one is not unknown. The Tarentine relief of ca. 350 likewise proves the contemporaneity of the two forms. The minor works of sculpture, the gems and the coins considered - all, in fact, indicate that the two forms of the conical pilos co-existed throughout the Greek World from the late 5th century to the middle of the 4th. Prior to that period, one may propose that the rounded pilos and the conical form with convex sides existed side by side.

It proved impossible in the art to distinguish felt piloi from bronze, although suggestions were made along the way when a detail of the representation, such as the position of the pilos in the scene, seemed to provide a likely indication of the material. When the wearers were still clearly hoplites, the actual identity of the material was perhaps less important than the simple fact that head-gear which offered protection to the crown of the head only was considered adequate. Neck-guards were added to only one of the originals (no. 9 from Rudiae), but to a number of carved helmets, e.g. on the relief of Mnason (late 5th c.), the Bassae Frieze (early 4th c.), the Trysa Frieze and possibly the Payava Sarcophagus (second quarter of the 4th c.) and the statuette (B.M. no. 1454) (ca. 350). Cheek-pieces, similarly, were rarely associated with piloi: examples occurred possibly with the same original, with two painted piloi on a 4th century Attic vase, possibly with the Bassae example, with those on the Payava Sarcophagus and the Rider Monument in Kadyanda.

Crests were not generally attached to piloi in art. Two Early Classical and one Classical pilos on Attic vases had crests (another Classical one had

a plume). In sculpture they only occurred on Lycian monuments (at Trysa, on the Payava Sarcophagus and the Rider Monument) of the second quarter of the 4th century, and the three small statuettes (ca. 440 and 350). Beyond that, only the piloi on two Early Classical Greco-Persian gems were crested. Instead, carrying loops at the top were depicted more often, on 5th century Attic vases, the Boiotian stelai of the late 5th century, four gems of the late 5th or early 4th centuries and the Segestan coin of 410/400.

Since piloi did sit higher on the head than other types of helmet, the use of a chin-strap was probably a necessity. Holes in the sides of the original piloi were recorded for nos. 2, 4, 6, 7, 9 and 12. In art the strap is not always shown: it occurred on the Attic vases, the statuette (B.M. no. 1454) from Corcyra ca. 350, the cornelian scarab in the British Museum from the late 5th century, and the Segestan coin (ca. 410/400). In stone sculpture this chin-strap could no doubt have been added in paint as it probably must have been on the Tarentine relief where the position of the pilos behind the warrior requires that it be assumed. The additional lines and circles which appeared on the Attic vase piloi and which were there interpreted as further straps, did not recur elsewhere in the artistic representations and their full purpose remains enigmatic.

Two points remain to be made concerning the pilos. The first has been emphasised throughout this section, namely that the wearing of a pilos does not indicate a light-armed soldier. There is sufficient evidence in the art that hoplites were wearing piloi, whether of felt or bronze, in the late 5th and 4th centuries. The second concerns the geographical distribution of the pilos. The proveniences of the surviving helmets led to the suggestion that the peoples around the Black Sea did not readily adopt this less

protective head-gear. This suggestion has found some support in the art also, for, apart from the piloi depicted on the quiver found in the Vergina tomb, which can be paralleled further north, there is no evidence from that area.[34] Otherwise, piloi seem to be well represented from Italy and Sicily, Mainland Greece, Lycia and Asia Minor in general, the Greek Islands and North Africa.

CHAPTER 2

CORSELETS

How well protected was a hoplite's chest and back? Did all hoplites wear a form of corselet, or did some go into battle in only a tunic or even naked? What were the corselets made of, and how effective were they? These are some of the questions an examination of the literary references, the surviving items and the artistic representations may help to answer.

a. THE LITERARY EVIDENCE

First, a point of terminology. Both "cuirass" and "corselet/corslet" are currently used in English for body-armour. According to the definitions given in the Shorter Oxford English Dictionary, it seems possible to distinguish the two words, not on the basis of the material used, leather or metal etc., but on the basis of the size of the item; thus, the "cuirass" seems specifically to reach only to the waist. Both words, however, appear to have become more and more general in use and can be loosely applied to any defensive armour worn on the torso. For the sake of simplicity, therefore, I shall employ only the term, corselet.

In Greek the following words are particularly relevant to the study of body-armour, and the lack of it, ὁ θώραξ , -ακος, ἡ σπολάς , -άδος , ἡ ἐξομίς , -ίδος , ὁ χιτών , -ῶνος and γυμνός .

θώραξ is the basic Greek word for a "corselet". From the Iliad onwards it could refer to either a metal or a linen one, but not as far as I know to a leather one.[1] Aristophanes refers to a corselet worth one thousand drachmai in the Peace which was produced in 421 B.C.[2] Presumably

so expensive an item was of bronze and not of linen or other materials.

Xenophon records an interesting conversation between Socrates and an armourer, Pistias, on the importance of a good fit for a corselet.[3] The type discussed must be a metal one because the weight of it is mentioned and the possibility of its hurting the wearer if it does not fit properly. Furthermore, others are described as ποικίλοι "cunningly wrought" and ἐπίχρυσοι "gold-plated".[4] The heavy weight of a metal-corselet is mentioned again in the Cyropaedia.[5] The θωρακοφόροι are placed at the head of the army to set a slow pace which the lightly-armed troops and the others can easily maintain.

That cavalrymen too in Xenophon's time wore a heavy, and presumably metal, corselet is well attested.[6] Indeed, the particular form a cavalry corselet should take was described at length by Xenophon himself.

> First then we say that the corselet must be made with the body in mind. For the body bears the well-fitting corselet, but the shoulders alone carry the one which is too loose. Nevertheless, the one which fits very tightly, is a restriction, not a protection. 2. And, since the neck too is one of the vital parts, we say that a covering must be made for this also, out of the corselet itself and shaped to the neck. For this will at the same time both provide decoration and, if it has been made as it should, take in the rider's face whenever he wishes as far as his nose. 3. ... Further, let the corselet be made in such a way that it prevents neither sitting down nor bending over. 4. Round about the abdomen and genitals, let the pteryges be so big and of such a kind as to repel missiles. 5. And since the left arm, if it suffers any harm, disables the rider, for it also we recommend the piece of armour invented for it, called 'the arm'. For it protects the shoulder, the upper arm, the forearm and the hand which holds the reins, and it both stretches out and bends; in addition it also covers the gap left by the corselet under the armpit. 6. The right arm must be raised, if he wants to throw a javelin or strike. So the part of the corselet which hinders this must be taken away; and in its place pteryges must be added in the hinges so that, whenever it is raised, they may open out in a similar way, and whenever it is lowered, they may close up. 7. For the upper arm the piece which is put on like a greave seems to us to be better than one connected to the armour. The part which is left unarmed when the right arm is raised, should be covered near the corselet with either calf-skin or bronze; if it isn't, he will be unguarded in the most vital part.[7]

Pausanias refers a number of times to corselets in his description of the painting by Polygnotos in the Lesche of the Knidians at Delphi. It depicted the sack of Troy: Odysseus is said to have put on his corselet (10.26.3); a bronze corselet lies on an altar (10.26.5); the corpses of Ἐioneus and Admetos are still wearing their corselets (10.27.1); and Glaukos is sitting on a corselet made up of two plates (10.27.3). In fact, when he mentions the corselet on the altar, he digresses into a brief discussion of the type:

> In my time this form of corselet was rare, but they used to wear them in ancient times. It consisted of two bronze pieces, one fitting the chest and the areas around the stomach, the other intended to protect the back - they were called γύαλα : one was put on in front and the other behind; then pins fastened them together.6.They seem to have offered sufficient safety even without a shield.

He goes on to cite a Homeric reference to support the last idea, and to recall another painting by Kalliphon of Samos in the Temple of Artemis at Ephesos, which depicted women fitting on Patroklos' corselet.

Pausanias uses the word, θώραξ , each time, and, although he only describes it as made of bronze twice and consisting of two plates four times, one can assume he has the same type in mind throughout. The plates, then, were called γύαλα , i.e. "hollows", and pins joined them together.[8] He does not say that such corselets were unknown in the 2nd cent. A.D., only that they were rare. Perhaps he had in mind corselets similar to those seen on the cuirassed statues of Roman emperors, in particular. He does not make it clear whether they were still being worn in battle. It is interesting to compare his opinion on the effectiveness of the material with his view of linen-corselets (see below), and one notes how easily he slips across centuries for evidence to support an idea - just as modern commentators are prone to do. Although the Sack of Troy was Homeric, it is highly unlikely

that Polygnotos (or Kalliphon) portrayed the scene in other than contemporary equipment. Finally, one may note the artistic images portrayed: first, of a corselet on an altar;[9] second, of a corselet being sat upon;[10] and third, of Patroklos helped to arm by women.[11]

Both Herodotus and Xenophon provide many references too for the use of linen-corselets among barbarians.[12] In Thucydides θώραξ appears only once, in 3.22.3, where twelve φιλοί leading the escape from Plataia are provided with a dagger and corselet each. It seems probable that these are also linen-corselets. One assumes a linen one would, in practice, be more comfortable, less restricting, lighter and quieter - all advantages to be sought in the circumstances - while still giving the extra protection they would need, especially since they appear to be without the shields mentioned in connection with the other φιλοί.

Cornelius Nepos, however, attributed the adoption of linen-corselets among the Athenian peltasts to the reforms of Iphicrates.[13] Aeneas Tacticus, on the other hand, who may have been writing about 357-6 B.C., included linen-corselets among the ordinary arms and armour smuggled into a besieged city for the use of the disaffected aliens and unarmed citizens inside.[14]

Linen-corselets seem, therefore, to have been in regular use, at least in the fourth century B.C., as an alternative to bronze ones, especially when comfort and mobility were required. And the ancient users do not seem to have shared Pausanias' doubts as to their effectiveness.[15]

> Linen-corselets are not equally useful to fighters, for they even let iron through when struck hard. But they are of use to hunters, for the teeth of lions and leopards break off short in them.

From the literary sources it is clear that the Greeks were also familiar with the use of scale-armour, at least among foreigners, and in particular the Persians. Herodotus reports that Masistios wore a corselet covered with

golden scales under a purple tunic.[16] Elsewhere, the Persian tunics are described as "sleeved, of different colours and of iron scales like in appearance to the scales of fish".[17] Pausanias later describes a Sauromatic corselet which was dedicated in the sanctuary of Asklepios on the Athenian Acropolis. It was made of 'scales' of horse hoof.[18]

A number of other dedications of linen-corselets are mentioned by the ancient authors. Pausanias went on to cite Gryneum, a small city in Aeolis, as one sanctuary (of Apollo) where others could be seen.[19] At Olympia three linen-corselets were offered by Gelon and the Syracusans after their victory over the Carthaginians.[20] Amasis, the Pharaoh of Egypt, made an earlier dedication to Athena at Lindos;[21] a similar corselet which he sent to the Lacedaemonians was captured at sea by the Samians.[22] The latter had figures of animals woven into it, and gold and cotton embroidery added.

The second Greek word, ἡ σπολάς , is given the meaning "leathern garmet, jerkin" in LSJ.[23] It does not appear in Thucydides or Herodotus. In Aristophanes' Birds (ll. 933-34) it refers rather to a garment worn by a priest, not a soldier. Anderson suggested that it was, therefore, "some sort of weather-proof jerkin, not a piece of armour".[24] The scholiast on the passage cited a couple of lines from Sophocles' Ajax Lokros, where one is made of leopard skin.[25] Hesychius described it as "a short, thick chiton of leather; the leather corselet".[26] It turns up twice in the Anabasis,[27] and on the second occasion the σπολάς is specifically mentioned as a (makeshift?) alternative to the θώραξ for cavalry use. In the light of this lack of explicit literary evidence, I believe that there is good reason to question whether the Greeks actually did use leather regularly as a material for body-armour. Leather jerkins for everyday use certainly existed, (cf. the use of the term, ἡ διφθέρα), but there is no proof of any corselets

made of leather rather than metal or linen.

The remaining three Greek words mentioned at the beginning of this section relate to the question, did all hoplites wear corselets. ἡ ἐξομίς was the tunic which was worn over one shoulder only. It was thus common among artisans and the poor. The references given in LSJ do not come from military contexts, but one may note that, according to Aelian, Laconizers wore this particular type of tunic.[28]

With regard to the concept of "heroic" or "athletic" nudity in art, the literary references are, it seems, of little help. γυμνός can mean "quite naked" or simply "lightly clothed in an undergarment", and it is often impossible in military contexts to choose between them. For example, it presumably means "naked" in Xen. HG 3.2.5 and 3.4.19, and "poorly clad" in 2.1.1, but what of its use in 4.4.12 where Xenophon gets up " γυμνός" from sleep and starts chopping wood on a snowy morning. Furthermore, it can have the sense of "unarmed", "unprotected", e.g. Xen. An. 4.3.6, and so τά γυμνά mean the parts of the body not covered by armour or protected by the shield on the left arm, e.g. Thuc. 3.23 and 5.10; Xen. HG 4.2.22, 4.4.11-12, 4.5.13 and 15, and Lac. 11.9 where τά γυμνά are opposed to τά ὡπλισμένα . In the light of the above and the well-known Greek fear of being wounded beyond the cover of their shields,[29] they sound to have had little confidence in any body-armour they might have been wearing. Although there is no clear literary evidence for completely naked warriors in battle, it certainly remains possible that some hoplites were only lightly dressed and not in corselets. Anderson has already pointed out that on one occasion at least Xenophon leads us to suppose that Cyrus' mercenary army paraded in full battle array, wearing only red tunics.[30]

Finally, on the topic of the effectiveness of the corselets, we may

note a few instances when death occurred despite the wearing of such protection. According to Diodorus (15.87) Epameinondas was killed by a spear which passed through his θώραξ . A Spartan was killed when a long arrow pierced his side after passing through not only his σπολάς but also his shield.[31] Masistios indeed might have fared better - his golden scale-corselet protected him for a short time, but eventually he met his end from a stab in the eye![32] In contrast, Artaxerxes did survive after Cyrus struck him in the breast through his corselet. Ktesias, his doctor, was able to heal the wound which, presumably, was not as severe as it might have been.[33]

b. THE ORIGINALS

What original evidence is there then for hoplite body-armour? The literary references led us to believe that the materials most commonly used were linen, leather, bronze and even sometimes a more precious metal like gold.

The linen ἐξωμίς and χιτών we considered while questioning "heroic" or "athletic" nudity, and not as a form of body-armour proper. Furthermore, since linen from the Classical period is rarely found,[34] it cannot really be discussed in this section, neither in the form of simple, linen tunics nor, unfortunately, as part of a linen-corselet.

Similarly, the σπολάς , whether jerkin or true corselet, was distinguished by its leather material, and, although leather does, of course, sometimes survive in some water-logged conditions, large and well-preserved items from Greece and the Mediterranean area in general would be again most unusual. Fragments of leather, sometimes attached to metal, are usually all that survive.[35]

We are left, therefore, with only the metals, primarily bronze, possibly iron (though this was not mentioned in the literature) and for more expensive and decorative pieces, gold and possibly silver.

The catalogue which follows, lists some of the published examples of Greek corselets, in museum collections. The foundation-work on these was produced by Arnold Hagemann.[36] He included in his list corselets which can be assigned to non-Greek areas or considered to be non-Greek types.[37] Panoplies of, for example, Etruscan, Samnite or Lucanian warriors are now recognised whose metal plates do not exhibit the accurate anatomical modelling characteristic of the Greek corselet, although their designs were influenced by it.[38] Indeed, even among the anatomically modelled corselets a whole body of material has recently been identified as for native cavalry use because of the wide design of the lower part and its discovery in the chamber tombs of the indigenous Italic tribes.[39] These are not considered here.

Catalogue

I. From South Italy

1. Geneva, private collection.

Possibly from the same grave at Metapontum as a Chalcidian helmet, shield-fragments and a spear-head (now in St. Louis).[40]

H. 45 cm. Th. 1-2 mm. Bronze. ca. 450 B.C.

Only the breastplate is preserved at all well; damage is most severe down the right side from the shoulder to the hip where a large area is missing. The forms of the torso are carefully rendered with nipples (riveted on), navel and collarbones. The lower edge is damaged but appears to have ended in a gentle curve, and not necessarily much deeper in the centre. The edge of the metal at the wide neckline, the armhole

and base has simply been turned outwards. A ring with palmette attachment still survives on the left shoulder, but the edge itself which might have carried a hinge,has gone. A possible trace of the method of fastening is visible at the left side: in Kunstwerke der Antike lacing is suggested. Schefold, M 57 and 216 no. 242, fig. on 215, from a Peloponnesian or Attic workshop, ca. 450 B.C.; Kunstwerke der Antike (Basle, 1963) B1, ca. 450-425 B.C.; Ol Ber VIII 163, of severe style; MusHelv 36 (1979) 179 n. 25 (Zimmermann); MusHelv 38 (1981) 56 type II no. 6 (Guzzo); GettyMusJ 10 (1982) 139 n. 102 in support of the mid 5th cent. date (Zimmermann).

II. From Greece.

1. Olympia, Museum, inv. no. B509.

From the North Mound of the Stadium.

H. 42 cm. Bronze. ca. 480 B.C.

Fragments only of a bronze corselet survived. They came from near the neck and from the right hip. The latter displays part of the lower projection over the stomach, i.e. this was not a bell-corselet, but one of the earliest examples of the new muscle-corselet. It has a border of half a dozen parallel bands and a series of holes along the edge which are interpreted by Kunze as serving to fasten it to a foundation, probably of leather. Ol Ber II 97-8 fig. 62, dated to very late in the Archaic period.

III. From Macedonia.

1. Thessaloniki, Arch. Mus.

From the Royal Tomb at Vergina.

H. 47 cm. Iron. ca. 350-300 B.C.

This unique corselet consists of iron plates, the remains of cloth and leather,[41] and decorative gold bands. The iron overlaps at the front so that there is a double thickness there. The shoulder-pieces are separate and attached to the back by hinges. No attempt is made to model the human anatomy in the metal; the plates are simple, angular and square. The raised neck-guard at the back is rectangular; the edges under the arms rise slightly to the front; the front top edge is only a little higher than the sides. The lower edge is turned up and so thickened for a couple of centimetres in a straight line just below the waist.

Gold bands with cymation pattern were riveted along all the edges and then the iron edge was turned over the gold to hide the rivets. Eight round, lion-head attachments were found with the corselet; they were made of gold and all of them originally had a ring in the mouth. The rings helped to fasten the corselet: two on the left side and two opposite them on the front plate served to join that side seam;[42] one on each shoulder-flap combined with a corresponding one on the front to fasten the flaps down. In addition, a broader gold band encircled the whole corselet just above the waist, and a small gold plaque which was found beside the right side, has been re-attached there. In relief on the plaque is the figure of Athena, standing to left, with a Corinthian helmet on the crown of her head, a shield against her right leg and a spear in her left hand.

Below the corselet were found over 50 gold plaques adorned with a lotus-and-palmette frieze. These had been sewn by three holes at the top and bottom to the pteryges which must have hung below the corselet, whether actually attached to it or as part of a separate undergarment.

Finally, of considerable importance is the fact that an iron pectoral was found "at the top of " the corselet. It is very simple with a raised collar and an opening at the back, but it would, nevertheless, have helped to cover the large exposed gap at the front between the shoulder-flaps. (Dm. 30 cm. Dm. of neck: 14 cm.) Another gold-plated iron pectoral was found in the antechamber to the tomb.[43] Andronikos, Royal Graves 37 figs. 12-13; S. Raven, "The Treasures of Philip's Golden Tomb", The Sunday Times Magazine Feb. 5 1978, cover and 26-36; Nat Geog July 1978 54-77 (Andronikos); Archaeology 31:5 (Sept./Oct. 1978) 33-41 (Andronikos); Acta pl. 14a; Treas Anc Mac Cat 51 no. 96 and no. 98 (the pectoral); Philip of Mac 225 pl. 127; PBA 65 (1979) pl. XLII.a (reversed) (Andronikos).

2. Present location unknown.

From a tomb excavated near Katerini in 1977.

Gilded silver.

Fragments of a pectoral were found in the antechamber to the tomb, with metal ornaments perhaps from a leather or linen corselet. At least two of the pattern bands are similar to two on the Mezek pectoral (see below). AAA 13 (1980) 204-5, figs. 5-6, 207-8; the tomb was dated to the second quarter of the 4th cent. by the finds and a coin of Amyntas III (381-369 B.C.) (Despini).

IV. From Thrace.

Three bronze muscle-corselets have been found in Thrace. They are more developed than the earlier (5th century), Thracian bell-corselets from Tatarevo, Svetlen and Tărničani (Turnichané).[44]

1. Oxford, Ashmolean Museum, inv. nos. 1948.97 and 1948.98.

From Dalboki. (From a tomb discovered in 1879.)

Front, H. 28 cm. (neck to waist); 37.5 cm. (shoulder to bottom);
Back, H. 36 cm. (neck to waist); 39.2 cm. (shoulder to bottom).

ca. 425-400 B.C.

The back and front plates have both survived well; there is a small hole in the front near the right armhole, and there are patches (presumably ancient) on the inside of both. The patina is dark green. The plates are well rounded to accommodate the chest of the wearer; however, for the shoulders to join, it appears it would have been necessary to overlap the sides or to add a shoulder-strap. The modelling is simple; both plates have a sharp depression down the centre of the lower part marking the linea alba and the spine; the pectoral muscles, the thorax arch and the shoulder blades are edged with relief lines rather than being truly modelled. The nipples and navel are not represented. The neckline is extremely low at the front, and the armholes are wide so that the pieces over the shoulders are very narrow. The lower edge forms a straight line below the waist and is turned very slightly outwards, but not at all to the same degree as on the true bell-corselets. The edges of the neck, armholes and bottom are all very slightly depressed for about 1-1.5 cm., and at approximately 3 cm. intervals small iron rivets are found. In addition, larger pieces of iron are still stuck by rust to the top and side of the left shoulder of the breastplate. These are interpreted by Ognenova (p. 535) as the remains of a double pectoral of iron and gold which protected the neck and ornamented the wearer's chest at one and the same time. The gold part still survives - inv. no. 1948.96 in the Ashmolean Museum. Ognenova, 501-538, esp. 516-518 figs. 10-11, the

pectoral fig. 19; Venedikov & Gerassimov, 366 pl. 219 (the pectoral), L. 35 cm., dated to mid 5th century; Thrac Treas Cat 93-95, nos. 548 (the pectoral) and 552.

2. Plovdiv, Arch. Mus., inv. no. 1524.

From the Bashova Mound near Duvanli. Late 5th - early 4th cent. B.C. The corselet survives only in fragments, but the details of shape and size correspond for the most part with those of the Dalboki corselet. In addition, there is a piece of iron stuck to the left shoulder of the front plate which still extends beyond the bronze on both sides. Again Ognenova (pp. 534-5) argued that this piece and other fragments found with the corselet belong to the pectoral which protected the neck and was decorated on top with a gold sheet, bearing a lion (inv. no. 1514). Ognenova, 519-521 figs. 12-13; the pectoral fig. 20; Hoddinott, Bulgaria 65-66; Venedikov & Gerassimov, 365 pl. 213 (the pectoral), L. 13.8 cm. Wt. 19.6 gr. dated to the end of the 5th cent.; Thrac Treas Cat 48 no. 181 (the pectoral); Fol & Marazov, 108 top (the pectoral); Hoddinott, Thracians 102 fig. 98 and 106, late 5th cent. (the pectoral).

3. Sofia, Arch. Mus., inv. no. 6168.

From Rouyets near Turgovishtĕ, excavated illegally with a Chalcidian helmet and a "mitre".

Front, H. 25 cm. (neck to waist), 33.5 cm. (shoulder to waist), 2.5 cm. (waist to bottom);
Back, H. 35.2 cm. (neck to waist), 2.5 cm (waist to bottom), width 28.4 cm. (at shoulders).

Both plates are extremely well preserved. The details of the corselet are very similar to those of the Dalboki one.

The "mitre" consists of two bronze plates hinged together across

the middle. H. 28.5 cm. W. 21.3 cm. The centre projects to accommodate the belly. Three evenly spaced rings along the top must have served to connect the piece to a belt (since there appears to be no sign of attachment on the base of the corselet itself). The rivets used to fix these rings and the hinge are silver.

As a result of the circumstances of the excavation of this corselet it is now impossible to tell whether it too may have had an iron-and-gold pectoral, but Ognenova is inclined to suppose it did (p. 535). Ognenova, 519, 522-523 fig. 14, dated to the beginning of the 4th cent. B.C.; Thrac Treas Cat 50 no. 193 illustrated on p. 51, dated to 450-400 B.C.; Fol & Marazov, 92 top (N.B. the photograph seems to have been taken from the inside, and it is titled "from Tarnichane".)

These three corselets obviously owe much, especially in their decoration, to the earlier Thracian type of bell-corselet, but as Ognenova has clearly shown they do constitute something new, with their low neckline, shorter bottom edge and recessed edges. Moreover, they stand apart from the standard South Italian/Greek tradition represented in Section I; in particular they seem to be incomplete without a pectoral. In addition to the pectorals already mentioned in the above list, there exist at least three more which may have been worn over corselets.

1. The Mezek pectoral, Sofia, Arch. Mus., inv. no. 6401.

   From the Maltepe Mound near Mezek. ca. 350-300 B.C.

   The pectoral was well published by Ognenova. It consists of an iron collar covered with gilt silver on the outside for the decorative part and lined with leather or felt on the inside, traces of which are visible in the rust.

Ognenova, 530-531 figs. 15-18, 4th century B.C.; Venedikov & Gerassimov, 367 pl. 230, L. 29 cm., ca. 350; Thrac Treas Cat 68 no. 318 illustrated in colour as pl. 2; Hoddinott, Bulgaria 73-74 pl. 43 on p. 72; Hoddinott, Thracians 106-7 fig. 100, early 4th cent.

2. The Vurbitsa pectoral, Sofia, Arch. Mus., inv. no. unknown.
   From a tumulus excavated in 1885 near Vurbitsa (Varbica). 4th cent. B.C.
   Similar to the Mezek one, but fragmentary.
   Ognenova, 531 pl. XVII.

3. The Jankovo pectoral, in Sofia?
   A similar pectoral found in 1905 in a tumulus dated by coinage of Philip II of Macedon.
   Ognenova, 531 and 533.

V. From South Russia.

1. Leningrad, the Hermitage, Ku. 1914.8/1.
   Found in the Elizavetinskaya Barrow, Krasnodar region, during an excavation by N.I. Veselovsky in 1914.
   H. 41 cm. W. 44 cm.
   Only the bronze breastplate has survived. It seems to resemble both the South Italian corselet and the Thracian ones in different ways. The stronger modelling of the chest, the higher neckline and the suggestion of the nipples in the coiled ends of the floral motif - all recall the South Italian type. On the other hand, its short length (if its present condition is any guide) and the treatment of the armhole- and side-edges with rivets along a recessed band are features paralleled in the Thracian version. In striking contrast to the simply patterned Thracian ones, however, this Scythian corselet bears a fearsome Gorgon's head surrounded

by spiralling snakes and topped by florals, all rendered in very high relief. In the Exhibition Catalogue it was described as being of Greek workmanship: "It is executed in an archaizing style, echoing the ferocity of early gorgons' heads, but the floral ornaments confirm that it was made in the late 5th century B.C."

Artamonov, 44 pl. 144; FLS 112-113 no. 85; cf. Or des Scythes, the Catalogue of the Exhibition, Trésors des musées soviétiques held in the Grand Palais, Paris 8 Oct.-21 Dec. 1978, 151 no. 63, where it was described as "Travail grec, Ve-IVe siècle".

VI. Shoulder-flaps and Pteryges

A number of small bronze items have been interpreted as parts of corselets, either from the shoulder-flap[45] or the pteryges which protected the lower body. Both are often difficult to identify; some relief plaques may indeed have been part of the cheek-pieces of a helmet.[46]

Shoulder-flaps

1. Athens, Nat. Mus., Carapanos Coll., no. 81. (Pl. 3b)

From Dodona.

H. 17 cm. ca. 350-300 B.C.

The bronze is well preserved except for some minor damage to the edges, the tip of the nose at the centre and the hinge along the top. The patina is light green. The sides are symmetrical with a wavy outline which is echoed at a short distance in by a raised band. Within that frame in relief is the head of a fierce-looking man in a lion's scalp headdress; the paws are knotted below the chin and the mane flies out on either side of the face; presumably Herakles in the skin of the Nemean Lion. Along the top edge is riveted a five-part hinge; the sides

below are pierced at regular intervals by small rivet-holes; a ring is still fixed through a hole in the sheet at the centre near the bottom; all of these features go to prove that the bronze was once attached to a backing, was hinged for manoeuvrability at the shoulder and was secured in position by being tied to the chest of the corselet itself. Carapanos, 191 pl. XVII.4; Hagemann, 54 no. 23 fig. 63.

2. London, Brit. Mus., Walters no. 285 (The Siris Bronzes).
Found near the River Siris in 1820.[47]
Right, H. 16.5 cm. Left, H. 17.75 cm.(in present condition).
Both shoulder-pieces are badly damaged down the inner side and along the bottom; in addition the highest points of the relief decoration have suffered. Judging by the right piece, the upper edge was more or less straight with a seven-part hinge at the outer corner which would have fastened the shoulder-piece to the back plate. At the bottom of the left piece is the remains of a lion's head which would originally have had a ring in its jaws for tying the piece to the front plate. (Cf. the gold lion's heads from Vergina.) In very high relief on both is depicted a fight between a Greek and an Amazon; the two compositions are not mere mirror-images but variations on a theme (the Greek in each has the upper hand). Originally the surface was completely gilded.
P.O.Bröndsted, Die Bronzen von Siris (Copenhagen, 1837); Baumeister, 2032 figs. 2204-5 (drawn inaccurately); Walters, 39 no. 285 pl. VIII; Hagemann, 51-2 and 146 no. 14 figs. 62 and 75, 4th cent. B.C. In note 2 on p. 52 H. suggests that the shoulder-pieces may have originated in a Greek colony in South Italy (Poseidonia or Thurii); Hesp 12 (1943) 102, very end of the 5th century B.C. (Hill); Hesp 38 (1969) 250-1 pl. 66e, late 5th cent. B.C. (Thompson); Cook, GRA, 130 and 132 fig. 104, 400-350 B.C.; Aitken,

The Siris Bronzes, dated to the second quarter of the 4th cent. B.C. and attributed to Taranto or another city in Magna Graecia; LIMC I pl. 498 Amazones 478a & b, dated to after 350 B.C. on p. 617.

3. Palestrina (Praeneste), Museo Archeologico, inv. nos. 107 and 108 (ex 1504 and 1505). Formerly in the Villa Giulia.

From Palestrina.

inv. no. 107, H. 13 cm. W. 8 cm.
inv. no. 108, H. 12.3 cm. W. 9.6 cm.

Both pieces are right shoulder-flaps. They are damaged around the edges especially at the top and bottom, and the original contour is no longer clear. No trace now survives of the upper hinge or the bottom ring. According to Hagemann, part of the straight edge at the top still exists on no. 108, which also still preserves two rivets, at the upper right and near the base. Hagemann explains these as fastening the metal to a foundation.

On no. 108 an Amazonomachy is depicted - the poses and composition of the two figures are different in detail from those on the Siris Bronzes, but there are strong similarities in the modelling and the drapery. On no. 107 Herakles is represented resting on his lion-skin on a rock. One may compare the stippled foreground here with the treatment of the area behind the lion's head on the left piece in London.

Hagemann, 60 nos. 58-59 and 70 fig. 74; cf. 52 n. 2 for origin in Magna Graecia; Hausmann, 134 (no. 107); Roma Medio Repubblicana (Rome, 1973) 286-8 nos. 426a & b., probably from Taranto, second third of 4th cent.; Aitken, 28-30; cf. AK 25 (1982) 61 (Aitken).

Pteryges

1. Athens, Nat. Mus., Carapanos Coll., inv. no. 100.

   From Dodona.

   H. 10 cm.

   Broken off straight at the top; rounded at the bottom, with holes along the edges, and two at the top corners. The decoration consists of overlapping feathers within a frame of a raised line.

   Carapanos, 191 pl. XVII.3; Hagemann, 55 no. 27.

2. Delphi, Arch. Mus., inv. no. 3806.

   Found in 1896 near the theatre.

   H. 10.5 cm. W. 8.5 cm. at base.

   The shape seems to be right, if rather stunted.[48] No holes are visible around the edges which appear to have been turned out.

   FdD V.1 103 no. 514 bis fig. 354 where described as an "épaulière de cuirasse"; Hagemann, 54 n. 1 "Das Blech hatte einst sicher eine andere Bestimmung und scheidet somit für die Panzerung aus."

3. Dodona, Museum ?

   Found in the 1957 excavations west of the sanctuary, with other bronze fragments.

   Dm. 6 cm. Possibly 4th cent.

   A small bronze plaque, not quite a semi-circle, broken along the top and decorated with a frontal lion's head in relief. A series of holes punched around all the edges.

   Ergon (1957) 44 fig. 45; Praktika 1957 78 pl. 26a (Evangelides); BCH 82 (1958) 739-40 fig. 22 (Daux); AJA 81 (1977) 235 n. 7 (Williams).

4.-5. Dodona, in the museum?, inv. nos. 5513 and 5516.

Found in the 1972 excavations between the Bouleuterion and a 4th cent. wall in a level dated to the 4th-3rd centuries B.C. (revised date).

6 x 6 cm. and 5.2 x 5.2 cm.

Two small bronze plaques, slightly more than semi-circles in shape. One shows in relief Herakles fighting the Nemean Lion in a frame of beads, beyond which are holes around all the edges. The other shows the frontal head of a lion without a border; two rows of holes run along the top but only one around the other sides.

Ergon (1972) 44-45 figs. 36-37 (Orlandos); BCH 97 (1973) 322 and 325 figs. 146-147 (Michaud); AJA 81 (1977) 234-5 n. 7 fig. 4 (Williams).

The Plaques from Golyamata Mound, Duvanli

1. Plovdiv, Arch. Mus., inv. nos. 1654 and 1655.

H. 6.5 cm. W. 6.4 cm.

Two rectangular, silver-gilt plaques with a loop at the top. Within a punched border Nike is represented in relief in a frontal four-horse chariot. The design is one well-known on Archaic and Early Classical shield-bands in Greece.[49]

B.D. Filow, Die Grabhügelnekropole bei Duvanlij in Südbulgarien (Sofia, 1934) 112-3 no. 6b pl. VIII.1-2; Hoddinott, Bulgaria 63 pl. 36; Venedikov & Gerassimov, 367 pl. 228, mid 5th cent.; Thrac Treas Cat 48 no. 179 and pl. on p. 43, "ascribed to a Greek workshop"; Fol & Marazov, 109.

2. Plovdiv, Arch. Mus., inv. no. 1653.

Dm. 9 cm.

A circular, silver-gilt plaque in the form of a Gorgoneion with

protruding tongue and hollowed-out eyes.[50]

Filow, op. cit., 112 no. 6.a pl. IX.1; Hoddinott, Bulgaria 63 pl. 35; Venedikov & Gerassimov, 367 pl. 226, 5th cent.; Thrac Treas Cat 48 no. 180.

3. Plovdiv, Arch. Mus., inv. no. 1652.

H. 5.5 cm.

Five silver-gilt plaques from the same matrix. Each bears a lion's head in relief. Holes have been punched around all the edges.

Filow, op. cit., 114 no. 6.c pl. IX.2-6; Hoddinott, Bulgaria 63; Venedikov & Gerassimov, 367 pl. 227, mid 5th cent.; Thrac Treas Cat 48 no. 178, "made in local workshops".

Hoddinott states that these plaques "were found in a position suggesting they had been attached to a disintegrated jerkin". This seems very possible, and one might go so far as to interpret the lion's heads as decoration for pteryges, (the lack of a hole for a ring seems to prevent them from being fasteners), the Gorgoneion as a central motif and the Nikai as attachments on the shoulder-flaps. Cf. Filow 114-5 and fig. 128 on p. 105, with an explanation of why the material was probably not leather. A linen-corselet, therefore, appears a possibility, although Filow himself actually rejected the idea of the garment's having any protective purpose.

VII. Scale-armour.

During the fifth and fourth centuries B.C. a lighter-weight alternative to the full bronze corselet existed. It was made of linen (or leather),[51] and occasionally it was given added protection by the sewing on of small metal plates.[52] These could be cut from sheets of bronze or iron in the shape of fish scales or simple rectangular blocks. They could be applied all over a corselet or merely to certain areas like the centre of the front, the shoulders

on the back or under the arms at the sides, as we will see. Some of these scales have survived while the rest of the corselet, the organic part, has decomposed.

1. Olympia, Arch. Mus., inv. no. 13875.

   From east of the Temple of Zeus. Undated.

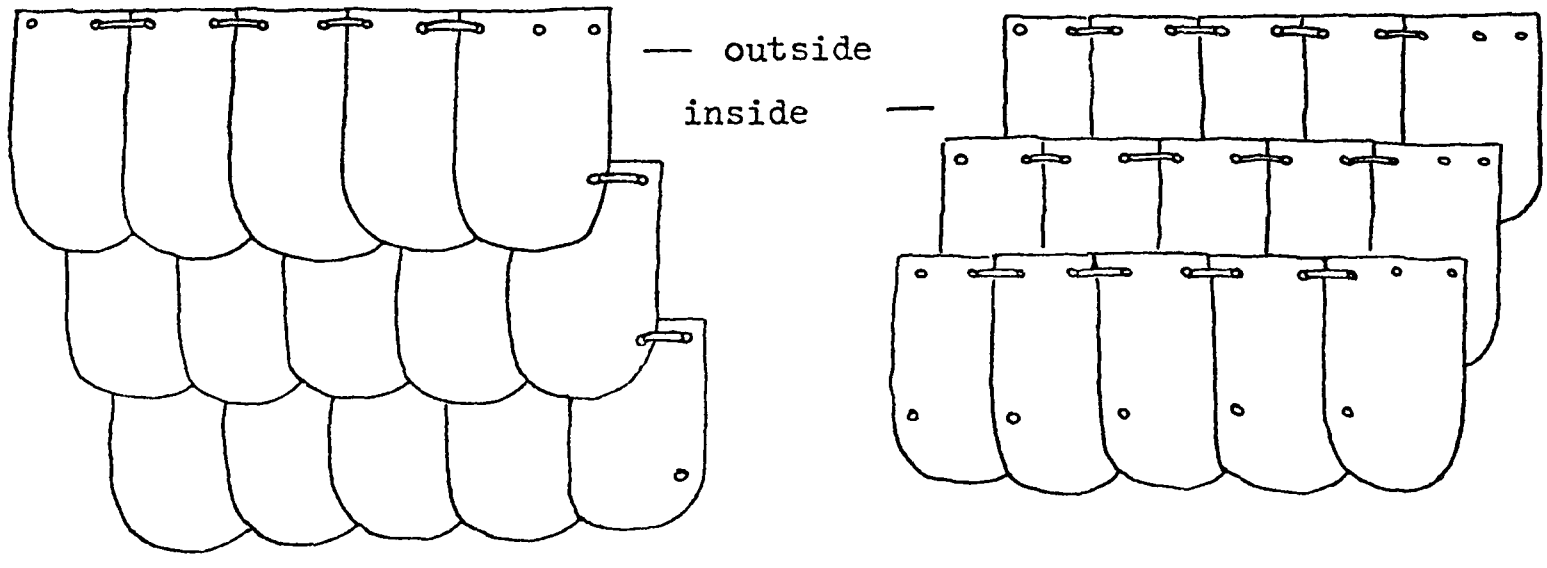
   Six or seven scales survive stuck together in a lump; they are made of bronze and were coated with silver on top.[53] Each has a raised decorative circle at its lower, rounded end and two holes at the upper, squared end. The whole cluster measures approximately 2.3 x 2.2 cm.

   Olympia IV 158 no. 984 pl. LX.

2. Oxford, Ashmolean Museum, inv. no. 1885.465.

   From the Necropolis of Nymphaeum, Crimea (1868). 5th/early 4th cent. B.C.

   A roughly triangular fragment of leather survives to which are still attached small scales. It measures approximately 20 x 16 cm. and may have been a separate shoulder-piece for a leather or scaled-leather corselet. The scales are sewn in 11 rows to the top layer of leather and are closely overlapped to form a firm and united surface:



Six of the surviving scales have also a large hole in the centre by which the linked scales and the top layer were sewn with leather thongs

to a second layer of leather. The whole pad was secured around the edges by a folded band of leather. There are two holes in the piece - one goes through both layers at the bottom right hand corner and would presumably have served to tie the shoulder-piece to the rest of the corselet, the other is a little above it, about the centre of that side, but it was made only in the backing layer and I cannot at present explain it. JHS 5 (1884) 62-73 pl. XLVI (Gardner); E.V. Chernenko, "Burials with weapons in the Necropolis of Nymphaeum" in A.M. Leskov (ed.), Antiquities from Eastern Crimea (Kiev, 1970) 191-194 (in Russian). (I am grateful to Mr. M. Vickers for knowledge of this article.)

The Oxford piece is one of many found in Scythia. Since I have not been able to find further information on the others which are held in the USSR and seem to have been published only in inaccessible Russian journals,[54] I merely draw attention to the quantity of scale-armour mentioned by Artamonov in

Treasures from Scythian Tombs:

pp. 33-34	from the Golden Barrow, ca. 475-450 B.C. (iron)
p. 38	from barrow 24, cist 19 at Nymphaeum, 5th cent. (iron and bronze)
pp. 39-40	from Seven Brothers Barrows, Kuban: 2nd mound, mid 5th cent. (iron and bronze, some covered in gold leaf, with leather remains)
pp. 40-41	4th mound, ca. 475-450 B.C. (bronze on leather)
pp. 41-42	6th mound, ca. 450-400 B.C. (unspecified)
p. 44	from the Elizavetinskaya Barrow dug in 1913, end of 5th cent. (unspecified)
pp. 48-50	from the Solokha Barrow, end of 5th cent./beginning of 4th cent. (iron and unspecified)
p. 51	from Chertomlyk, mid 4th cent. (bronze from a "belt")
p. 63	from Talayevsky, 4th cent. (bronze)
p. 64	from Dort Oba (Four Barrows), 4th cent. (iron)
p. 72	from Cape Ak Burun, 4th cent. (unspecified)

3. Thessaloniki, Arch. Mus., inv. no. B46.

From Grave B at Derveni. Second half of the 4th century B.C.

H. 8 cm. Dm. of neck 14 cm.

A pectoral of leather on to which are attached many hundreds of small "copper" scales, which were originally gilded. The scales are almost semicircles rather than rectangles with rounded bases, and they overlap in 20 rows, the one to the right always applied about a third over its neighbour at the left. Judging by the exposed top row, each scale has three holes along its top edge for sewing. The throat itself was protected by a raised collar of leather. It would appear from the Catalogue photograph that a modern leather backing has been sewn on to support the old through holes already present at intervals along the edge.

Treas Anc Mac Cat 61 no. 228 pl. 30.

Commentary

On the whole, one notes first of all the lack of material, especially if one recalls the glut of cavalry corselets attributed to the Tarentine workshops. Only one modelled corselet was listed from Italy and fragments of another from Greece; both were dated early in our period, ca. 450 and ca. 480 respectively. Neither, unfortunately, offered detailed evidence for the reconstruction of the edges at shoulder or side, though on the basis of other South Italian corselets, one would probably be correct in restoring hinges along these edges. The ring and palmette attachment on the Geneva piece is unlikely to have formed the only method of connection at the shoulder.[55]

The corselets from Thrace, while still made of bronze plates, clearly owed much more to the earlier bell-corselet, especially in its particularly

local form. Despite the proposed dates for them in the late 5th and 4th centuries, these corselets lacked the exact, anatomical modelling and emphasised the Thracian preference for a traditional form. Worn with them, no doubt, were the decorative, iron and gold, pectorals. Hoddinott considered that these were Bosporan and of local workmanship.[56] That they were not made exclusively in that area is suggested now by the find from Katerini, which serves to emphasise the mutual taste of the Macedonians for such pectorals. Though not so decorative (only the one from the antechamber was gold-plated), the two examples from Vergina can be seen to fit into this scheme. The pectoral from Derveni illustrates the use of scales also in Macedonia. These were strongly associated with Scythian armour, but they were not unknown in Thrace also[57] and even a few were found at Olympia, though of unknown date. The scales would not usually be attached to a hard metal surface. Their purpose was one of reinforcement for a softer material, in Greece probably linen rather than leather, although the Derveni pectoral and the Scythian "shoulder-piece" in Oxford were both on a leather foundation.

Linen-corselets, as such, do not survive, but the Vergina corselet seems to reproduce in iron the shape of the linen type, as we know it from the art (see below). Indeed, it seems very likely that when it was in its original state, one would have had difficulty in telling that this corselet had iron beneath the cloth and leather covering, which may have lined not only the inside but also the outside surface. If this were so, then we must face the possibility that some of the "linen-corselets" represented in the art, may also have to be interpreted as covered or padded metal ones.

The corselet from Scythia which has not been mentioned up till now, brings us back to the metal type. As stated already, it appears to combine the features of the Greek musculature and the Thracian edges with extraordinary

patternwork which is only paralleled on a few South Italian corselets.[58] The effect of such a bronze item in a country which favoured scaled-armour and garments with small appliqués must have been startling.

Such appliqués were found at Duvanli, and it was suggested that the various pieces may have served as decoration for a linen-corselet. The other fragments which were listed, were shoulder-flaps and pteryges from mainly sanctuary sites in Greece and Italy. The former, of bronze, with figured decoration in relief, no doubt belong instead to metal-corselets of the anatomical type, as the hinges along the top suggest.[59] The latter, however, appear to have been secured to a foundation by means of the holes along their edges. They could have been sewn to an organic material or perhaps even riveted to a metal backing, though if they are correctly interpreted as pteryges, the latter seems less likely. (The Delphi piece remains anomalous.) The shape of the pieces listed in section VI is basically rectangular with a rounded end or semicircular, when shorter. The small gold plaques found with the Vergina corselet, however, are rectangular, and the design actually runs horizontally so that one might suggest that these formed simply a lower border to the linen pteryges in the manner of some of the black-glaze lines on the pteryges of the vase-paintings (see below).

It is to these paintings that we turn next.

c. THE ARTISTIC REPRESENTATIONS

CORSELETS IN ATTIC VASE-PAINTINGS

The evidence from the vase-paintings may be used in a number of ways. I propose to return to the points made first in the section on the literary references to see what light the representations may shed on them. Next, I will compare what we found out about the surviving originals with what we see in the paintings. Where do they agree, and which details are not represented at all? What can the paintings tell us that the originals and the literature could not? And finally, I would like to consider the vase-paintings in their own right for information on the painters and their styles.

(i) To begin then with the literature, we saw that the Greek word for a corselet was ὁ θώραξ , and that both metal-, primarily bronze, and linen-corselets were mentioned. The basic forms of both have long been identified in countless vase-paintings, but closer study reveals considerable variety in their details. These will be described later.

First we may note how rare metal-corselets are in relation to linen-corselets. My sample gives us only 50 metal-corselets (Figs. 79-82) to at least 395 linen ones. This enormous difference surely tells us something about the probable rarity of the bronze corselet in real life, presumably because of its greater cost and consequent status. The ordinary Athenian hoplite would have worn a corselet of linen, not metal, if he wore one at all. Anderson further noted that the metal-corselet appears most often in large, mythological compositions and rarely in contemporary, everyday scenes.[60] The following table illustrates this point, and supplies the corresponding figures for the linen-corselet:

Table 79

	Total
(a) Vases with metal- and/or linen-corselets	246
(b) Vases with metal-corselets only	21
(c) Vases with linen-corselets only	203
(d) Vases with metal- and linen-corselets	22

Numbers of metal-corselets

Period	in heroic/myth scenes	no. of vases	in ordinary scenes	no. of vases
LA	9	9	0	0
EC	25	18	6	6
CL	5	5	2	2
Late 5th	0	0	1	1
4th	2	2	0	0
Total	41	34	9	9

Numbers of linen-corselets

Period	in heroic/myth scenes	no. of vases	in ordinary scenes	no. of vases
LA	118	50	92	48
EC	70	36	45	33
CL	34	28	34	33
Late 5th	1	1	1	1
4th	0	0	0	0
Total	223	115	172	115

Note: For the purpose of these tables scenes containing chariots are taken as heroic, while those with Nike and a warrior are considered to be ordinary. Light-armed warriors, peltasts, riders, archers and non-hoplite Amazons have been excluded. Five vases (LA nos. 148, 271, 313; EC nos. 34, 339) have both heroic and ordinary scenes on them, and so are counted twice in the last part.

Furthermore, I have not yet seen a single representation of a warrior putting on a metal-corselet. General arming scenes are popular (see nos. 128-173), but, when a corselet is shown, it is always a linen one, as in the following list of vases:

Table 80

LA: nos. 111,137, 138, 144, 149, 150, 304, 384.

EC: nos. 153, 154, 341.

CL: nos. 169, 172.

These 13 cases are the only ones in my catalogue. It would certainly seem

that the vase-painters were simply not interested in, and perhaps not even familiar with, the method of fitting a bronze corselet. It cannot have been a common sight for them.[61]

Xenophon supplied evidence for the use of a heavy, metal-corselet by cavalrymen in the fourth century B.C.[62] He even recommended a particular type, but a careful reading of the text still leaves one wondering just what specifically he had in mind. A look at the vase-paintings of cavalrymen and infantrymen in body-armour does not help much either.

His high neck-guard on the corselet, which even protects the rider's face up to his nose when he wishes, is not represented at all. Bronze corselets are sometimes shown with a raised collar, but not with anything as high as Xenophon implies, e.g. on nos. 10 and 148 (LA); 156 (EC); 17 and 481 (CL); and 22 (4th cent.). Of these it is interesting to note that the first three which are dated to the first half of the 5th century, may be considered as examples of the "improved bell-corselet" (this term will be explained later), while only two from the Classical period and the somewhat less certain one from the 4th century illustrate muscle-corselets proper. Linen-corselets, on the other hand, do have raised neck-guards more frequently, but invariably only at the back.

The abdominal pteryges which he also recommends, are a familiar sight on both linen- and metal-corselets on the 5th and 4th century vases. Only a very few corselets are found without them, specifically on the following:

Table 81

Improved bell-corselets

LA: nos. 10 and 24 (the latter is fringed below instead).
EC: nos. 156 and 593 (the tongue ornament is interpreted as on the metal edge)[63]

Muscle-corselets
LA: no. 52.
EC: nos. 68, 341, 468, 504.
CL: nos. 17, 232, 284, 469, 481, 561.
Late 5th: no. 616.
4th cent.: nos. 22 and 507.

Linen-corselets
LA: no. 31(?)

The last example is a doubtful one which could easily be reinterpreted as a corselet with none-too-clearly-drawn pteryges, since there are arcs on the patterned chiton over which it is worn. If that were done, we would be left surprisingly without a single example of a linen-corselet which did not have these flaps, and with no example of a metal-corselet after EC which did. In any case, this numerical difference between the metal-corselets and the linen ones surely tells us a lot about the relative construction of the pteryges. On the linen type the flaps are one with the body of the corselet, as is confirmed by some corselets which do not have any dividing line or band at the waist (e.g. nos. †86, 306, 382, 442, etc.). The improved bell- and muscle-corselets, however, are provided with pteryges only as optional extras; the two charioteers and an Amazon who wear corselets in the above list might appear special cases, but ten other corselets without pteryges are worn by male warriors, five in mythological and five in ordinary scenes. Five others, though, are not being worn; two are carried, one is on the ground, one on a trophy and one on a pyre. These may be contrasted with three examples of metal-corselets which do have pteryges attached and which are being held on other vases in my catalogue, LA nos. 111, 148a, and EC no. 385. This evidence suggests that these pteryges were linen (or leather?) strips attached somehow to the bottom edge of the bronze. But they could also have been part of a complete undergarment, worn between the chiton and the metal plates.[64] And what, in fact, does the filling-in of the centre

of the flap with black glaze signify on many vases - a metallic facing for additional protection or mere decoration? Would that Xenophon had specified more then just τοσαῦται καὶ τοιαῦται "so large (/so many) and of such a kind" as to repel missiles!

He does describe at considerable length the best protection for the rider's arms; the left is to be covered by a special piece of armour called "the arm". It is flexible, and so one might believe it is made of leather.[65] There is no illustration of this item in the red-figure paintings.[66] For the right shoulder he suggests more pteryges to allow greater freedom of movement for the weapon-bearing arm.[67] The vase-paintings do not illustrate these either. And even his separate (greave-like) arm-guard, and the calf-skin or bronze layer for the right arm-pit are nowhere seen.

For the linen-corselets the literature provided ample evidence of the Greeks' familiarity with its use among barbarians but surprisingly little among the Greeks themselves. Moreover, apart from the adjective "linen", they tell us little else about the construction or shape of the corselets. Pausanias' reference to the effectiveness of linen in hunting and not in battle is interesting in view of the fact that in red-figure the warriors who wear muscle-corselets are never wounded, while those in linen ones may be. For examples, see the following:

Table 82

LA: nos. 267 (spear into right hip)
382 (wound in right breast, and spear in centre of chest)
394 (sword wound in right side at waist)
441 (spear wound in right side above waist)
442 (? wound under right arm)
↑499 (wound in right side above waist; wound above waist)

EC: nos. 34 (spear through pteryges at front right)
74 (sword into left breast at collarbone)
419 (? spear into front)
429 (wound in chest)
473 (wound in right breast)

CL: nos. †428 (spearhead in right side)
461 (? wound in back shoulder-flap)
462 (spear into groin through chiton below pteryges)
582 (sword wound in upper right thigh).

The references to scale-armour emphasised its use among foreigners and especially the Persians.[68] The fish-like, iron scales of Herodotus (7.61) may be identified on a large number of Greek corselets. The artists use various patterns of differing sizes to represent them, in both dilute and relief lines. The different types are listed in the following tables.

Table 83

Type 1 - a and b

LA cat. nos.

1	a on the front across the middle; a on the back from the neck to the waist, and at the right.
140	b on front shoulder-flaps, sides and pteryges; b on front shoulder-flaps and sides (Persian); b inverted on back shoulder-flap.
141	b on front shoulder-flaps (upper part) x 2.
150	a on front above the chestband and on shoulder-flaps (upper part).
310	b on front across middle.
395	a at right side only x 2.
534	a/b on back across middle.
636	b on front at left side.

EC cat nos.

34	b inverted on front.
35	b on centre back panel.
66	a/b on front right side.
67	b on front above chestband and in centre front panel below.
68	b " " " " " " " " " "
70	b on front above and below chestband x 2; b on front below chestband.
72	b on centre back panel; b on back across middle.
74	b on front in panels under arms.
125	b on front above chestband and in centre front panel below x 5; b on front above chestband x 2; b on front below chestband; b on centre back panel x 2.

EC cat. nos.

221	b on front above and below the chestband and on shoulder-flaps (lower part).
276	b on centre back panel.
325	b on front above chestband and in centre front panel below.
326	b on front above chestband with a Gorgoneion.
339	b on centre front panel.
341	b across front above chestband.
455	b on centre back panel.
†457	b on centre front panel.
503	b on centre front panel.
504	b on centre front panel.
505	b on front above chestband under left arm and on left shoulder-flap (right side damaged); b on back at right between waist- and chest-bands.
521	b on centre front panel.
543	b on centre front panel and under arms.
†589	b on sides seen from front.
656	a on centre front panel.

CL cat nos.

87	a/b on front at right side up to shoulder, at left side only under arm.
118	b on front above and below chestband x 4.
461	a on back across middle and up under right arm.
462	b on front above chestband.
551	a on front under right arm.
700	a all over front.

Type 1 - c

LA cat. no.

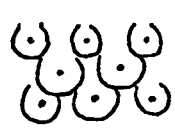
52 on front above and below chestband.

EC cat. no.

70 on back between chest- and waist-bands.

Late 5th cat no.

464 inverted on centre front panel.

Type 1 - d 

LA cat. nos.

10 on front above chestband;
on back between chest- and waist-bands.

LA cat. nos.

38	on front at right side.
46	on front above and below chestband.
49	on front on right shoulder-flap;
	on front on right shoulder-flap and right side.
128	inverted on back shoulder-flap and around middle;
	inverted on back between chest-and waist-bands;
	inverted on front between chest- and waist-bands;
	inverted on back between chest- and waist-bands with alternate rows shaded.
138	on front between chest- and waist-bands.
150	on front between chest- and waist-bands x 4.
†645	on back shoulder flap.

EC cat. no.

62	on front above chestband at sides only.

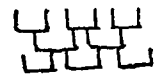
CL cat. no.

601	inverted, large and with a central circle instead of a dot on front between chest- and waist-bands.

Type 1 a/b is found on vases from ca. 500 to ca. 420 B.C., and it is most common in the Early Classical period. There is a tendency for the artist to use the more quickly drawn type 1b, and on the Classical corselets the scales become proportionately bigger.

In addition to these fish-scales one also finds a great variety of other patterns many of which may be considered to be forms of applied metal plates as well.

Table 84

Type 2 (basically rectangular) - a 

LA cat. nos.

10	on front across right side and centre below chestband.
52	on front around middle.
304	on front between chest- and waist-bands.
444	on front above chestband and below it at sides;
	on front above and below chestband and on shoulder-flaps;
	on back between chest- and waist-bands.
636	on front above chestband at left side.
†645	on back below chestband, continuous on to pteryges.

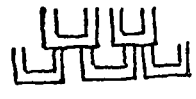
EC cat. nos.

15 on centre front panel?
339 on front at sides.
521 on front at sides below chestband.

CL cat. nos.

†23 on front at sides.
608 inverted on front at left side.

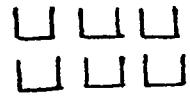
Type 2 - b



LA cat. nos.

150 on front between chest- and waist-bands.
636 on centre front panel.

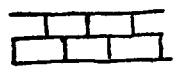
Type 2 - c



LA cat. nos.

618 on front around middle.
654 on front around middle.

Type 2 - d



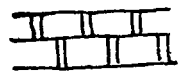
LA cat. no.

133 on front at sides.

EC cat. nos.

62 on front at sides;
on front around middle.
†457 on front above chestband;
on centre back panel.
503 on front at sides.

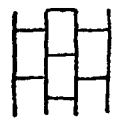
Type 2 - e



LA cat. no.

509 on front between chest- and waist-bands.

Type 2 - f



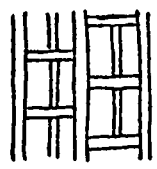
EC cat. nos.

68	on front below chestband at sides; on back around middle.
503	on back around middle x 2; on front at right side; on front around middle.

Type 2 - g

EC cat. nos.

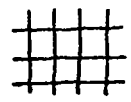
66	on front at sides.
339	on back.
455	on front around middle; on back around middle.

Type 2 - h 

EC cat. no.

71	on front at left side.

Table 85

Type 3 (a grid) - a 

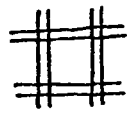
EC cat. nos.

66	on front at sides x 3.
67	on front at sides under chestband.
160	at right side.

Type 3 - b

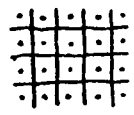
LA cat. no.

140	on front at right side.

Type 3 - c 

EC cat. nos.

153	on front at sides.
326	on front at sides.
538	on front at sides; on side of folded corselet.

Type 3 - d 

LA cat. nos.

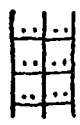
268 on front at sides between chest- and waist-bands; on back between chest- and waist-bands.
271 on front between chest- and waist-bands.

EC cat. no.

331 on front at right side.

CL cat. nos.

547 on front at sides.
†681 on front at right side.

Type 3 - e 

EC cat. no.

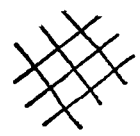
419 on back at left side.

Type 3 - f (chequerboard)

EC cat. nos.

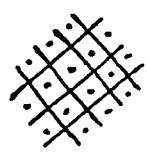
34 on front at sides.
502 on front at sides.
cf. 558 on front at sides ( ) and similar on 527 from CL.

Table 86

Type 4 (a cross grid) - a 

LA cat. nos.

38 on front as two vertical bands below chestband.
128 on back shoulder-flap.

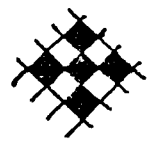
Type 4 - b 

LA cat. no.

38 on front as a central vertical band below chestband.

CL cat. no.

79 on back between chest- and waist-bands.

Type 4 - c 

LA cat. no.

140 on back shoulder-flap;
on front shoulder-flap and left side.

EC cat. nos.

125 on front centre panel below chestband x 2.
505 on front centre panel above chestband.

From the information contained in the above tables we can make the following conclusions regarding the positions on the corselets where scales were most often attached:

Table 87

		Total	%
LA period:	No. of corselets	53	
on the sides		14	26
on the front,	around middle (i.e. below chest-band or between chest- and waist-bands)	16	30
	in central panel	1	2
	above chestband	3	6
	all over (i.e. above and below chestband)	3	6
	on shoulder-flaps	9	17
	on vertical bands	2	4
	on pteryges	1	2
on the back,	around middle	8	15
	in central panel	0	0
	all over	1	2
	on shoulder-flaps	5	9
	on pteryges	1	2
EC period:	No. of corselets	74	
on the sides		27	36
on the front,	around middle	5	7
	in central panel	18	24
	above chestband	14	19
	all over	4	5
	on shoulder-flaps	2	3
on the back,	around middle	6	8
	in central panel	7	9
	all over	1	1
CL period:	No. of corselets	16	
on the sides		7	44
on the front,	around middle	1	6
	above chestband	1	6
	all over	5	31
	on the back, around middle	2	13

Late 5th cent.: No. of corselets 1
on the front, in central panel 1

Note: in the LA and EC periods more than one area of each corselet may have scales.

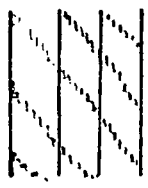
The changes over the four periods of the 5th century are apparent from the figures, especially the percentages. For example, while 30% of the corselets in LA have scales on the front around the middle, the popularity of this position drops in EC to only 7% and in CL to 6%. On the other hand, corselets with scaled sides increase from 26% in LA, to 36% in EC and 44% in CL. The widest range is found in LA.

When the numbers are considered altogether, the following order of frequency is apparent for the 5th century:

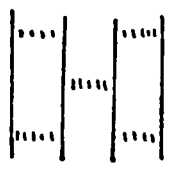
Table 88

		Total	%
(1)	on the sides	48	33
(2)	on the front, around the middle	22	15
(3)	" " " in central panel	20	14
(4)	" " " above chestband	18	13
(5)	on the back, around middle	16	11
(6)	all over front	12	8
(7)	on the front, on shoulder-flaps	11	8
(8)	on the back, in central panel	7	5
(9)	" " " on shoulder flaps	5	3
(10)	" " " all over	2	1
(11)	on the front, on vertical bands	2	1
(12)	" " " on pteryges	1	1
(13)	on the back, on pteryges	1	1

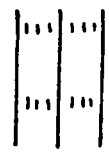
These are some of the patterns then, which seem to suggest scale-armour. Some of them, however, and many others might be interpreted instead as embroidery or appliqués.[69] A further selection from EC and CL vases could be seen as indicative of quilting, e.g.,



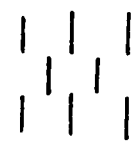
EC no. 589
CL nos. 56, 293, 296, 585



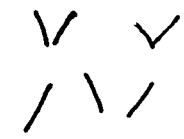
CL no. 371



CL no. 29



EC no. 62



CL no. 90

CL no. 582

CL no. 462
cf. CL no. 368

The literary evidence for the σπολάς seems extremely slight, so much so that I was inclined to omit it from the military equipment altogether, were it not for Xenophon's use of the term. As far as representations are concerned, it seems probable that if it were identical in style and cut to the linen-corselet, then it would also be indistinguishable from it. However, if we accept that it was a "jerkin", and that Hesychius' description of it as "the leather corselet" might simply relate to the form of the muscle-corselet instead of the linen one, then we may be able to identify it in a couple of vase-paintings. On cat. no. 116 by Polygnotos a mounted Amazon wears just such a short jerkin over her chiton, and on cat. no. 80 by the Painter of the Louvre Centauromachy another Amazon rides away from her Greek opponent in similar dress. Both jerkins are quite plain without obvious joins at the sides; the lower hem, and on one the armhole, and on the other the neckline, are given a simple double-edge; the garment fits the torso closely especially on the first where the Amazon's breasts are prominent. Bearing in mind, however, that leather need not be of one colour only, one might compare patterned "jerkins" found on other vases, e.g. one worn by a dancing maenad on the Andokides Painter's amphora in New York[70] and others on a Dionysiac chorus on a Mannerist column-krater in Basle.[71] Hoplites do not seem to wear such patterned jerkins as these, but one may recall at

this point their heavy, patterned tunics and "aprons".[72] (Cf. Pls. 6b and 7b.)

Mention was also made in the literary section of the ἐξωμίς and χιτών as worn by hoplites. These garments, and the absence of them altogether, may be peripheral to the study of body-armour, but there is ample evidence in the vase-paintings that light dress and nudity were by no means rare among hoplites in the 5th and 4th centuries.[73] In fact, a close study of the vase-paintings leads to some interesting results. The 56 vases chosen depict ordinary soldiers so far as one can tell; they are seen in action, lying in ambush or fighting, and not at rest; and the warriors considered are hoplites, i.e. those carrying the shield, and not light-armed soldiers.[74] (Cf. Pls. 8b, 9a-b, 10a-c.)

Table 89

On 29 LA vases the following variety is found:

corselet and chiton	26	chiton alone	1
corselet, chiton & chlamys	2	chiton & chlamys	4
metal-corselet & chiton	3	chlamys alone	9
		chlamys as loin-cloth	9
		naked	46

On 11 EC vases:

corselet and chiton	22	exomis	1
corselet & patterned tunic/ apron	1	chlamys alone	2
metal-corselet & chiton	2	chlamys as loin-cloth	2
		patterned tunic	1
		patterned apron	1
		naked	2

On 8 CL vases:

corselet and chiton	6	chiton alone	3
metal-corselet	1	exomis	2
		chlamys alone	2
		patterned tunic	2
		naked	13

On 2 Late 5th cent. vases:

chiton alone	2
chlamys alone	1
naked	2

On 6 4th cent. vases:

chlamys alone	8
naked	5

The LA vases show a surprising number of naked hoplites and just over half as many in corselet and chiton. Only five more have body-armour, while 23 wear variations on the chiton and/or chlamys. In the EC period the number of naked hoplites has dropped drastically, while the number of corselet-and-chiton wearers is proportionately even higher (about 65%). Only three more have any armour at all, and seven are simply clothed. The exomis, patterned tunic and apron appear now for the first time. On the CL vases naked hoplites again appear in larger numbers, more than double the number of those in corselet and chiton. The muscle-corselet is worn by one warrior, and light garments by nine. By the late 5th century, if one may make any judgement on the basis of only two vases, body-armour has gone out altogether. How much this reflects a change in the taste of the vase-painter and his buying public at this time, rather than a change in real life is difficult to assess. But it is noticeable that on the 4th century vases too this apparent lack of protection continues, and the variety seen on the earlier vases is completely lost.[75]

To these figures which were taken from the action-scenes, one may add a few others. For example, on nine vases Nike is represented with what appear to be ordinary hoplites (men who had been victorious in battle?). On an EC vase (no. 542) the warrior wears a corselet, chiton and chlamys. In the CL period three men are kitted out in the same way (nos. 547, 550 and 552); another three have only the corselet and chiton (nos. 546, 549 and 551), while two more wear only the chlamys (no. 548). Finally, on one vase from the 4th century (no. 553) the soldier is naked.

On another couple of vases trophies are depicted. It is interesting

to note that on them a muscle-corselet is shown in the late 5th century (no. 616), and a patterned chiton in the 4th century (no. 617).

Runners in the hoplitodromos (nos. 482-498) are all, as far as I can tell, represented naked, but carrying their helmet, shield and greaves in most cases. These are clearly exceptional - the customs of the race-track prevail here. But one may be tempted to wonder why, if it was the usual custom for each hoplite to have his own body-armour of linen or bronze, as well as helmet, shield, greaves and spear, this item was not included in the dress and equipment of the runner to provide a real test of the hoplite's strength and stamina.

In any event, the evidence of the vase-paintings so far considered seems to suggest strongly that body-armour was not essential for a hoplite, and that lighter garments, various tunics and cloaks, and even bare skin were not only acceptable, but even possibly preferred on the field of battle. Certainly these same vases also depict other soldiers who do not carry the hoplite shield, presumably the light-armed forces, and who are not given linen or bronze armour and are allowed the same freedom in dress or the lack of it.

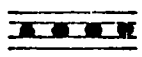
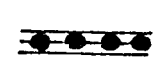
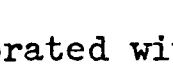
(ii) I propose to consider now the representations in Attic red-figure vase-painting in connection with the surviving original corselets. As already noted, the illustrations of metal-corselets are rare in comparison with those of the linen-corselet, and we are dealing with only 50 corselets on 43 vases. (Figs. 79-82)

The majority of the bronze muscle-corselets depicted seem at first glance to tally with the anatomically modelled corselets of the first section from Italy, and the second section from Greece. Examples are to be found

on the following vases:

Table 90

LA:	nos. 52 and 130.
EC:	nos. 35, 62^2, 64, 66, 68^2, 70^2, 72, 125^4, 334, 339, 341, 385, 455^2, 468, 503, 504, 505, 506.
CL:	nos. 17, 232, 284, †428, 469, 481, 561.
Late 5th:	no. 616.
4th cent.:	nos. 22 and 507

These corselets are generally plain except for border patterns at the neck, armhole and bottom edges, e.g. on nos. 68, 70 and 504,  on nos. 35, 62, 64, 68, 339, 468, 503 and 505 and  on nos. 339 and 385. Other vase-paintings simply mark the edges with one (e.g. nos. 66, 72, 284, 341, 506, 616) two (nos. 17, 22, 66, 70, 125, 232, 385, †428, 455, 469, 481, 507, 561), or three lines (no. 62). One may compare the border on the fragment from Olympia. Only on no. 68 is a further pattern added around the neck and armholes -  .

Seven corselets (all EC) are decorated with volutes and a palmette on the pectoral muscles; nos. 35, 62, 68, 125, 334, 339 and 468. This particular form of decoration is not found on any of the surviving corselets, (though one may compare the Scythian breastplate) and it might be a hang-over in the vase-paintings from the earlier ornamentation of the improved-bell-corselets.

The method of fastening the two plates together at the shoulders is nowhere represented, but very large palmettes are shown on Achilles' shoulders on no. 35. One recalls the palmette on the Geneva corselet. Similarly the side-join is rarely marked, only on nos. 64 and 561; on no. 469 there is the sole indication of the hinge itself.

Some importance may be attached to the presence or absence of the

bulge over the iliac crest at the side of the breastplate. This feature really tells us the actual length of the corselet (i.e. the bulge would not be there if the corselet did not reach so far down the torso to cover it). In the paintings the majority of the corselets seem to terminate above the crest; the vertical lines delineating the abdomen continue straight down to the lower edge, e.g. on nos. 35, 62, 72, 125, 455, 503 and 504. A bulge is only indicated on a few vases, e.g. nos. 22, 68, 232, 481 and 561, nearly all of which date to the late 5th and 4th centuries B.C. The vase-paintings, therefore, would appear to confirm that in very general terms a slightly more stylised type belongs to the 5th century, while a more anatomically developed type is later and more typical of the 4th century.

The iron corselet from Vergina finds its closest relative in cut and style in the linen-corselets of the admittedly earlier vase-paintings. They share the raised back neck-guard, the tied shoulder-pieces, the more or less horizontal, front top edge at the level of the armpit, the overlapping front panel and the pteryges below. (Cf. the corselets on nos. 150a and 384 (LA); 153 (EC); 169 and 172 (CL).) Only these five vases in my sample illustrate the low line at the front, and it is noticeable that they are all examples of someone putting on the corselet - otherwise the neckline is represented much higher. It may seem surprising that these have little indication of any overlap at the front, but neither do the artists show any hooks or buckles for the ties from the shoulder-flaps.

The edging to the shoulder-pieces and the main body (in gold on the Vergina item) can be seen on countless corselets on vases, as can the chest-band, though a (very large) cymation pattern only occurs on CL no. †23. (Cf. Fig. 88.) The lion-heads are not exactly paralleled on the vases - these pieces are usually in the shape of simple circles or schematic ivy leaves

on the tips of the shoulder-pieces and one, two or three circles on the body itself. (Cf. Figs. 91-93.) Indeed, in the light of the evidence of the paintings, I would repeat my suggestion that the arrangement of the heads on the Vergina corselet should be altered so that only two are set to tie the shoulder-flaps down, while four in two groups of two fasten the left side join; cf. the corselets on the nos. 149 (LA), 123, 371 at the warrior's right side, 550, 608 and 683 (all CL). Finally, on the Attic vase-paintings considered there are many examples of plaques on the pteryges exactly like those on the Vergina piece, if we are correct in interpreting them as a decorative band for the bottom. (Cf. Fig. 87.)

On the whole, therefore, the later, richly and elaborately decorated Macedonian corselet seems to have clear ancestors in the linen-corselets of the previous century from Athens. The transfer of the linen type into iron is startling. Two questions have already arisen from this. First, is it possible that at least some of the corselets shown on the vases should be thought of as made of iron?[76] And second, as a corollary to this idea, would the Vergina corselet with its lining or covering of material have looked identical to the linen version at first glance (and been so represented in art)?[77] Unfortunately, neither question seems answerable now, but it is certainly an intriguing thought.

Parallels for the Thracian corselets are not found in the Attic vase-paintings. A common ancestry in the earlier Greek bell-corselet is apparent from the similarities between the so-called improved bell-corselet of the LA and EC paintings (Fig. 79) and the Thracian originals; notable are the volutes for the pectoral muscles, and the abdominal arch, especially on nos. 10, 26 and 471. The improved bell-corselets, however, do not show the low, front neck-line, except perhaps on no. 26, and as on the true muscle-corselets,

anatomical detail is emphasised. There is moreover no indication in the paintings of the pectorals worn as separate items over the corselet by not only the Thracians but also the Macedonians.[78]

The Scythian corselet likewise with its extremely ornate relief decoration is not seen on the vases, though the Gorgoneion as a central motif is occasionally found as the 'button' on the linen-corselets, e.g. on nos. †23 and 85 (CL). Cf. also nos. 62 and 326 (both EC) where a small Gorgoneion is set between the shoulder-flaps on the front.[79]

A separate shoulder-flap is not a feature of the bronze muscle-corselets represented in the vase-paintings. This is quite understandable since they were adopted later as the sculptural evidence proves (see below). The shapes of the originals in Athens, London and Palestrina are not characteristic for linen-corselets either.

The surviving pteryges are too semicircular or squat compared to those on the vases. Moreover, the 5th century pteryges are generally plain or very simply patterned with black glaze or linear designs (cf. Fig. 87): figured designs like those on the originals are not found, but the feathers of the first example may be compared with the scales on one vase, i.e. no. 140 (LA).[80]

As for the plaques from the Golyamata Mound at Duvanli, the evidence for a Gorgoneion as a central motif has already been cited, and the fact that a lion-head on an almost semicircular pteryx is not represented, was also mentioned above. There are no parallels either for a squarish plaque with Nike in a quadriga, as an attachment on the shoulder-piece of the linen-corselet, though various snakes, stars and florals are depicted there on numerous vases (cf. Figs. 84-86), and on three EC vases a panther head and figures are drawn: the panther head on no. 543, men or satyrs on no. 538

and a running Hermes or Perseus on no. 70.

The representations of scale armour have already been surveyed in detail in connection with the literary references. Here one may note further that the fragment from Olympia might be represented by the type of dotted scale categorised as type 1 - d in Table 83. Possible parallels for the Oxford piece may also be found in the scaled shoulder-flaps listed there. One small point to note about the patterns in the vase-paintings is that the method of overlapping the scales employed on the Oxford piece, and incidentally by the Romans, creates a different pattern from those used by the red-figure artists at Athens, i.e. as opposed to .

In conclusion, therefore, the vase-paintings may be said to tally well with the original evidence, but while in some areas they add to our understanding, in others they may appear over-simplified. An important factor not to be forgotten, of course, is the place of origin of the vases - none of the original pieces was Attic.

(iii) I intend next to consider the corselets represented in the Attic vase-paintings for themselves. Ninety-six LA, 78 EC, 67 CL, three Late 5th cent. and two 4th cent. vases have been used to form the basis of what follows.[81] The ratios between these groups may be considered generally representative of the preference of painters and patrons for warlike compositions in the various periods. It has indeed become a cliché to state that during the Peloponnesian War Athenian interest turned away from the harsh realities of the war to more homely subjects of predominantly feminine taste,but the vases with martial scenes certainly decline in numbers drastically after the third quarter of the 5th century.

The "Improved Bell-Corselet" (Fig. 79)

The bell-corselet proper belongs to the period before ca. 500 B.C.[82] Hagemann[83] and Anderson[84] following him argued for the use of an "improved bell-corselet" in the first half of the 5th century B.C., before the developed muscle-corselet became established in the second quarter.[85] Considerable variety is to be found in the details in the vase-paintings, and I would agree with Hagemann in seeing this period as a transitional stage in which older features of the bell-corselet are combined with new features which become established later for the muscle-corselet. The sole deciding factor in assigning a particular corselet to this group is not greater or more correct anatomical modelling, but the straight drawing of the bottom edge at or just below the waist and always, I think, above the navel. The jutting edge of the bell-corselet is less pronounced or completely lost, but the sweeping curves of the muscle-corselet which follow the abdomen itself, are not yet present. Otherwise, as Hagemann himself pointed out, there is no uniformity in this category: spirals may or may not be represented on the pectoral muscles; the thorax, nipples and ribs may or may not be drawn in detail; the pteryges may or may not be appended.

Hagemann listed seven examples of the improved bell-corselet on vases. They were on

1 no. 10, a cup by Douris
2 " 24, a cup by the Foundry Painter
3 " 26, a stamnos by the Berlin Painter
4 " 385, an oinochoe by the Altamura Painter
5 " 471, a kantharos by Douris
6 " 593, a w-g lekythos by the Sabouroff Painter
7 Louvre G44, an amphora by Euthymides

The last one was rejected by Anderson, and it is in any case too early in date to be included in my study. Anderson added two more with which I would agree. They were on

1 no. 160b, a stamnos by the Deepdene Painter
2 " 280, a column-krater by the Kaineus Painter

I am, however, uneasy about the fourth in the first list, no. 385, because the lower edge does curve and the navel is represented. I have, therefore, transferred it to the category of muscle-corselets. Six more improved bell-corselets may be added: on

1 no. 11a, a cup by the Penthesilea Painter
2 " 75b, a kantharos
3 " 111 , an amphora by the Nikoxenos Painter
4 " 128 , a lekythos probably by the Terpaulos Painter
5 " 148 , a cup by Makron
6 " 156 , a stemless cup by a follower of Makron

The final total of improved bell-corselets to be found on vases in my sample is, then, 13, of which seven date from the Late Archaic period and six from the Early Classical.

The Muscle-Corselet (Figs. 80-82)

The 37 examples of muscle-corselets have already been listed in Table 90. Only two date from the LA period, the majority, i.e. 25, to the EC, seven to the CL, one to the Late 5th century, and two to the 4th. The features of the drawings which have a bearing on the surviving originals have been discussed, as have others in connection with Xenophon's description of the cavalry corselet.

At this point it may prove interesting to consider the context of the representations - Are the scenes mythological or everyday ones? Who is shown wearing these bronze corselets? What do the other warriors wear?[86]

Abbreviations used in the following tables:

ch: chiton
chl: chlamys
comb: combinations
ex: exomis
i-b-c: improved bell-corselet
l-c: linen-corselet
m-c: muscle-corselet
patt: patterned

Table 91

LATE ARCHAIC			IMPROVED BELL-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
10	Quarrel over arms of Achilles	on ground	l-c, ch & chl	1
24	Achilles & Hektor	Hektor	probably l-c & ch	1
26a	Achilles & Hektor	Achilles	chl over arms	1
111	Amazons arming	held by Amazon	ch l-c	1 1
128	Arming with chariot	warrior	l-c & ch	4
148a	Arming (chariot on B)	youth	ch ch & chl l-c & ch	1 1 1
471	Amazonomachy	Telamon	ch skin & ch (Herakles) l-c & ch	3 1 1

LATE ARCHAIC			MUSCLE-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
52b	Menelaos & Paris	Menelaos with chl	l-c, ch & chl	1
130	Arming with chariot	youth	l-c l-c & ch	1 3

All the scenes are mythological, i.e. if the presence of a chariot is correctly interpreted as signifying this.

Some of the figures who are associated with the metal-corselet are clearly identified, i.e. Hektor, an Amazon, Achilles (2x), Telamon and Menelaos. In the arming scenes the figures can only be described as a bearded man and two youths, but these may be Greek heroes.

In the multi-figured scenes the majority wear combinations of linen-corselet, chiton and chlamys, while only one figure in each is distinguished

by a metal-corselet. Similarly, where there are only two combatants (i.e. on nos. 24, 26 and 52) a contrast is made between them by the use of different armour. This distinction appears to be purely artistic.

Table 92

EARLY CLASSICAL			IMPROVED BELL-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
11a	Quarrel over arms of Achilles	Agamemnon	------	
75b	Fight	central warrior	1-c & ch	1
156	Arming	held by woman	------	
160b	Menelaos & Helen	Menelaos with ch	------	
280	Centauromachy	Kaineus	------	
593	Tomb - Thanatos & Hypnos	dead warrior	------	

EARLY CLASSICAL			MUSCLE-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
35	Achilles & Memnon	Achilles	1-c, ch & trousers (i.e. Memnon)	1
			1-c, ch & chl	1
			1-c & ch	1
62	Amazonomachy	Greek at centre	ch	1
		Greek at side	1-c & ch	1
			1-c, ch & chl	1
			1-c, ch & comb	2
64	Amazonomachy	central Amazon	(pteryges) & ch	1
66	Amazonomachy	Greek	naked	2
			1-c & ch	3
			1-c, ch & chl	1
			patt apron & chl	1
68	Amazonomachy	Amazon with patt ch & comb	ch	1
			1-c & ch	1
		central Greek	patt ex	1
			patt ch & comb	1
70	Amazonomachy	2 Greeks	naked	1
			1-c & ch	1
			ch & chl	1
			chl	1

72	Amazonomachy	Greek with chl & petasos	naked (centre B)	1
			chl	1
			ex (centre A)	1
			patt ch	2
125a	? Argonauts	2 warriors	chl	1
			l-c & ch	1
			l-c, ch & chl	4
			patt ch	1
			ch & chl	4
			patt ch & chl	1
			ex	1
125b	7 against Thebes	2 warriors	naked	2
			ch & chl	1
			chl	1
			l-c & ch	7
			ex	1
334	Departure	departing warrior	------	
339b	Fight	victor	l-c & ch (loser)	1
			chl	1
			patt ch	1
341	Departure	warrior with chl	------	
385	Dionysos arming	held by maenad	------	
455	Gigantomachy	Giant	naked	1
		Ares	ch & chl	1
			l-c & ch	3
			patt ch	1
			ex	2
468	Warriors leaving home (? Hektor)	warrior at side	? m-c, ch & chl	1
			l-c & ch	1
503	Ilioupersis	Neoptolemos at centre	ch & chl	2
			l-c & ch	2
			l-c, ch & chl	1
504b	Setting out	charioteer at left with chl	ch	1
			patt ch	1
505	Ilioupersis	Greek	l-c & ch (i.e. Neoptolemos, Trojan & Aeneas)	3
506	Ilioupersis	Neoptolemos	------	

The vast majority of the scenes are still mythological. Amazonomachies and the Ilioupersis form the bulk of these.

Of the improved bell-corselets three are worn by 'ordinary' warriors,

but only three of the 25 muscle-corselets are not worn by heroes or mythological characters. There may be a tendency to give important figures in the scenes a metal-corselet to set them off from the rest, but this does not always seem to be the case, e.g. on nos. 62, 468 and 505.

The comment about artistic variety made in connection with the LA examples above still applies in this period. In addition, one sees the contrast drawn further by the inclusion of naked hoplites and others in patterned chitons, aprons and exomides.

Table 93

CLASSICAL			MUSCLE-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
17	Arms of Achilles	held by Nereid	------	
232b	Departure	departing warrior	------	
284	Centauromachy	Kaineus with patt ch or apron	------	
†428	Fight	warrior at left	naked	3
			chl	1
			l-c	1
			ex	1
			ch	1
469	Hektor leaving home	Hektor with chl	------	
481	Herakles on Oita	on pyre	------	
561	Pursuit of woman	charioteer with patt ch	------	

There is still a predominance of mythological/heroic scenes. (The presence of the chariot on no. 561 might signify that it too has a heroic connotation.)

Achilles, Kaineus, Hektor and Herakles seem to warrant special armour, but the departing warrior and the charioteer are less obvious choices.

Only no. †428 preserves the variety of costume in a combat.

Table 94

LATE 5th CENTURY			MUSCLE-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
616	Trophy	trophy with ch	------	

The scene is ordinary.

Table 95

4th CENTURY			MUSCLE-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
22	Arms of Achilles	held by Nereid	------	
507	Ilioupersis	Ajax with patt ch & chl (possibly Neoptolemos also)	chl	1

Both scenes are mythological.

The association of the bronze corselet with Achilles has been maintained throughout.

The distinction given to an important character at or near the centre of the composition by the wearing of a muscle-corselet apparently continues.

In general, this survey does suggest that the metal-corselets were particularly associated with a few mythological figures. Only eleven named characters actually appear in the above tables, i.e.

1) Achilles - LA:2, EC:1, CL:1, 4th cent.:1.
2) Neoptolemos - EC:2, possibly 4th cent.:1.
3) Hektor - LA:1, CL:1.
4) Kaineus - EC:1, CL:1.
5) Menelaos - LA:1, EC:1.
6) Agamemnon - EC:1.
7) Ajax - 4th cent.:1.
8) Ares - EC:1
9) Dionysos - EC:1.

10) Herakles - CL:1.

11) Telamon - LA:1.

It may prove interesting to see how all this compares with the results we get from a similar study of the scenes with linen-corselets.

Table 96

LATE ARCHAIC			LINEN-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
1	Achilles & Ajax playing	Achilles or Ajax 4 warriors	ch & chl	2
10	Armour of Achilles	held by Neoptolemos & Odysseus Ajax or Odysseus	------	
24	Achilles & Hektor	Achilles probably	i-b-c	1
27	Achilles & Hektor	Hektor	naked (Achilles)	1
31	Achilles & Memnon	Achilles & Memnon	------	
33a	Achilles & Memnon	Achilles & a Trojan	naked (Memnon)	1
37b	Departure	4 warriors with himatia	------	
38b	Briseus led away	Agamemnon	------	
42a	Achilles & Troilos	Achilles & 3 Trojans (1+ chl)	------	
46a	Agamemnon	Agamemnon with himation	------	
48	Death of Aigisthos	Orestes	------	
49	Rescue of Aithra	Akamas & Demophon with chl	------	
52a	Ajax & Hektor	Ajax	naked (Hektor)	1
52b	Menelaos & Paris	Paris with himation	m-c & himation (Menelaos)	1
53	Ajax & Hektor	Ajax & Hektor	------	
57	Lesser Ajax & Cassandra	Lesser Ajax with chl	------	

105	Amazons	2 Amazons	------		
108	Amazons	Amazon	ch		1
109a	Amazons	Amazon	------		
109b	Amazonomachy (+ Herakles)	5 Amazons	------		
111	Amazons	Amazon	ch		1
			i-b-c (held)		1
128	Arming + chariot	4 warriors	i-b-c (held)		1
130	Arming + chariot	4 warriors (incl. charioteer)	m-c (held)		1
131	Arming + chariot	4 warriors	------		
133a	Arming	4 warriors	naked	(?2)	1
133b	Warrior	warrior	------		
134	Arming	warrior	------		
137a	Arming	warrior	------		
137b	Fight	3 warriors	ch		1
			chl		1
			chl as loin-cloth		1
138	Arming	warrior	------		
140a	Arming	3 warriors	ch		1
140b	Persians & Greeks	3 warriors	------		
140c	Warriors	2 warriors	------		
141	Arming	2 warriors (1 + chl, 1 + himation)	naked		1
			ch		2
			chl		2
			himation		1
144	Arming	warrior	ch		2
148a	Arming	warrior	ch		1
			ch & chl		1
			ch & i-b-c (held)		1
148b	Departure + chariot	2 warriors (1 + chl)	ch		1
149	Arming	4 warriors 2 warriors + chl 1 held by warrior in ch	ch		1
150a	Arming	6 warriors	ch		7
150b	Departure	warrior	------		
193	Herakles & Athena	Iolaos	------		
267a	Centauromachy	9 Lapiths	------		
267b	Gigantomachy	2 Giants	------		

268	Centauromachy	4 Lapiths	chl	1
			naked	1
270	Centauromachy	Kaineus	chl	1
271a	Centauromachy	2 Lapiths	ch	2
		Kaineus + chl		
271b	Fight	warrior(?s)	------	
272	Centauromachy	Kaineus	chl around waist	1
291	Chariot-scene	warrior + Boiotian shield	------	
298	Chrysippos & Zeuxo	Chrysippos himation	------	
300b	Warrior at altar	warrior	------	
302	Departure	2 warriors	------	
304	Departure	warrior	------	
306	Departure	warrior + chl	------	
307	Departure	warrior	------	
309	Departure	warrior	------	
310	Departure	warrior	------	
313a	Departure	warrior	------	
313b	Patroklos leaving Achilles	Patroklos & warrior	------	
315	Departure	warrior	------	
316	Departure	2 warriors	------	
		2 warriors + chl		
317	Departure	warrior	naked	1
382a	Diomed & Aeneas	Diomed & Aeneas	------	
382b	Herakles & Kyknos	Kyknos & Ares	------	
384	Dionysos arming	Dionysos	------	
390	Fight	warrior	------	
		warrior + chl		
394	Fight	I 2 warriors	naked] on A & B	5
			chl] on A & B	5
395	Fight	2 warriors	naked	1
396	Fight	2 warriors	ch & chl	1
399	Fight	warrior	------	
402	Fight	warrior	------	

407a	Fight	5 warriors	naked	1
			m-c	1
407b	Persian & Greek	warrior	------	
†412	Fight	warrior	naked	1
			chl	2
439	Gigantomachy	Hephaistos	naked	4
441	Gigantomachy	Giant	------	
442	Gigantomachy	2 Giants	------	
444	Gigantomachy	7 Giants Hephaistos	ch (Ares)	1
446	Gigantomachy	2 Giants	-----	
448	Gigantomachy	Giant	-----	
449	Gigantomachy	Giant	naked	1
471	Herakles & Amazons	Amazon	ch	7
			i-b-c (Telamon)	1
472	Herakles & Amazons	2 Amazons	patt ch	1
475	Herakles & Hydra	Iolaos	------	
477b	Warriors	2 warriors	------	
†499	Ilioupersis	Aeneas, Lesser Ajax, Akamas, Demophon, Neoptolemos, 2 Trojans 1 Greek	----	
500	Ilioupersis	Neoptolemos, Akamas, 1 Greek	ch & chl	1
			chl	2
509	Sacrifice of Iphigeneia	warrior	------	
		warrior + chl		
512	Menelaos & Helen	Menelaos + himation	------	
513	Menelaos & Helen	Menelaos + chl	------	
515	Menelaos & Helen	Menelaos	------	
517	Menelaos & Helen	Menelaos	------	
534	Panoply	free-standing	------	
618	Warrior	held by warrior	------	
†622	Warrior	warrior + chl	------	
624	Warriors	warrior	chl	1

629	2 warriors	warrior	naked holding ?ch	1
†630	Warrior	warrior	------	
633	Warrior	warrior + chl	------	
635	Warrior	warrior + chl	------	
636	Warrior	warrior	------	
638	Warrior	warrior	------	
†643	Warrior	warrior	------	
†645	Warrior	warrior	------	
646	Warrior	warrior	------	
647	Warriors	warrior + chl	naked	1
652	Warrior	warrior + chl	------	
653	Warrior	warrior + chl	------	

There are 54 mythological scenes and also 54 ordinary ones. N.B. Some of the fragmentary warrior scenes at the end might be mythological rather than ordinary, as I have counted them. In any case, linen-corselets do not seem to be especially typical of one or the other.

The figures who wear the linen-corselet may be identified as follows:

1) Heroes (30 times)
2) Giants (16 times)
3) Lapiths (15 times)
4) Amazons (13 times)
5) Achilles (5 or 6 times)
6) Menelaos (4 times)
7) Ajax (2 or 4 times)
8) Akamas (3 times)
9) Kaineus (3 times)

twice each:
10) Aeneas
11) Agamemnon
12) Lesser Ajax
13) Demophon
14) Hektor
15) Hephaistos
16) Iolaos
17) Neoptolemos

once each:
18) Ares
19) Chrysippos
20) Diomed
21) Dionysos
22) Kyknos
23) Memnon
24) Odysseus?
25) Orestes
26) Paris
27) Patroklos

If we recall that only five particular figures were associated with the metal-corselets in this period (see above), the wide range presented here is all the more remarkable. Under half the linen-corselets are worn by

'ordinary' warriors (92:118, 44%:56%).

In a large number of these scenes only one warrior is represented in his corselet, or all the figures wear linen-corselets. The artistic contrast, therefore, between variously attired warriors is less pronounced than it was in the other tables. Alternatives do exist, and there is a scattering of figures in chiton, chlamys, himation, a mixture of those or naked. Bronze corselets are rare - five improved bell-corselets and three muscle-corselets. Regarding the question of heroic nudity, we may note that 9 heroic/mythological and 13 'ordinary' warriors are naked; the latter appear in arming, departure, fight and non-specific contexts, where I am not convinced that their presence automatically transfers them all to some heroic sphere.

Table 97

EARLY CLASSICAL — LINEN-CORSELET

cat. no.	Context	Worn/carried by	Others in	no.
13	Armour of Achilles	held by ?Thetis	------	
15	Armour of Achilles	held by Nereid	------	
34a	Achilles & Memnon	Achilles & Memnon	------	
34b	Warriors & man	3 warriors	------	
35	Achilles & Memnon	Memnon + trousers Trojan + chl ?Trojan	m-c (Achilles)	1
62	Amazonomachy	Greek Greek + chl 2 Amazons + comb	m-c (Greeks) ch (Amazon)	2 1
66	Amazonomachy	1 Greek 2 Amazons 1 Greek + chl	naked (Greeks) m-c (Greek) patt apron & chl (Greek)	2 1 1
67	Amazonomachy	1 Greek	------	
68	Amazonomachy	1 Amazon	ch (Greek) m-c (Gk & Amazon) patt ex (Greek) patt ch & comb (Am)	1 2 1 1

69	Amazonomachy	1 Greek	------	
70	Amazonomachy	1 Greek	naked (Greek)	1
			ch & chl (Greek)	1
			chl (Amazon)	1
			m-c (Greeks)	2
71	Amazonomachy	1 Greek + chl	naked (Greek)	1
74	Amazonomachy	2 Greeks, 1 Amazon	naked (Greek)	1
112	Amazons	1 Amazon	------	
124	Birth of Pandora	Ares	------	
125a	?Argonauts	1 warrior	chl	1
		4 warriors + chl	patt ch	1
			ch & chl	4
			patt ch & chl	1
			ex	1
			m-c	2
125b	7 against Thebes	7 warriors	naked	2
			ch & chl	1
			chl	1
			ex	1
			m-c	2
152	Arming	warrior	------	
153	Arming	warrior	------	
154	Arming	warrior	naked (poss. + 6)	3
156	Arming	on a chair	i-b-c held	1
160a	Arming	warrior	------	
221	Athena + chariot	warrior	------	
276	Centauromachy	Lapith	chl round hips	1
277	Centauromachy	Kaineus	------	
278	Centauromachy	Kaineus	naked (Lapiths)	2
279	Centauromachy	Kaineus	loin-cloths	2
281	Centauromachy	Kaineus & 2 Lapiths	naked	1
318	Departure	warrior + chl	------	
325	Departure	warrior + chl	------	
326a	Departure	warrior + chl	patt ch	1
331	Departure	warrior + chl	------	
332	Departure	2 warriors	chl	2
336	Departure	warrior + chl	------	
339a	Departure + chariot	warrior	patt ch	1

339b	Fight	warrior (loser)	patt ch	1
			chl	1
			m-c (victor)	1
414	Fight	warrior	------	
416a	Fight	5 warriors	------	
416b	Warrior	warrior	------	
418bis	Fight	4 warriors	chl	2
			ch	1
419a	Fight	2 warriors	chl	1
419b	Warriors	------	naked	3
			chl	1
451	Gigantomachy	Giant	------	
455	Gigantomachy	3 Giants	naked	1
			ch & chl	1
			patt ch	1
			ex	2
			m-c (Ares & Giant)	2
†457	Gigantomachy	2 Giants	------	
†458	Gigantomachy	Giant	------	
473	Herakles & Amazons	Amazon	------	
502	Ilioupersis	2 Greeks	------	
503	Ilioupersis	Lesser Ajax + chl	m-c (Neoptolemos)	1
		1 Greek & 1 Trojan	ch & chl	2
504a	Ilioupersis	Akamas & Demophon (1 + chl)	patt ch + chl (Menelaos)	1
505	Ilioupersis	Neoptolemos, 1 Trojan & Aeneas	m-c (Greek)	1
510	Ixion	Ares	------	
519	Menelaos & Helen	Menelaos	------	
521	Menelaos & Helen	Menelaos	------	
538	Neoptolemos leaving home	Neoptolemos + chl 1 held by woman	------	
542	Nike & warrior	warrior	------	
543	Nike & warrior	warrior	------	
557b	Setting out	warrior	------	
558	Pursuit of woman	warrior + chl	------	
†589	Theseus leaving home	Theseus + chl	------	

594	Tomb-scene	warrior	------
654	Warrior	? held by warrior in ch & skin	------
656	Warrior	warrior	------
657	Warrior	warrior + chl	------
658	Warrior	warrior	------
660	Warrior	warrior	------
664	Warrior	warrior	------
670	Warrior	warrior	------
671	Warrior	warrior + chl	------
†677	Warrior	warrior	------
679	Warrior	warrior	------
705	Woman	held by woman	------

Again the linen-corselets seem to be spread almost equally between heroic/mythological (37) and 'ordinary' (35) scenes.

The linen-corselet is here associated with the following:

1) Heroes (14 times)
2) Greeks in Amaz.y (10 times)
3) Amazons (8 times)
4) Giants (7 times)
5) 7 against Thebes (7 times)
6) Kaineus (4 times)
7) Achilles (3 times)
8) Lapiths (3 times)
9) Neoptolemos (3 times)
10) Ares (twice)
11) Memnon (twice)
12) Menelaos (twice)
13) Aeneas (once)
14) Lesser Ajax (once)
15) Akamas (once)
16) Demophon (once)
17) Theseus (once)

The list of names is clearly shorter than that for the LA period. Missing are Ajax, Agamemnon, Hektor, Hephaistos, Iolaos, Chrysippos, Diomed, Dionysos, Kyknos, Orestes, Paris and Patroklos. Newly included are Greeks fighting Amazons, the Seven against Thebes and Theseus. We may compare with the list here the names of those associated with muscle- and improved bell-corselets in the EC period in Table 92. Dionysos and Agamemnon are the only figures to be represented there and not here. On the other hand, a number of characters appear only in linen-corselets, namely the Lapiths (except for Kaineus) Memnon, Aeneas, Akamas, Demophon, Lesser Ajax and Theseus. Finally, the

proportion of 'ordinary' hoplites to heroic/mythological has dropped, 45:70 (39%:61%).

There are 17 muscle-corselets and 1 improved bell-corselet in these EC scenes, of which only one muscle-corselet and the improved bell-corselet come from ordinary scenes. It is noticeable, on no. 339b, that the muscle-corselet is worn by the victor in a fight, while the loser has the linen one. Variety in dress is considerable, from nudity, through chiton, chlamys, exomis, to the patterned chiton, exomis and apron, and loin-cloths. There is a total of 47 scenes on the EC vases in my sample which show only one hoplite in some form of body-armour; of these 39 are given linen-, 8 metal-corselets. There is no doubt about which type was the commoner, either en masse or in a narrow category like this.

Table 98

CLASSICAL			LINEN-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
3	Achilles & Ajax playing	Achilles	patt ch (Ajax)	1
19	Arms of Achilles	held by Nereid	------	
†23	Achilles & ? Briseis	Achilles + chl	------	
29	Achilles & Patroklos leaving home	Achilles & Patroklos	------	
47	? Agamemnon & Thersites	Agamemnon + chl	------	
56	Ajax leaving home	Ajax	------	
78	Amazonomachy	Greek	------	
79	Amazonomachy	Greek	------	
80	Amazonomachy	Greek	------	
84	Amazonomachy	Greek	ex (Greek)	1
85	Amazonomachy	Greek	------	
†86	Amazonomachy	2 Greeks	------	
87	Amazonomachy	Greek	patt ch (Greek)	1

90	Amazonomachy	Greek	------	
92	Amazonomachy	Greek	chl (Greek)	1
93	Amazonomachy	Greek	------	
118	Amazons	2 Amazons	ch & chl (Amazon)	1
122	Amphiaraos leaving home	Amphiaraos	------	
167	Arming	warrior	------	
169	Arming	warrior	------	
172	Arming	warrior	------	
234	Athena & Phaon	Athena + himation	------	
293	Chariot-scene	warrior + chl	------	
296	Chariot-scene	warrior + chl	------	
344	Departure	warrior	------	
350	Departure	warrior + chl	------	
354	Departure	warrior + chl	------	
363	Departure	2 warriors (1 + chl)	------	
364	Departure	warrior + chl	------	
365	Departure	warrior + chl	------	
368	Departure	warrior + chl	------	
371	Departure	warrior	------	
372	Departure	warrior + chl	------	
379	Departure	warrior + chl	------	
†428	Fight	warrior	naked ch chl ex m-c	3 1 1 1 1
461	Gigantomachy	Giant	naked	2
462	Gigantomachy	3 Giants & Ares	naked	2
508	Iolaos	Iolaos + chl	------	
527	Menelaos & Helen	Menelaos	------	
546	Nike & warrior	warrior	------	
547	Nike & warrior	warrior + chl	------	
550	Nike & warrior	warrior + chl	------	
551	Nike & warrior	warrior	------	
562	Pursuit of woman	warrior + chl	------	

563	Pursuit of woman	warrior + patt ch & chl	------	
574	Setting out	warrior + patt ch	------	
582	Theseus & Amazons	Greek	naked (Greeks) chl (Greek)	5 1
583	Theseus & Amazons	Amazon	naked (Greeks) ch (Amazon)	6 1
588	Theseus & Antiope	Greek	naked (Peirithoos & Theseus) chl (Greek)	2 1
599	Tomb-scene	warrior	chl	1
600	Tomb-scene	warrior	------	
601	Tomb-scene	warrior + chl	------	
608	Tomb-scene	dead warrior + chl	------	
†681	Warrior	warrior	------	
683	Warrior	warrior	------	
684	Warriors	warrior + chl	------	
689	Warriors	warrior	------	
†693	Warrior's return	warrior + chl	------	
696	Warrior	warrior	------	
698	Warrior & man at altar	warrior	------	
700	2 warriors	warrior	------	

For the first time in these lists of linen-corselets the number of 'ordinary' scenes slightly outnumbers those with heroic/mythological compositions, 33 to 28.

The choice of mythological figures is even more restricted than it was in the preceding period. The following appear:

1) Greeks in Amaz.^{y} (13 times)
2) Achilles (4 times)
3) Giants (4 times)
4) Amazons (3 times)
5) Heroes (twice)

once each:
6) Agamemnon
7) Ajax
8) Amphiaraos
9) Ares
10) Athena
11) Iolaos
12) Menelaos
13) Patroklos

The only completely new faces are Amphiaraos and, surprisingly, Athena. If we look back to the list of muscle-corselet wearers in the CL period, we see that only Achilles appears in both, and Kaineus, Hektor and Herakles are conspicuously absent here. Heroic/mythological and 'ordinary' warriors are equally represented in the CL list; there are 34 of each.

The contrast between different forms of dress in the same scene is less noticeable; most scenes have only one figure in a linen-corselet. (In a few scenes, e.g. of departure, a companion of the central figure apparently bears his shield for him. These figures have not been counted. Some Amazons who wear linen-corselets, but who do not carry shields, have also been omitted.) The alternatives are more limited, ranging only through chiton, chlamys, exomis, patterned chiton, muscle-corselet and nakedness. Consequently, no. †428 and some of the Amazonomachies are exceptional for their variety.

Table 99

LATE 5TH CENTURY B.C.			LINEN-CORSELET	
cat. no.	Context	Worn/carried by	Others in	no.
464	Gigantomachy	Giant	naked (Giants) naked (Ares)	5 1
612	Tomb-scene	warrior + chl	------	

Since there are only two examples, one can scarcely comment on more than their rarity at this date. One is mythological, one an ordinary scene.

It might be significant that it is the Giant and not the war god who is given the corselet here.

The only alternative presented to the linen-corselet here is nudity.

Subsequently there are no examples of linen-corselets on the 4th century vases in my sample. This is largely a reflection of the fact that warriors in general are no longer popular themes for the Attic vase-painters. The point should, however, be made that on the contrary muscle-corselets do

still appear. (Cf. the situation in sculpture below.)

The small number of metal-corselets from vase-paintings can be presented most easily through the drawings (Figs. 79-82) where the reader can see at a glance the differences in detail through the 5th and 4th centuries. The important points relating to fit, fastening, etc., have already been made, and so I leave unwritten further, descriptive comments on shape and decoration. What remains to be considered regarding these bronze corselets are the characteristics which may be typical of particular artists.

Forty-six of the corselets have been attributed to 22 artists, of whom the majority (i.e. 15) are responsible for only one each and three two each in my sample.[87]

Douris is the artist of three LA corselets, two improved bell- (nos. 10 and 471) and one muscle-corselet (no. 52). Each is rendered differently. The improved bell-corselets both belong to Douris' second (early middle) period, as defined by Beazley, but they are certainly not conceived of in the same way. Note the lower edge, and compare that again with his muscle-corselet which is later and dates from his third (middle) period.

In the EC period the Niobid Painter and his Group naturally stand out immediately. The Niobid Painter himself painted 13 muscle-corselets, and there is another in his manner (no. 341, Late according to Beazley):

Early - nos. 62^2, 468, 503 and 505.
Middle - no. 334.
Late - nos. 68^2, 72, 339, 455^2 and 504 (the last "Very Late").

One may note the patterned borders and florals of the Early corselets and contrast the Late examples on nos. 68 and 339. Nos. 72 and 455^2 also form a group because of their simpler lines. Note the horizontal dashes across the median line of the pectoral muscles on these, and compare no. 341.

The Painter of Bologna 279 illustrated four muscle-corselets on his vase, no. 125, one noticeably and uniquely in back view and one (the third) covered in black glaze except for the reserved anatomical contours.

From the CL period we may consider three examples by Polygnotos plus one by an artist in his Group (nos. 284, 428 and 561 by Polygnotos himself, and no. 17). Beazley stated that Polygnotos "came from the school of the Niobid Painter", and we may point out the presence of the small cross-lines on the breast of the corselet on no. 284, as an indication of the continuing tradition.

A similar survey of the painters of linen-corselets gives the following results.

With reference only to the vases in my catalogue, in the LA period Douris again stands out with at least 33 linen-corselets, and there are another 4 in his manner. The Kleophrades Painter has 32. A further 6 artists have between 10 and 19 examples each: namely, the Brygos Painter 19, Syleus Painter 15, Painter of the Paris Gigantomachy 13, Berlin Painter 12, Foundry Painter and Makron 10 each. Four others painted between 6 and 9 corselets: Painter of the Oxford Brygos 9 (+ 1 by a related artist), Eucharides Painter 8, Tyszkiewicz Painter 7 and the Proto-Panaitian Group 6. The majority follow these with between 1 and 5 corselets to their credit.[88]

All the painters of the LA metal-corselets are included here, with Douris and the Kleophrades Painter quite clearly the most interested in representing body-armour. It comes as no surprise that the Berlin Painter, the Foundry Painter and Makron also paint linen-corselets. However, we may note that the Brygos Painter, the Painter of the Paris Gigantomachy and the Syleus Painter, for all their examples of the linen type, are not among those who painted both types of corselet.

If we look closely at the linen-corselets of the two artists who painted over 30 corselets each in the LA period, we find certain features which are characteristic of their individual styles. We start with the 37 associated with Douris. Beazley's four periods in the development of Douris' work provide a very useful framework in which to present them.

Period 1 (very early and early):

Three vases belong in this period, nos. 60^2, 150^7 and 636. The linen-corselets are extremely ornate and elaborately decorated, with scales of different types, pattern-bands around the waist and chest, and patterned double pteryges.

Period 2 (early middle):

Here three vases are relevant, nos. 10^2, 471 and 509^2. The corselets on the first are still as ornate as those of the first period, and we may note the patterned double pteryges. While that on the second is a much plainer back view, those on the last are still provided with scales and patterned bands. Note the odd shoulder-flaps on the warrior leading Iphigeneia.

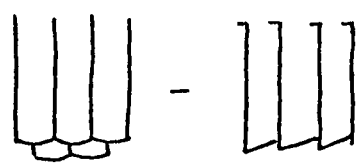
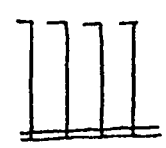
Period 3 (middle):

This is represented for us by five vases, nos. 52^2, 394^2, 402, 407^6 and †412. Douris' style in general in this period exhibits greater and richer patterning, but most of the corselets on these vases are, on the contrary, plainer and simpler. Only the two on no. 52 retain the scales, patterned bands and double pteryges. The other pteryges appear as a single layer. Note the rendering of what are presumably the chiton 'sleeves' at the shoulders on these vases; in the tondo of no. 394 especially the effect is rather that of the later pteryges attached at this point.

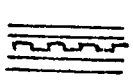
Period 4 (late):

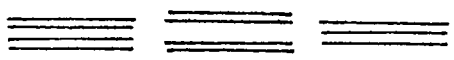
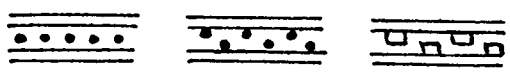
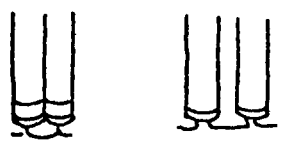
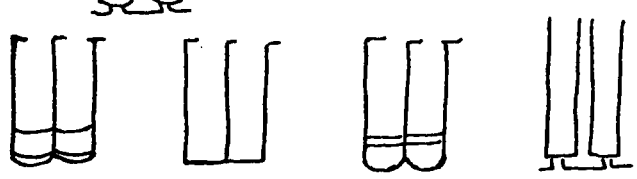
Only one of the catalogued vases belongs in this period, no. 395[2]. The drawing of the patterned bands and ties is cleaner and crisper. Note the simplification of the pteryges.

To summarise, scales are applied in all four periods, but the detailed drawing of the overlap and fastening of the front panel only appears in periods 3 and 4. The pteryges develop thus:

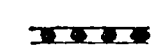
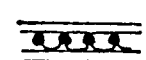
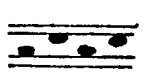
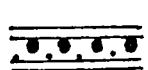
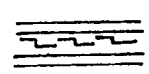
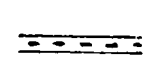
1-2 2 3  4 

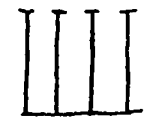
Cf. the pteryges on his improved bell-corselet on no. 471. Cat. no. 37b[4] was not assigned to a period by Beazley, but on the basis of the evidence above it should probably be placed in period 3. Similarly, no. 137[4] is seen to be very late and actually displays work in the Dourian manner of the EC period.

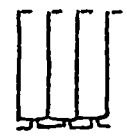
We look next at the 32 linen-corselets by the Kleophrades Painter. From very early in his career come nos. 193 and 315, to which may be added the early vase, no. 307. Later are eight more vases, nos. 53[2], 130[6], 131[4], 132, 272, 313[3], 382[4] and †499[8]. The Kleophrades Painter's corselets are uniform and bear a strong resemblance to one another. His corselet style is easily recognisable because of the short, stocky impression given to the warrior, especially when the pteryges run down from the upper part without a waistband, as is the norm. When possible, he draws the neck-guard standing up at the back, sometimes decorated with a pattern as on no. 307,  . The front shoulder-flaps may be cut square or rounded; both appear on no. 382. Their shape, especially on the three early vases and on nos. 53 and 382, may be stressed by inner contour lines. Additional decoration as, for example, the snake or the panther heads on the back shoulder-flaps

on nos. 130 and †499, and the crosses or floral stars on the front shoulder-flaps, is applied in moderation. Nos. 53, 307, 313 and †499 provide examples of the Kleophrades Painter's most elaborate linen-corselets, no. 272 his simplest. His chest- and waist-bands, if added, are formed from simple lines, e.g.  , occasionally with a pattern between them, e.g.  . His pteryges range from the apparently early forms  , on nos. 193, 307 and 315 to the following on the remainder,  , but note Neoptolemos' on no. †499. The pteryges are often curved out over the hips and buttocks of the warriors. Finally, we may observe the complete lack of added scales.

The <u>Brygos Painter's</u> 19 linen-corselets appear on seven of his vases, nos. 33^{2}, 42^{4}, 149^{7}, 298, 400, 439 and 500^{3}. In front, back or side view a characteristically Brygan corselet is found on all of these. We may point out a few particular features:

1) at the neck an occasional pattern-band at the front, and a low neck-guard at the back. (e.g. on nos. 33, 42, 149 and 439.)
2) the shape and edging of the front shoulder-flaps. (e.g. on nos. 33, 42 149 and 500.)
3) the snake and quatrefoil patterns on the front and back shoulder-flaps. (e.g. on all.)
4) the representation of the front- and even sometimes the side-fastenings (e.g. on nos. 33, 42, 149, 298 and 500.)
5) the use of a dilute pattern at the sides to indicate possibly scales or quilting. (e.g. on nos. 42, 149, 298 and 500.)
6) the chestband on the back. (e.g. on nos. 33  , 149  , 298  , 400  , 439  , and 500  .)

7) three types of pteryges. (i.e. on nos. 33 and 42, 

on nos. 42, 149, 439 and 500, and  on nos. 33, 149, 298 and 500.)

A further and final point of interest is that in the arming scene on no. 149 the Brygos Painter gives us not only one corselet being put on, but also another one folded up and carried.

We may conclude from this detailed study of these LA artists' corselets that their own styles are clearly reflected in their methods of representation. A similar study of the next five artists mentioned earlier corroborated this, but the exact details need not be presented here.

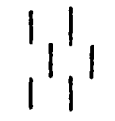
Among the EC painters of linen-corselets the Niobid Painter and the artists associated with him stand out. Nineteen are represented by only one corselet each in my sample, of whom three are part of the Niobid Group, and another ten by between two and eight examples each, of whom one more is a Niobid follower.[89] The remaining five are represented as follows: Niobid Painter 27 (+ 2 in his manner); Altamura Painter 16; Pistoxenos Painter 13; Painter of Bologna 279 12; Sabouroff Painter 11.

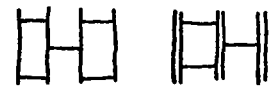
We may take a closer look at the style of the linen-corselets of the Niobid Painter himself. His corselets are to be found on 11 vases:

Early period - nos. 62^5, 468, 503^5 and 505^3.
Middle period - nos. 124 and 221.
Late period - nos. 68^2, 72^2, 455^3 and 504^2.
Very late period - no. 339^2.

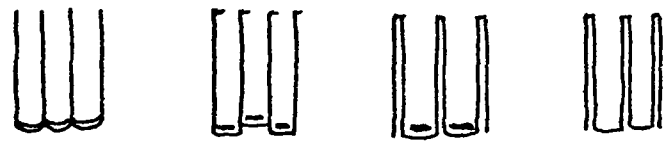
Certain features of the Niobid Painter's style in corselets are common to all these stages in the development of his work. For example, in general they all show careful and elaborate patterning with intentional variety in minor details. In particular we may note the, often rounded, front

neck-band; the curved, lower end to the front shoulder-flaps, which are regularly adorned with a floral star, frequently reserved on a black background; the panelling of the chest and back; the scales; the variety in the pteryges.

In addition, there are further details which characterise the different periods; for example, in the early period, we see the detail of the fastening of the shoulder-flaps to the front, to two buttons on no. 62 and to one on no. 505 (these are only seen again on no. 504 and in a slightly different form); one of the varieties of pattern, i.e.  , is only found in this early period. The two corselets from his middle period do not give us much to work with, but we may note two features which reappear in the late period also, namely the pattern-band across the bottom of the upper part of the shoulder-flap on no. 124 (cf. no. 504), and the way in which the pteryges begin below the waistband on no. 221 and no. 505 (cf. all the late vases).

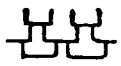
Finally, in the late period the "vertical brick-wall pattern" is the only alternative to the common fish-scales, i.e.  .

Examples of early pteryges

and late pteryges 

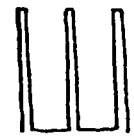
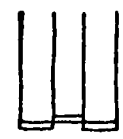
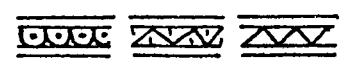
Nos. 325 and 519 are painted in the manner of the Niobid Painter. The latter is of little value in a consideration of the style of the linen-corselets, but the corselet on the former can be seen to be very close in style to the Niobid Painter's, with its scaled body, and shoulder-flaps with ivy leaves reserved on the black lower tab.

At least 16 linen-corselets (part of one more remains) on five vases are by the Altamura Painter, on nos. 35^{2}, 418^{10}†, 457^{2}, †458 and 521. His style

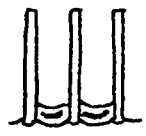
of corselet is very close to that of the Niobid Painter; note the neckbands which, however, are always still straight, the similar shoulder-flaps with quatrefoil decoration and black lower tab (but note the preference for a simpler reserved dot on no. 418, and the reserved snakes on the tabs of no. †458), the floral on no. 521 and the dotted square on no. 418 in the centre of the upper chest, which can be paralleled occasionally in the work of the Niobid Painter, and the panelling of the body area with scaled sections, usually at the centre. He bothers to draw the front ties on only three corselets, twice on no. 418 and once on no. 35. The latter also exhibits an unusual figured scene on the back shoulder-flap, the exact interpretation of which is now doubtful. Finally, a couple of details in his work may betray his proximity to Late Archaic artists and their styles, i.e. his use of the  pattern on no. 521, and the simple pteryges but note the black ones on nos. †457 and †458.

No one painter dominates the others in depicting linen-corselets in the CL period; nineteen artists are represented by only one corselet, nine artists by two each, one by three, and then there are Polygnotos (4), the Christie Painter (5), the Achilles Painter (6), the Eretria Painter (8) and the Group of Polygnotos (11).[90]

Polygnotos and the large group of artists associated with him are well represented - apart from the Christie Painter, the list includes the Hector Painter, two in the manner of the Peleus Painter, the Guglielmi Painter, the Biscoe Painter and the Kleophon Painter. We might expect to find echoes of the Niobid Painter's style in Polygnotos' four linen-corselets on nos. 84, †428, 584 and 585. However, it is immediately obvious that the interest in pattern and panelling has gone. Polygnotos' corselets are strikingly plain in comparison. One feature does survive, and that is the

late form of the pteryges,  and  which begin below the level of the waistband. The only surface pattern which recalls the Niobid Painter's scales is on no. 585, but it is certainly more suggestive of padding or quilting. The chestbands are plain ; only some of the waistbands continue the tradition  .

Cat. nos. 19, 56, 92^2, 93, 234, 379, 563 and 582^3 were painted by the Group of Polygnotos. As might be expected, this group did not share one rigid style in linen-corselets. Most of them seem to allow more decoration than Polygnotos himself. We may compare the "quilting" on nos. 19 and 56 with the example mentioned above. A couple of new features are interesting developments; first, the reshaping of the shoulder-flap which now seems to project further out from the shoulders, and, second, the vertical bands on the front of nos. 93 and 379. Note also the indication of a side-seam on one corselet on no. 92 and no. 582.

The Christie Painter belongs in the Polygnotan Group, but Beazley was able to distinguish his work from that of the crowd. His five corselets are seen on nos. 76, 78, 85^2 and 562. He too draws the new, extra-wide shoulder-flaps, and adds a flamboyant back flap, e.g. on no. 85. Two of the corselets are neatly tied at the front, on nos. 78 and 85; the laces come from black ivy leaves on the tabs, and one of them has a Gorgoneion for a button. Note the clear rendering of the double layer of pteryges, e.g. on no. 78  .

In conclusion, we can state that the vase-painters definitely have particular and individual ways of depicting and embellishing the linen-corselets on their vases. How much of this is a reflection of current and real changes in style and fashion is, of course, impossible to answer

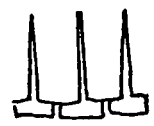
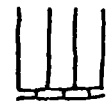
because of the complete absence of originals. However, I refer the reader to the sketches illustrating the basic components of the linen-corselets drawn between ca. 500 and 400 B.C. (Figs. 83-93)

CORSELETS IN SCULPTURE

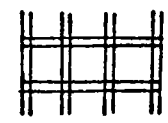
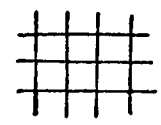
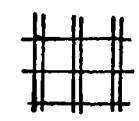
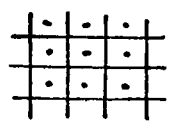
Catalogue and Commentary

1. The metopes of the Athenian Treasury at Delphi, ca. 500-490 B.C. Metope no. 8 from the south side shows Theseus and an Amazon. She wears a linen-corselet,[91] as do five of her compatriots on the eastern metopes nos. 9-14, and the fallen Amazon against Herakles on metope no. 22 on the north. At least one of Geryon's bodies, and probably all three, are also equipped with a linen-corselet on metope no. 27 from the west side. In addition, two fragmentary figures from the fight in one pediment wore corselets, as did the mounted Amazons who formed the acroteria. FdD IV.4 pls. 27-30 and 32.6 (no. 8); pls. 33-34 (no. 9); pls. 34-35 (no. 10); pl. 38 (no. 12); pls. 39-40 (no. 13); pls. 41-42 (no. 14); pl. 65 (no. 22); pls. 70-73 (no. 27); pls. 77-79 (fr. 43 and fr. 44) and pls. 87-91 (acroteria). GSAP fig. 213.

All of these linen-corselets are of the same simple type: the neckline is rounded as on Antiope or Geryon, or straight as on the Amazon on no. 13, where the carved pattern might be intended to represent a band on the corselet or the tunic below it; the underarm cutting is right-angled, clearly seen on no. 13; the shoulder-flaps are also square-ended, and the ring or button at the tip is shown on Antiope's and possibly on no. 13; the corresponding button on the chest itself is only shown on no. 9; the material runs straight into the pteryges without a

carved waistband, although this and other details like the buttons could easily have been originally picked out in paint;[92] the pteryges themselves have been treated in three slightly different ways, the majority on metopes nos. 10, 13, 14 and 27, fragment 43 and acroterion no. 1 are rendered thus  , while those on metopes nos. 12 and 22 have a shorter lower layer, i.e. , and finally on the second acroterion they appear as  . One wonders how much of this diversity is due to different sculptors rather than to any intentional attempt to show different types of pteryges. At any rate, the general style of the corselet is in keeping with those on Archaic sculpture; cf., for example, those on the Siphnian Treasury at Delphi, or the Megarian Treasury at Olympia.[93] Note, however, that an alternative type exists in which the waistband or at least a line across the body above the pteryges is carved in relief, for example, on the Stele of Aristion and on the base, Athens 3477.[94]

2. The linen-corselet worn by the Herakles on the east pediment of the Temple of Aphaia on Aegina, ca. 490-80 B.C. Ohly, 67-71 figs. 57-59 pls. 30-34 and 75. Like de la Coste-Messelière Dieter Ohly also interpreted this corselet as an Ionian "Lederkoller".[95] Ohly provides a detailed description and explanation of the corselet, particularly covering the parts like the neck-guard and right shoulder-flap which the sculptor applied as separate pieces - the shoulder-flap was depicted as undone to allow the archer greater freedom of movement. However, I am not wholly persuaded by Ohly's account of the panelling at Herakles' left side. Indeed, in his projected restoration in fig. 57, the horizontal "laces" are clearly overemphasised compared to the vertical edges of the "Lederlamellen". Ohly was on the right track when he compared the

panel to that on the Greek's corselet in the tondo of Munich inv. 8705 (2688), no. 71a, but I believe that in the vase-paintings we should be looking for a strong pattern comparable to this carving in relief, and a better comparison might be made with the pattern,  , on nos. 153, 326 and 538, or the pattern,  , on nos. 66, 67 and especially 160. All of these examples are actually Early Classical in date, and the only similar patterns on Late Archaic vases are  on no. 140, and  on nos. 268 and 271. I prefer to understand these as reinforcing panels of metal scales, not merely movable parts of the same material as the body of the corselet itself, i.e. leather according to Ohly.[96] That is, rather than thinking that the fit of the corselet is adjustable (it would presumably be made originally to fit one individual), I think we should note the position of the archer in battle; he crouches and drawing his bow, exposes his left side which, I believe, is given extra protection by metal plates or scales. It is noticeable that on the vases such panels often appear at both sides of the hoplite's corselet; he would also, of course, have been protected by his shield at the left. However we interpret the panel at the left side, we may note the regular pteryges which are of the same type as those on most of the metopes of the Athenian Treasury.[97]

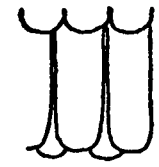
3. The Harpy Tomb from Xanthos in Lycia, London, Brit. Mus., B 287, ca. 480-470 B.C. Xanthos I 37ff.; Fifty Masterpieces no. 21; Ridgway, SS 95-6 and 108 fig. 128; HGA 200-1; Acta 202-3, ca. 470 B.C. (Tritsch). In the centre of the north side a warrior stands in front of a seated man, and a Corinthian helmet is passed between them. The warrior is wearing a linen-corselet of the same, simple type as we have been studying up to now, but once again there is a variation in the rendering of the

pteryges; there is a carved line above them and the second layer below is not carefully delineated.

4. The metope in Palermo from Temple E at Selinus, with Herakles and an Amazon, ca. 470-460 B.C. Becatti, pl. 139; Langlotz & Hirmer, pls. 100-101; Ridgway, SS fig. 32; HGA pl. 69b.
The Amazon wears a linen-corselet, with a rounded neckline (note that the zig-zag pattern above could be the top of the chiton, or a pattern on the corselet itself), and the usual rectangular shoulder-flaps. The pteryges are strange; below a horizontal line there seem to be two layers, one very short one over a longer one.

5. So far in sculpture we have seen examples of linen-corselets only, but with the Parthenon Frieze (ca. 445-438 B.C.) we find the first instance of both muscle-corselets and linen-corselets together. Eight linen-corselets (probably originally ten) are worn by riders and apobatai on the west, north and south sides, and the variations in details among them are immediately striking.

On the west side only one rider wears a linen-corselet, figure 11 on slab VI (Brommer, PF pls. 18-19). It has the usual raised neck-guard at the back, and rounded neckline at the front. The shoulder-flaps end in panther-heads, a feature not seen on the vases,[98] and the Gorgoneion on the centre of the abdomen, rather than between the shoulder-flaps is odd.[99] As on the Herakles earlier, the area under the left arm is reinforced, here however, quite clearly with large scales. The edges of this panel and the waistband are raised, and below the latter lie the pteryges. These appear to be two layers deep, decorated with a long v pattern down each, i.e. .

Three corselets appear on the north side of the Parthenon Frieze. The apobates 47 on slab XII is actually broken into two fragments at roughly waist level. Brommer, PF pl. 68, shows the upper body in front view. The neckline is curved and apparently trimmed with a border of incised lines between which paint would have marked out a pattern. The edge under the arm is also curved, but the shoulder-flaps are rectangular. Again the tab ends in the head of a lion or panther, but the setting-in of the lower tab itself is unusual and not to be found in vase-paintings. The rectangular dowel-hole in the centre of the chest is interpreted by Brommer[100] as the means for attaching a Gorgoneion similar to that on the previous corselet, even though the latter is not so attached. The lower part of the figure (Brommer, PF pl. 67) gives us the pteryges over the chiton. These seem to consist of three layers, one of short, semicircular tabs above two of longer, round-ended ones, i.e.  .

A second apobates, figure 65 on slab XXII (Brommer, PF pl. 80), wears a different linen-corselet. The front neckline appears to be similar to the last, but the shoulder-flaps are plainer with a simple raised edge, cf. those on vases, for example, by the Berlin Painter. The pteryges are of yet another type; below the semicircular ones a single row of long, round-ended ones appears decorated with incised lines, i.e. .

Only one of the riders, figure 116 on slab XXXVIII (Brommer, PF pl. 102), wears a linen-corselet on the north frieze. It is partially obscured by his cloak and the following horse, but we can still make out the long square-ended shoulder-flap and the plain pteryges. As

Brommer noticed all of these figures in corselets on the west and north friezes also wear helmets. Those on the south frieze do not.

There is also a difference between the north and south friezes in that it is a group of riders on the south who are equipped with corselets of the linen type. Probably all six figures, 32-37 on slabs XII-XIII (Brommer, PF pls. 130-131) originally were so represented, but damage to the surface allows us to consider only figures 33 and 35-37 in detail now. Each seems to wear a basically identical type, which is seen most clearly on figure 36 (Brommer, PF pl. 128.4; Becatti, pl. 153). The upper edge is marked by a simple, curving line. The shoulder-flaps are comparable to those on N 116. The underarm edge is straight unlike that on N 47. Indeed, the type is closest to W 11; the belt and the side panel, here on the right, are framed by raised lines; the panel itself, however, is not filled in with a scale-pattern, but a grid of grooves, clearly visible on figures 36 and 37, and reminiscent of the Aeginetan Herakles. The straight-ended pteryges seem to be single and plain.

One wonders whether this spread of corseleted riders and apobatai had any special significance. Are the noticeable differences in detail merely the result of their being sculpted by different hands? That is one possibility, but the whole question of the variety in dress and equipment among the warriors on the frieze seems to be in need of discussion. John Boardman came to the following conclusion with which I would agree:[101] "in both (the north and the south sides) I think we can detect a deliberate grouping of the horsemen into ten ranks or clusters, which can only reflect the tribal organisation of democratic Athens, as important in war as it was in the celebration of festivals. This is

particularly clear in the south where the groups are further differentiated by dress." As he goes on to state, however, the groups are by no means distinguished by their dress into exclusive units of equal numbers throughout the length of the frieze. The closest we get to the idea of a distinctive "uniform" for each unit is in the three adjacent groups of six riders on the south side,i.e. S 26-31 in muscle-corselets, S 32-37 in linen-corselets, S 38-43 in Chalcidian helmets.
The existing state of preservation does not make this survey any easier, but in general it is the variety and not any unity, in the rendering of the riders that makes an impact on the viewer.

In association with these warriors in linen-corselets there are other figures who wear metal-corselets.[102] On the west frieze this metal-corselet is worn by three riders, figures 3 on slab II, 7 on IV and 18 on X, (Brommer, PF pls. 9-10, 13-15 and 30-31). It is seen only once on the north side, on figure 86 on slab XXVIII (Brommer, PF pls. 86-87). On the south a group of six riders, to the left of the group in linen-corselets,wears it, figures 26-31 on slabs X-XI (Brommer, PF pls. 127-129).[103]

All of these corselets are of the same, regular type; it is modelled to fit the naked body closely, although it is worn over the chiton. It is often difficult, if not impossible, to detect any indication of the upper edges at the neck and armhole, and there is certainly no attempt made to show us the hinges, rings or buckles on the shoulders or down the sides. On W3 and W7 the sculptor has left a bulging roll of chiton below the bottom edge of the corselet - this indication of a cushioning pad is surely true to life, although it is missing on the others. It is likewise noticeable that there are no

pteryges in this position on any of the metal-corselets.

There has been some discussion regarding these metal-corselets on the Parthenon Frieze, as to whether they should be considered as examples of the improved bell-corselet or of the true muscle-one.[104] Hagemann seems to have been prepared to see two types in figures S 26 and 29.[105] To me even figure S 26 seems to be wearing a fully developed muscle-corselet which reaches to below the navel - the decisive front part is admittedly obscured by the rider's right arm, but in the face of the clear evidence from all the others I can see no point in interpreting this as the only improved bell-corselet on the Parthenon Frieze.

6. As is already well known the majority of Classical battle friezes do not depict heroes or ordinary Greeks in heavy hoplite armour. One may think immediately of the friezes of the Hephaisteion or the Temple of Athena Nike. On the Bassae Frieze (ca. 395 B.C.) also almost all the combatants have only tunics, cloaks or nothing at all. Only one Lapith (who is incidentally losing) is equipped in a muscle-corselet over his chiton, with a cloak hanging from his neck. Hofkes-Brukker & Mallwitz, 51-52 H2-522. The abdominal musculature is heavy; there is a roll of metal under the left arm-pit, but the bottom edge appears to lack this feature. Another figure wears what might rather be called a jerkin over his chiton (a σπολάς ?) - I refrain from giving the title of linen-corselet to this item. Hofkes-Brukker & Mallwitz 85-6 H21-538. This leather (?) garment worn by the victorious, bearded Greek has a high, round neck, no shoulder-flaps and very short, rounded pteryges. He alone of the 24 male figures in the Amazonomachy is so honoured with more than a cloak or tunic. One may well ask who this figure is.

So far we have concentrated on the Greek World proper, but there are also a number of reliefs from Lycia which like the earlier Harpy Tomb, depict Greek body-armour. These date from the late 5th and the 4th centuries B.C.[106]

7. The Merehi Sarcophagus, ca. 410-390 B.C. London, Brit. Mus. 951. Xanthos V 88-96 pls. XXXI-XXXII and 46-53; Childs[2], 307-310, figs. 15 and 21 (dated on 297, n.1, by epigraphical and numismatic evidence); Childs[3], 10, 17-18, pl. 2.

   On one side of the crest-beam there is a battle-scene in which perhaps seven figures were given linen-corselets originally and four were nude. In its present state of preservation we can say nothing further about them. The main, large-scale decoration on the curving sides of the top is in the form of the hunt of a panther, and a "chimaira", by a warrior and charioteer in a four-horse chariot. The warrior who hunts the "chimaira", is dressed in a linen-corselet over a tunic with a cloak around his neck and billowing out behind. The only distinctive feature of the corselet is the single row of widely-spaced pteryges below the line of the waist.

8. The Inscribed Pillar, early 4th cent.[107] On block 215 in Istanbul the upper figure is kitted out in a muscle-corselet over a chiton. Xanthos I pls. XXX-XXXI; V pls. XXXIX and 62.2.

   As on some figures on the Parthenon Frieze, the upper edges of the corselet are not carefully marked out, but the lower edge has the usual dipping contour, and below it there is a single row of short, rounded pteryges. In contrast, on another block, 679 in the British Museum, three staggered rows of pteryges lie over the chiton. Xanthos I pl. XXXV;

V pls. XXXVIII and 62.2. Although the rest of the corselet has been damaged, it is possible to state that these pteryges probably belonged to a linen-corselet, since at least in Attic sculpture muscle-corselets do not usually have three layers at this date.

9. The Nereid Monument, ca. 380 B.C., was decorated in four places with Greek-style battle-scenes; on both friezes on the podium, on one frieze on the architrave outside the building and in the west pediment. The first frieze, the larger and the lower of the two on the podium, represented a battle. On slab 859 (Cook, GRA 89 fig. 71; Lane-Fox, 142) two hoplites engage in combat. One is hidden by his shield and only the tunic and cloak are seen, but the other clearly wears a linen-corselet over his chiton with a chlamys draped over his left shoulder. The right shoulder-flap is prominent; grooves at the waist would suggest a waist-band, below which the pteryges appear as a smooth curve of material. Presumably the ties of the shoulder-flap, any pattern on the band and the pteryges themselves could have been detailed in paint.[108]

Corselets are worn by the hoplite and two cavalrymen on slabs 855-856. EAA Atlante pl. 278 (6); cf. Childs[1], 112 fig. 5. The linen-corselet is worn by the hoplite over a tunic and under a chlamys. It has a square-ended shoulder-flap and long, narrow pteryges hanging down from a line just below the waist. On slab 860a a similar linen-corselet was shown in back view, while on 860b in three-quarter back view a hoplite wears a muscle-corselet without pteryges. EAA Atlante pl. 278 (7) and (8).

The second freize on the podium shows battle-scenes in relation to the capture of a city.[109] Unlike the first frieze this has ranks of

heavily-armed warriors marching into the fight; all the figures are clothed, and a large number of them have a corselet over their tunics and a cloak over the left shoulder. The linen-corselets are of basically the same type, with long, narrow pteryges, as on the hoplite mentioned above from the first frieze. Cf. slabs 868: MTP pl. 13b, IEE 2 210-211; 869: MTP pl. 13a, IEE 1 344-345, Childs[3], pl. 7.1; 872: MTP pl. 14b, IEE 2 231, Childs[3], pl. 10.2. On a number of slabs, for example, slab 882 (Childs[1], 109 fig. 3) and slab 884a (Childs[3], pl. 11.1), shoulder-flaps are visible. On slabs 879 (Cook, GRA 89 fig. 72; IEE 1 346-347; Childs[3], pl. 13.1) and 866 (MTP pl. 14a) a narrow belt or waistband is worn over the corselet at the waist. A few figures wear muscle-corselets without pteryges, e.g. on slab 867: EAA Atlante pl. 280 (31); Borchhardt pl. 36.1.

Of the warriors of the third frieze one can say nothing. In the pediment two figures are running to the right: Childs[2] 292 fig. 11; EAA Atlante pl. 288. The one on the left wears a normal linen-corselet, as already described for this building, except that the pteryges seem to be divided by ridges instead of grooves. The other has one of the very rare muscle-corselets, with chiton and chlamys. The form of the body is well-modelled, and the edges at armhole and base clearly marked, but there are no pteryges.

In conclusion, we are able to state that the warriors on the Nereid Monument for the most part wear linen-corselets of one simple type on which the pteryges are long and narrow, and only one layer deep, and the shoulder-flaps, when represented, are angular. Muscle-corselets do also appear, but only very rarely, and always without pteryges.

10. Four hoplites on the west frieze of the Limyra Heroon, ca. 370 B.C. Borchhardt, 51-2, 61-2 pls. 20. 1-2 and 21. 2.
The first three figures (nos. 1, 3 and 9) wear the linen-corselet (or "Lederkoller" as Borchhardt terms it), with edged shoulder-flaps and three layers of pteryges. The fourth (figure no. 15), however, has a muscle-corselet with, surprisingly, edged shoulder-flaps as well, and two rows of shorter, rounded pteryges. This is the first time the shoulder-flaps have been depicted on the muscle- as opposed to the linen-corselet.

11. The friezes on the inside and exterior front of the surrounding wall of the Heroon at Trysa, ca. 370 B.C. Now in the Kunsthistorisches Museum, Vienna. Childs[2], figs. 1-6, 9-10, 12, 14, 19 and 23; Childs[3], 13-14, and passim, figs. 9 and 20 pls. 1.2, 5, 13.2-17; EAA Atlante pls. 268-275.
Because the local limestone was used and this has weathered badly, it is now difficult to make out more than just general features. Almost the only distinguishing characteristic of the linen-corselet is the pteryges; for example, these can be seen most clearly on two figures in the upper part of one slab (interior west A 10) which shows a file of soldiers on top of or within the city wall. (Childs[3], pl. 16; also Richter, Hdb fig. 182; Cl Gr 40; HGA pl. 136b.) Shoulder-flaps can hardly be made out at all, but they may be present on one corselet on one slab (exterior south east B 1) (Childs[3], pl. 5.2). A number of the fighters in the siege-scenes appear to be naked or wearing a tunic or exomis, but one or two do wear muscle-corselets; e.g. once with indistinct pteryges (Cl Gr 42-43, interior west A 7), and once without

any (Childs[3], pl. 15, interior west A 9; drawn in AA 1970 380), cf. also interior west A 5, on which a duel is fought by warriors in a linen- and a muscle-corselet (Childs[2], fig. 2). Yet another muscle-corselet is worn by a warrior on the fragment of the sarcophagus (?) which was found within the peribolos. (Childs[2], 299 fig. 18; Borchhardt, pl. 36.4). It too lacks pteryges.

12. The Payava Sarcophagus in London, Brit. Mus., ca. 370-360 B.C. Xanthos V 61-87 pls. 27-45.

The decoration on the cover is similar to that on the Merehi Sarcophagus. On the east side of the crest-beam there is a fight between cavalry and infantry, but none of the figures seems to have on body-armour. On both sides of the cover there are four-horse chariots with charioteers and apobatai. The apobatai who are not quite identically rendered, are shown in well-developed muscle-corselets, tunics and cloaks (Xanthos V pls. 32 and 38). The muscle-corselets have the regular curved, lower contour below which are depicted two or possibly three rows of pteryges. The upper row is short and rounded so that the impression given is one of a scalloped edge. Running midway across the row below is a raised line which seems to cut the long pteryges into two rows.

On the base of this tomb there is more sculpture and of interest in our study is the cavalry battle on the east side and the two warriors on the south. The leader and most important rider (Payava ?) on the first of these wears a linen-corselet with edged shoulder-flaps and long pteryges which are partly hidden behind the chap-like leg-guard.[110] His opponents are naked or dressed in exomides (Xanthos V pls. 40-1; Childs[2], 298 fig. 17). The two warriors standing at ease on the south

are both equipped with muscle-corselets which closely resemble those on the apobatai above. Even the pteryges reveal the same odd ridge across the middle of the long row, but here it certainly does not seem intended to mark the lower end of an upper row. So why is it there? Could the artist have misunderstood the double row of these pteryges on a model he was copying? Or is he representing a hinged pteryx? It is noticeable too that there are slight differences in the treatment of the lower edge of the metal and the pteryges on the two figures (Xanthos V pl. 44; Borchhardt, pl. 34.3).

13. One more Lycian monument remains to be considered, the Dancing Women Sarcophagus at Xanthos from the middle or second half of the 4th century. Xanthos V 103 pl. 57.2; Childs[3], 6 and 46.

In the battle scene on the east side of the cover the victorious warrior stands above the lion protome, holding two shields. He wears a linen-corselet on which the shoulder-flaps, and two staggered rows of square-ended pteryges can just be made out.

These Lycian monuments are interesting examples of local works which are "presented in the form of Greek representational art."[111] Whether they were actually designed or executed for the Lycian dynasts by Greeks who lived in Lycia, or by local craftsmen who may have been trained by Greeks or merely copied the Greek style, is still a subject for discussion. For this thesis the important point is that Greek equipment, in this instance the linen- and muscle-corselets, are depicted on the whole faithfully, even to the extent that the new shoulder-flaps on the latter and the hinged (?) pteryges are represented there.

Before we turned to these examples from Lycian art, we considered

body-armour in architectural sculpture; we may continue now with relief sculpture and in the main funerary reliefs from Athens. A list of "warrior monuments" was compiled by Richter[112] and another of "combat reliefs" by Clairmont.[113] I have drawn most heavily, however, on the work of Dr. Reinhard Stupperich whose doctoral thesis has gathered together the vast majority of Attic representations.[114] He divided the warriors into six categories according to their dress and equipment; the last and largest of these is the hoplite in a corselet and, usually, an Attic (sic) helmet. Where I have been able to find good and useful illustrations of the figures in question I have included them in what follows, but where the books were not available to me, or the only illustration was a drawing whose accuracy I could not verify, I have omitted that work from consideration. Naturally, Dr. Stupperich's study did not emphasise the dress or equipment of the warriors, but his conclusions on the pieces in question, and in particular on their chronological setting in the late 5th and 4th centuries, seem to me to be sound, and worth accepting as a basis for my study.[115]

However, before I do go on to describe the relevant works, I think it is worth emphasising again how many of the warriors do <u>not</u> wear body-armour. Dress ranges from rarely none at all through a chlamys to a chiton or exomis, and finally to a linen- or muscle-corselet with or without some of the other pieces of material. This again has some bearing on the question of "heroic" nudity. It is frequently the case that the nude or semi-nude figure is the defeated and not the victor, who was presumably the person to whom the monument was erected. It seems to me illogical to refer to the nude, fallen foe as a hero and to withhold this status from the victor because he is dressed. Perhaps the intention is to show the enemy up as an unworthy opponent who is not even well-armed, but that would seem to detract from the courage and

prowess of the deceased. Alternatively, is time ignored, and the defeated shown as already stripped of his armour, as he would have been once dead? That seems to be just as unlikely, and still does not account for the light dress of the victor. I believe the only conclusion which so many scholars have found impossible to swallow,[116] is that some Greek hoplites did fight with little or no protection for their bodies. After all, a chiton of linen or a chlamys may satisfy the warrior's modesty, but it would really do nothing to save him from a blow. If we can accept on the evidence of, for example, numerous vase-paintings, that nudity, whole or partial, was a part of everyday life, at work and at play, in the Classical period, (metal-workers and symposiasts are not thought to be heroised or subject to artistic convention!) then I see little reason for refusing to believe in its presence on the battlefield.

14. The first of the reliefs stands outside the mainland tradition in style and date; it is the Stele of Dionysios Kardianos in Nicosia from the mid 5th century B.C. IEE 2 157. The warrior's linen-corselet is not at all clearly rendered, but we are able to make out the oblique folds of his chiton above the neck-edge, the simple,curved shoulder-flaps which on the left at least leave exposed a part of the chiton under the arm, and square-ended pteryges below a bulging belt. It is not at all similar to any of the representations on the architectural sculptures we have looked at up to now, although approximately contemporary with the Parthenon Frieze, and may be thought of as a provincial parallel to, and predecessor of, the later Attic warrior grave stelai.[117]

15. The trophy relief from the Athenian Acropolis, Acrop. Mus. no. 3173, late 5th cent. R. Schöne, Griechische Reliefs (Leipzig, 1872) 50 no. 97

pl. 23; MTP pl. 11.

Three linen-corselets are represented here on trophies, one with a chlamys. The necklines and armholes are rounded, the shoulder-flaps rectangular. One has a second incised line at the neck, and so may originally have had a painted border pattern. Another has a waistband which could have been painted. The final effect, therefore, may have been close to that on the vase-paintings.

16. The Monument of Ktesikrates in the Louvre, cat. somm. 3382 (second quarter of the 4th cent.). Diepolder, 33 pl. 28.1; Stupperich, cat. no. 521.

Ktesikrates is represented striding forcefully to his left, fully armed in Attic helmet, linen-corselet over his chiton, shield on his left arm and originally a sword on the baldric which crosses his chest. Only the shoulder-flaps and three rows of pteryges of different lengths are given emphasis in the carving. A parallel for the pteryges may be found in the fragmentary triple layer on the Inscribed Pillar at Xanthos, but the ends of those are more rounded, or on the frieze from Limyra which is contemporary. Moreover, Ktesikrates' first layer is very short in comparison with the other two layers, and they have a groove across the bottom as well.

17. From the third quarter of the 4th century, the Ionian Stele in East Berlin, K25 (1473). Conze, no. 463; C. Blümel, Katalog der Griechischen Skulpturen (Berlin, 1928) 27 K25 pl. 35; C. Blümel, Die Klassisch Griechischen Skulpturen der Staatlichen Museen zu Berlin (Berlin, 1966) 19-20 no. 8 figs. 13 and 44, an Ionian work from North Greece or the Islands, mid 4th cent.; Stupperich, cat. no. 373.

The warrior is represented in a large family group with his wife, child, dog and a servant. His linen-corselet has two rows of rectangular pteryges, the top row much shorter than the lower, and an incised belt. The presence of the belt might make this a forerunner of the Hellenistic and Roman type of corseleted figure who wears a belt as a matter of course, or a sign of rank.

18. The last linen-corselet is worn by a warrior on Athens, N.M. 731 from Salamis (third to fourth quarter of the 4th cent.). Conze, no. 1058 pl. 212; Diepolder, 52 pl. 49.1; Stupperich, cat. no. 13.
Despite the damage, the shoulder-flaps and the pteryges may be distinguished. There is only one row of long pteryges below the short, upper one, and the number of narrow and rectangular pieces is considerably greater. One may recall the pteryges on the corselet worn by the Amazon on the metope from Selinus of a century before - there has been nothing exactly the same since. Subsequently this type of pteryx appears on Hellenistic corselets, e.g. on the Alexander Sarcophagus.[118]

Much more numerous are the illustrations of muscle-corselets.

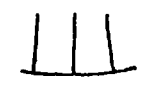
19. The first of the Attic series is not actually on a stele but a marble lekythos, Athens N.M. 835, ca. 430-420 B.C.[119] Conze, no. 1073 pls. 218-219; Karouzou, Cat 80; Schmaltz, 42-43, 118 A1; Stupperich, cat. no. 39.
Of the three warriors on this vase it is the rider who wears a muscle-corselet over his chiton, and a petasos on his head. The corselet follows the contours of his torso closely, but as on some of those on the Parthenon Frieze, the upper edges are ignored. The bottom dips, as usual, down into the groin, but the edge itself is not given any border or rim.

20. A similar muscle-corselet is found on a marble statue base, the Academy Relief, Athens N.M. 3708, but it takes us down into the early 4th century. AA 1931 col. 217-219 figs. 1-3 (Karo); Childs^2, 288 fig. 7; IEE 2 88-89; Stupperich, cat. no. 151.
The figured decoration occupies three of the sides, and on each a rider finishes off a fallen foe. Only one of the riders, however, has a muscle-corselet over his chiton. The underarm edge at the right is marked here, but the neckline is obscured by a cloak. Both this muscle-corselet and the last closely resemble those on the Parthenon Frieze, not least for the lack of pteryges.

21-22. Pteryges are still missing on the next two muscle-corselets which are represented on two loutrophoroi set up to Polystratos (and others), Athens, N.M. 2563 and 3483. AM 51 (1926) 57 and 59 figs. 1-3 pl. 7.1-2 (Blümel); Stupperich, cat. nos. 117 and 140.
The modelling of the muscles on the latter is more developed, and it also has a rolled neckline and a right shoulder-flap (the left is under a piece of the cloak) which are absent on the former. Stupperich placed these early in the second quarter of the 4th century.

23. The Lekythos of Diomnestos, also in the National Museum, first to second quarter of the 4th century. AD 11 (1927-8) 47-48 figs. 5-6 (Kyparisses); AM 71 (1956) Beil. 73 (Papaspyridi-Karusu); Stupperich, cat. no. 237.
The warrior stands in the centre of six figures, wearing a muscle-corselet chiton and chlamys. The corselet has a slightly raised, front neckline, a clearly visible, right shoulder-flap (the left is not carved, even though the cloak seems to be only partly hiding the area where it should be) and a double row of round-ended rectangular pteryges. This is the

first occasion on which these three features have been seen together on a muscle-corselet. The dating of these three vases, the two loutrophoroi and this lekythos, is, therefore, important for establishing the development of the muscle-corselet in the 4th century. Stupperich's dates would suggest that the lekythos of Diomnestos could pre-date the other two. At least we can conclude that the addition of the shoulder-flaps and the pteryges to the muscle-corselet took place at Athens about 375 B.C. We may wonder why they were added, and may be right to think that they were simply borrowed from the linen-corselet, to improve the fit and effectiveness of the metal one. It is noticeable too that the sculptors do not give any indication of a hinge at the top, or a ring or tie at the bottom of these shoulder-flaps.

24-27. For the rest of the second quarter and the middle of the century, this new type becomes standard. On the fragmentary Attic lekythos of Kalliphanes (and Leonike), Paris, Louvre Ma 3446 (AM 85 (1970) pl. 36.1 (Prukakis—Christodoulopoulos); Stupperich, cat. no. 523), the corselet is close to that of Diomnestos, though the double layer of pteryges may be slightly longer. Three more lekythoi represent the type, London, BM 691 (Ancient Marbles IX pl. 33.3; Conze, no. 366 pl. 88; Schmaltz A 259; Stupperich, cat. no. 459), Copenhagen Glyptothek no. 226 for Euphemos (AM 85 (1970) pl. 37 (Prukakis-Christodoulopoulos); Stupperich, cat. no. 445), and the last in a Private Collection (AA 1963 478 fig. 9 (Buchholz); Stupperich, cat. no. 567). Although there are minor variations in the shoulder-flaps, the major differences are in the pteryges, which range from , to and  .

28. With the latter especially we may compare here an Attic Proxeny Relief in Avignon Museum, no. 28, dated to 340-339 B.C. Süsserott 85 n. 189 pl. 5.1; Hausmann, 134.

The first of the three warriors represented with Athena has a single row of pteryges; none is obvious on the other two figures, nor are shoulder-flaps discernible.

29-32. The style of the muscle-corselet in the second half of the 4th century is immediately recognisable on a number of fine, almost or wholly, free-standing figures. Dated to the third quarter are Athens, N.M. 834 from Eleusis (Conze, no. 1023 pl. 201; Diepolder, 53; Hausmann, 134; Stupperich, cat. no. 38), and Athens, N.M. 737, the monument to Prokles and his parents from the Kerameikos (Conze, no. 718 pl. 141; Diepolder 50 pl. 46; Johansen, 46 fig. 25; Süsserott, 117 pl. 20.3; Stupperich, cat. no. 14). From the third to the fourth quarter is a fragmentary statue which was found at Ag. Demetrios (Brachami) in Attica (AD 20 (1965) Chron 120.13 pl. 91.3 (Davaras); Berytus 16 (1966) 49-51 pl. 9 ca. 340-25 (Vermeule); BCH 92 (1968) 758 fig. 8; Stupperich, cat. no. 336), and belonging to the third or fourth quarter a fragmentary figure, Athens, N.M. 3668 (AD 11 (1927-8) 10 fig. 16 (Theophaneides); Stupperich, cat. no. 148). These share the same basic features: the rounded neck-line and armhole-edge which are clearly marked: the shoulder-flaps with an indented contour, i.e. , although there is slight variation, and on the last the right piece is more of a blunt wedge shape; the bordered, bottom edge which drops in the centre towards the groin, although this is less pronounced on the third; and below that three rows of pteryges. Closer examination of the latter reveals considerable variety;

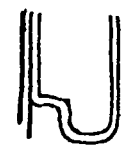
indeed, they are not exactly the same on any two statues. On the first the top row is more rectangular, and the three rows together appear to provide less protection, i.e. by being shorter; the two, lower layers on the second corselet are very similar to the first, but the upper layer is more semi-circular; on the third these semi-circles are repeated, while the lower layers are cut off more square at the base; and finally on the fourth all three rows have semi-circular ends. Finally, we may note that all four have cloaks, but that these too vary in position.[120]

33. The last Attic relief to be considered belongs very closely with these four, the Monument of Aristonautes, Athens, N.M. 738. Conze, no. 1151 pl. 245; Diepolder, 52f. pl. 50; Süsserott, 120 pl. 24.2; Hausmann, 134; IEE 2 315; Stupperich, cat. no. 15.

It is probably to be dated in the third to fourth quarters of the century, though some scholars, e.g. Diepolder and Süsserott, prefer to put it as late as the end of that century. The corselet is of the same type as the others above, with its round neck, shoulder-flaps and three layers of pteryges. The musculature is perhaps more strongly modelled, and the depression towards the groin more developed. The pteryges are again slightly different, more square then semi-circular, and one detail in particular is worth comment; there is a groove across the centre of the middle row. Is this the first evidence in Attic art for a hinged pteryx? One last point regarding Aristonautes' corselet is the absence of any indication of the vertical side-hinge under his right arm. Why should the artist fail to portray this detail? Would it have been so displeasing aesthetically or was it left to the painter to indicate?

34. Finally, we may add here one example from outside the Attic sphere,

namely a grave or votive relief from Thespiae, Thebes 35. Berytus 16 (1966) 50-1 pl. X.5 (Vermeule); AntP XII.2 (1973) 22-26 pl. 3b (Heimberg).

Although badly damaged, it still shows a warrior and his horse. He stands frontally, but turns his head to his right, towards the horse which appears behind him. He wears a cloak around his neck, over his corselet and chiton. The right shoulder-flap is picked out by the double groove that outlines its shape,  , beside the similar grooves which mark the armhole-edge. The lower edge of the corselet is likewise echoed by two incised lines; it is noticeable that this edge does not follow the line of the hip to groin musculature, but form its own gentle curve. Below it hang three rows of very small, rectangular pteryges, comparable to those on the Attic linen-corselets, e.g. to the two rows on Athens N.M. 731; each pteryx, however, has two thin, incised lines across the lower part which recall rather Ktesikrates' The really surprising feature of this corselet is the tiny pteryges at the shoulders; two rows of the same rectangles can just be made out over the chiton at the right side especially. Heimberg (p. 26) wished to date this relief to the second quarter or middle of the 4th century. We may recall the passage in Xenophon[121] where such pteryges were recommended. However, as we have seen, none of the Attic stelai has included this feature during the 4th century. Does this mean that the Thebans adopted these pteryges first and that the Athenians were slow to follow suit? Or was it the case that the Theban sculptor paid more attention to small details including the current improvements in the equipment? There is, indeed, a suggestion of the edge, if not the hinge,

under the warrior's left arm, and so the latter seems to have some truth in it.

To conclude this survey of the corselets in sculpture, I would like to draw attention to the chronological development of two features, namely the shoulder-flaps and the pteryges. On linen-corselets the shoulder-flaps are always present throughout the 5th and 4th centuries. The majority are simple and angular, though they may be less carefully depicted and become rounded after ca. 380. N.B. the exceptional shapes on the Cypriot gravestone and the Parthenon Frieze. On the other hand, muscle-corselets do not have shoulder-flaps before the second quarter of the 4th century, when they appear on some of the Attic reliefs, as well as the Lycian frieze at Limyra. At first they are roughly shaped and often rounded; in the second half of the century a distinctive, indented type is adopted on the Attic stelai.

Pteryges are always found on the 5th and 4th century linen-corselets because they are one with the body of the item. Through most of the 5th cent. two layers of approximately equal length are normal, but note the Selinus variety, the Cypriot single layer, the patterned type on the Parthenon where also the top, semi-circular layer is seen. A single layer is found in the first half of the 4th cent. Double and triple layers appear in the second quarter, doubles of different form in the second half. As was the case with the shoulder-flaps, so pteryges do not appear on muscle-corselets before the second quarter of the 4th century, when they are mostly of two layers, a long and a short. About the middle of the century and later single and triple layers are added to the corselets, and again in the second half a distinctive triple form is found on Attic monuments. (Contrast the Theban type.)

N.B.The Inscribed Pillar at Xanthos fails to fit into this projected sequence. In the text above, I adhered to Childs' date of ca. 400, but mentioned a later date which has been suggested in note 107. The muscle-corselet with the single row of pteryges and the (probably linen-) corselet with three rows cannot, I believe, be as early as 400. A date in the second quarter seems to be required not only by the Attic sequence but also by the other Lycian examples (cf. also below the coin of Alexander of Pherae). Or must we question again whether Attic warriors, or at least Attic sculptors, were slow to adopt new styles in body-armour?

CORSELETS IN OTHER MEDIA

Linen- and muscle-corselets may also be seen in wall-paintings, terra-cotta statues, on Thracian gold objects, gems and rings, coins, etc. How do these compare with the ones we have been considering in vase-paintings and sculpture? Firstly, we may note that, as was the case in sculpture, the linen-corselet is more often represented in the 5th century B.C., while the muscle-corselet is commoner in the succeeding century. The two types may, therefore, be considered separately.

Catalogue and Commentary for Linen-corselets

1. Tomb II at Karaburun, Elmali in Lycia, early 5th cent. AJA 75 (1971) 245-255 pls. 49-56; 76 (1972) 257-269 pls. 55-60; 77 (1973) 293-303 pls. 41-46 (all Mellink).

   In the battle on the north wall two linen-corselets are represented on the defeated opponents of the Lycians. They may reasonably be thought of as Greeks, although some of the equipment on the Lycian side, notably the shields and swords, are also of a Greek type. The corselet worn by

the warrior (the Greek leader?) who falls before the Lycian leader on his black horse, is white with red and black details, over a blue tunic. The neck at the front has a chevron band. The shoulder-flaps are edged in black and red and terminate below in very narrow tabs, on which the red "buttons" are apparently marked. A black square on the chest seems to indicate the corresponding "button" there. The armhole at the right side is curved rather than angular. A red line at the left[122] indicates the extent of the overlap at the front. The long, straight pteryges below the waist end in fringes. The rider's spear pierces his right flank. Further details of the area around the waist cannot be made out in the photographs. The second corselet is worn by the warrior at the far right of the north wall. Little of it survives.

The basic design and the details correspond to those of the Attic type as seen in the vase-paintings of the same period. The colours, however, add a new dimension, and the surface white seems to confirm that the material is linen and not leather. That statement applies too to the next example.

2. The terracotta torso of a mortally wounded figure was found on the Esquiline in Rome (ca. 480 B.C.). E. Gjerstad, Early Rome III (Lund, 1960) 139-140, 143 fig. 92.3; T. Dohrn in Helbig[4] II 599-600 no. 1833 inv. 3363 and 3378; Brendel, 294-295 fig. 211; Kokalos 26-27 (1980-1) I 157-191, esp. 165 pl. IIb, ca. 490 (Colonna).

Only the upper part of the chest is preserved, and that poorly. The neckline is lost, but parts of the shoulder-flaps remain, decorated in red and black with stars above a row of black squares. The centre of

the lower tab is black, the edging red. Red too are the ties which meet in a largely lost bow at a central black button or ring. The left armhole is cut off more or less horizontally, and below its red edging is a row of three small stars in black and red. Between these and a tiny section of the waistband red blood flows from the wound in the breast. The waistband itself seems to have originally been given a pattern of meander type in red and black.

3. The next corselet may be compared more directly to the Attic vase-painting type because of the similarity in technique between line-drawing and engraving. It is to be found on the silver phiale mesom-phalos from the Bashova Mound at Duvanli, dated to the end of the 5th century. Plovdiv Museum, inv. no. 1515. Hoddinott, Bulgaria 65 pl. 37; Venedikov & Gerassimov, 362 pls. 170-172.

Four chariots with charioteers and warriors encircle the inside of the bowl; each warrior is slightly different in pose and equipment, and only one wears a scaled linen-corselet over a patterned chiton. The straight, front neckline is quite low. The front is divided into three sections above the waistband. All four panels on the chest and the upper part of the angular shoulder-flaps are covered with scales of the fish type. In the centre of the lower tabs the circular buttons are drawn, and from them ties extend down towards the central panel, but the corresponding button there is not marked. Below the waist a simple layer of pteryges is seen. The overall effect is similar to some corselets on Attic vases, e.g. on nos. 118 and 700 from the CL period.

4. Another corselet of slightly later date is found on the gold, Scythian comb from Solokha. Leningrad, Hermitage, Dn 1913,1/1. Artamonov, 47

pls. 147-148 & 150; IEE 2 180; FLS 109 cat. no. 71 pls. 12-13; Grakow, pls. 10-11.

Two Scythians, one on foot and one on horseback, are attacking another whose horse lies dead at his feet. The rider wears a scaled "jerkin", not exactly a Greek-type of linen-corselet: the shoulder-flaps are simply rectangular without the usual lower tab; the waistband itself is scaled, and instead of pteryges below it, there are two more rows of scales. (This could be an illustration of the scaled leather items found in Scythian tombs.) Underneath he has a sleeved and trousered outfit. His opponent also wears such a garment below his linen-corselet, which takes the standard form. The shoulder-flaps are indented along the outer side, and edged; ties are shown between the circles on the flaps and those on the body. Between the shoulder-flaps the upper part of the chest is scaled with four rows of fish-scales. The waistband is plain, and the single layer of pteryges below it is decorated only with two incised, horizontal lines.

So far in this section the linen-corselets have been represented in some detail on a large enough scale for us to discuss their finer points. This is not the case usually on gems and coins; often it is difficult to do more than merely say that there is a corselet there.

5-6. For example, on a Greek gold ring from Sicily or Italy in The Hague, RCC inv. no. 1896/36 (ca. 400 B.C.) a linen-corselet is borne by a trophy to which Nike is in the process of nailing a helmet. M. Maaskant-Kleibrink, Catalogue of the Engraved Gems in the Royal Coin Cabinet, The Hague (1978) 81 no. 22 pl. 9.

It is extremely skinny like some of the folded corselets on the (LA, EC

and CL) Attic vases, and only the shoulder-flaps, waistband and pteryges can be made out. Similarly, on a chalcedony gem from Smyrna and now in a Private Collection (AG pl. 63.10; GGFR 410 cat. no. 156) (late 5th/early 4th cent.) we can see that the warrior who is adjusting his shield, is wearing a linen-corselet because the pteryges are shown below a waistband.

7. More detail is provided on a blue chalcedony scaraboid in London, Brit. Mus.,601, dating from the 4th century. GGFR pl. 590. The subject of the carving is again a Nike and a trophy. The grooves of the linen-corselet delineate its neck-band, shoulder-flaps, waistband and apparently two layers of rectangular pteryges. There is no exact parallel for this design of corselet in the sculpture, but the pteryges may be compared with those on the figure on the Dancing Women Sarcophagus in Lycia, or on the muscle-corselets on the Attic grave stelai of the second quarter of the century.

8. As stated above, the scale of the representation on a coin may cause problems, and this is certainly so with the Syracusan dekadrachms (ca. 405 and 390 B.C.). Kraay & Hirmer, nos. 116 and 104; Jenkins, nos. 438, 440; ACGC pl. 48 nos. 814-5.
In the exergue of these a corselet is depicted with a shield, greaves and helmet. The details vary on the different types, but I think one can make out a linen- rather than a muscle-corselet; the neckguard is high and prominent, the shoulder-flaps visible with the eye of faith, and either a triple waistband and one layer of pteryges, or two layers without the band.

Catalogue and Commentary for Muscle-corselets

Such is the evidence for the linen-corselet in the minor arts. We may now consider half a dozen examples of muscle-corselets.

1. The first appears on the gold scabbard from Chertomlyk of about the middle of the 4th century. Leningrad, Hermitage, Dn 1863,1/447. Minns, 286-7 fig. 207; Artamonov, 55 pls. 183 and 185; IEE 2 97 and 180; FLS 109 cat. no. 68 pl. 10.

   At the far left of the battle frieze which runs down the length of the scabbard, a leader turns back to encourage his men, apparently unaware of the risk to his own life.[123] He alone of the figures presented (Greeks v. Scythians?) has a muscle-corselet on over his chiton. It lacks pteryges, but shoulder-flaps are probably indicated.

2. They are certainly present on the second example, a muscle-corselet carried by a Nereid on a hippocamp on a gold pendant which was found in the Great Bliznitsa Barrow. Leningrad, Hermitage. Artamonov, 74 and 79 pls. 296 and 300.

   It has been dated to the same period or perhaps the second half of the century. It also displays a fairly high neck-guard, but again no pteryges.

3. Another muscle-corselet is carried by another Nereid on a hippocamp on a mirror cover in Boston, MFA 98.672. Comstock & Vermeule, GERB 254 no. 366, from Corinth, ca. 350; GERA fig. 133a.

   It resembles the last example in having a high neck-guard, but here the shoulder-flaps are omitted, while pteryges are added. These consist of two layers, one small and semicircular over another longer with the rounded ends.

4-5. There are few muscle-corselets on coins. One is found on the bronze staters of Alexander of Pherae (369-357 B.C.). Boston Cat no. 927; Kraay & Hirmer no. 471; IEE 1 315; ACGC pl. 21 no. 388.
On the reverse a warrior on a horse rides to the right. He wears a muscle-corselet over his chiton. The rolled, round neck and the rounded, short pteryges are clearly visible. Very similar is the corselet of the rider on a Tarentine stater (ca. 334-332 B.C.) Kraay & Hirmer, no. 313. It has the same rolled neck-edge, a pronounced bottom bulge and rounded edge, and possibly one row of rounded pteryges over a chiton (or two rows without the chiton). The really interesting thing about this representation of a muscle-corselet is that for the first time, and only here, the artist acknowledges the presence of the side join, and even depicts the moment when the warrior had to have someone else's help to fasten it.

6. And finally to conclude this section another Nike with a trophy, not on a gem this time but a silver horse-ornament in Basle, Antikenmuseum, inv. no. 520 (Nr. 181.3). (Pl. 21a) Schefold, M 91f. and 264 no. 349, fig. on 261, ca. 330, Tarentine; Langlotz & Hirmer, pl. 140, dated to the beginning of the 3rd cent.; PKG 122 no. 159a.
Nike is actually carrying the trophy with a chiton and corselet on it over her left shoulder. This time the neck- and armhole-edges are rolled up, but there are no pteryges at the bottom.

d. CONCLUSION

So what has this detailed survey of body-armour indicated in general? First, we may recall the range of the material considered, literary references, originals, and representations in vase-painting, sculpture and other arts.

The geographical range is also wide; from Italy through Mainland Greece, Cyprus and Lycia to Thrace and Scythia, corselets of a Greek type were used and portrayed through the 5th and 4th centuries B.C. Some problems arose from the evidence itself; for example, the minor arts presented the corselets on too small a scale occasionally, and the lack of original material, as opposed to the plentiful representations of it, from the main Greek centres created an imbalance in the study as a whole.

On the other hand, this sectional survey did serve to emphasise very clearly the discrepancies in the evidence. The different sources often provided different information to supplement or even contradict each other. This point is worth repeating in detail. For example, in the literature, Xenophon's recommendations appeared to be explicit, and one would have expected to find the suggested neck-guard, "arm" and shoulder-pteryges without difficulty in the art of the time, i.e. ca. 380 B.C. And yet his type of neck-guard does not seem to tally with those on the surviving corselets or the separate pectorals from Thrace; the "arm" is not to be seen in the 4th century, and the shoulder-pteryges only appear on a Boiotian corselet. Also from the literature one would gain the impression that the linen-corselet was still in common use in the 4th century, but the artistic evidence suggests strongly that its peak was in the 5th century, and that the muscle-corselet was more usual in the 4th (except in Lycia). Similarly, many references in the literature associated scaled armour with foreigners, but the Attic vases show it to have been very common at home too. Indeed, the panels and patterns clearly gave the painters great scope for individual variety in depicting them. This is true of the vase-paintings in general - the range and depth of minor detail there is greater than in any of the other media. In contrast, the finer points of shape and fit which one can consider when looking at the

original corselets, cannot be discussed when viewing the illustrations of them; we cannot tell how the painter, and only rarely the sculptor, imagined the edges of the metal had been treated. The methods of fastening a muscle-corselet which are so important on the real item, are not portrayed in art to any great extent. Indeed, the vase-painters only show linen-corselets being put on, and we have to turn to a coin to see a single representation of a warrior being helped to fasten his muscle-corselet.

Among the originals one looks in vain for an example of an improved bell-corselet, although this hybrid type is well vouched for in the art, as forming a natural line of development between the bell- and muscle-corselets. Even the intricate floral patterns on the front of the painted muscle-corselets are missing, just as the bands and patterns of the painted linen-corselets do not now appear on the sculptured examples. Were they too originally painted on, rather than embossed or inlaid?[124]

The figured metal pteryges and shoulder-flaps which survive, are nowhere represented in the Classical period. Are they Hellenistic, of the late 4th century or later in date, or is it just that such details were not modelled, but painted on the sculpture? The shape at least of the shoulder-flap from Dodona with the head of Herakles, would suggest a date for it in the third or fourth quarter of the 4th century to coincide with those on the Attic grave reliefs. And the semi-circular pteryges are likewise plain when they first appear in sculpture, on the Payava Sarcophagus and Attic reliefs of ca. 350-300. (I doubt if those on the linen-corselets on the Parthenon Frieze should be thought of as metal, but it is interesting and odd that the shape appears there, and there alone, in the 5th century.) In fact, it is from the representations in sculpture that we can conclude that the shoulder-flaps and pteryges were first borrowed from the linen- to the metal-corselets

in the second quarter of the 4th century. Both features had been essential parts of the linen-corselet from the beginning, as the Archaic and Classical vase-paintings and sculpture show; indeed, they were made as one with the rest of the corselet, and it is one of the unanswered questions of this study how they came to be attached below the metal edge of the muscle-corselet, and whether they were still made of linen, or of leather[125] or metal. Were they part of an undergarment which resembled a linen-corselet? I repeat that the sculptural evidence would suggest a date in the period ca. 375-350, for the adoption of pteryges on the metal muscle-corselet, but the evidence from the Attic vase-paintings contradicts this. Already in the Early Classical period painters added them along the bottom edge; subsequently they disappear. Were they reflecting real changes in practice, or were they carelessly confusing the two distinct types of corselets?

Another of the unsolved problems concerned the use of leather for body-armour. Neither the art nor the literature was helpful in establishing its regular use among the Greeks themselves, as opposed to among barbarians like the Scyths. However, while the material might remain occasionally in doubt, the characteristics and general style of the Greek corselets became clearer. Differences have been detected between the various regional examples, for instance, in Greece between the Attic and Boiotian and the Thracian and Scythian as distinct from the Mediterranean types. Even the styles of individual vase-painters were isolated and discussed.

At this point one may briefly consider the question of an artistic tradition in the representation of body-armour. Were the vase-painters, sculptors etc. working to please themselves or their patrons without regard for accuracy? Could they ignore the changes in equipment which might be taking place outside their workshops or studios, or did they reflect them

in their art? Without any surviving linen-corselets we are not, of course, in a position to check them, but as far as the metal-corselets go, I believe that the evidence on the whole does agree. One could make a case against the artists for failing to supply all the detailed information they had available to them, for example for omitting the hinges and rings of the joints, but, on the other hand, they do not seem to have indulged in wild flights of fancy. The elaborate patterning of some of the linen- and metal-corselets is quite credible and can sometimes be paralleled in the originals, e.g. the Scythian corselet or the shoulder-pieces. As for the improved bell-corselet it provides a logical link between the earlier and later styles, and despite the lack of a surviving original, I would not consider it an artistic invention.

Closely related to this theme is the thorny question of nudity on the battlefield, be it termed "artistic", "ideal", "heroic" or "athletic". There seems to be some indication of its presence in LA and EC vase-paintings for the sake of artistic variety, but I believe that I have shown at length throughout that not only naked but also lightly-clad warriors took part in Classical battles. If in the 5th century the linen-corselet was found to be not so effective as it was hoped it would be, and lighter dress, i.e. tunics, exomides and patterned tunics and aprons, were preferred, then the wearing of a chlamys or nothing at all seems a possible progression, given the Greek habit of doing dirty or uncomfortable jobs in the nude. Moreover, throughout the 5th century vase-paintings the muscle-corselet is largely associated with mythological or heroic figures, while the linen-corselet is regularly worn by ordinary men. In the 4th century on the Attic stelai these bronze corselets are worn by ordinary Athenians almost to the exclusion of linen-corselets. But these are ordinary only in the sense that they are

not gods or heroes; the men who are represented here in their armour are not poor or unimportant hoplites. The wearing of the muscle-corselet is no less a sign of their status and wealth.

CHAPTER 3

GREAVES

a. THE LITERARY EVIDENCE

The Greek word for the greave, ἡ κνημίς, -ῖδος, occurs infrequently in the surviving literature of the Classical period. It is not found in the works of Pindar, Euripides or Sophocles, Thucydides or Plato.

In Aeschylus' Seven against Thebes (676) Eteokles calls for his greaves before going out to fight Polyneikes. Although the play was performed in 467 B.C.,[1] the context is heroic, and the greaves in question could be thought of as of the contemporary clip-on type or the earlier (Bronze Age) strap-on one.[2] In either case, it tells us nothing of the contemporary Athenian practice regarding this item of armour. At the end of the 5th century in his comedy, The Frogs, Aristophanes actually includes greaves among the items (notably listed in Epic terms) which typify the heroes of Aeschylean drama.[3]

The use of greaves by foreigners is attested by Herodotus (the only mention of them in his histories)[4] and by Xenophon in the Anabasis[5] and Cyropaedia.[6] And it is in the Anabasis that we meet the first clear reference to them as pieces of the equipment of Classical Greek soldiers:[7] during Cyrus' inspection of the army at Tyriaion, all the Greek mercenaries (but presumably only the 10,600 hoplites and not the 2,300 light-armed troops) are said to have bronze helmets, purple chitons, greaves and unwrapped shields.

From the 4th century two authors provide evidence for the wearing of greaves. Aeneas Tacticus[8] cites an example of a city captured after corselets, helmets, shields, greaves, swords, bows and arrows have been secretly carried within the walls. The exact city, though unnamed, was probably sited

in the Peloponnese or Asia Minor, and the occasion before 360.[9] The second author is Aristotle[10] who, possibly writing just after the middle of the century,[11] refers to the use of a special type of sponge for the lining of helmets as well as greaves. There is no suggestion that this is an antiquated practice, strange as it may sound to us. Can Aristotle mean that the sponge was sliced thinly and stuck all over the inside of the greave? Surely linen would be simpler and as effective. Perhaps the sponge was actually padding, for the knee cavity or the ankle-edge. Was it, in fact, one of the materials used to make up the padded anklets seen on the vase-paintings and in sculpture?

One may conclude, therefore, that for the 5th century the only reference to greaves in contemporary use comes from Xenophon, at the very end of the period,[12] but that the item was certainly familiar to the Athenian audience in heroic contexts as well.[13] And for the 4th century they were still standard equipment somewhere, though one cannot say where precisely.[14]

b. THE ORIGINALS

Catalogue

I From Italy

1. Bari, Museo Provinciale, inv. nos. 20891 & 20892. From Tomb 10 at Conversano. A pair of greaves. H. 41.5 cm. Knee (patella) and sides of leg (gastrocnemius and peroneal muscles) modelled. Shin-bone (tibia) not sharp. A single and double incised line parallel with the edges. NSc 8th ser. 18 (1964) 161-2 fig. 75 no. 3, dated to last decades of the 4th cent. (Martini); Connolly, HER 27 fig. 15, ca. 350 B.C. Found with an Apulian helmet, muscle-corselet, belt, et al.

2. Brooklyn Museum, Pomerance Collection. Said to be from Sicily. A pair of greaves. H. 39 cm. Anatomically modelled. Holes along edges. The Pomerance Collection of Ancient Art (Brooklyn Museum, Brooklyn, 1966) 84 no. 97, dated to the 5th century and associated with a hybrid (Corinthian-Chalcidian) helmet.

3. Florence, Museo Archeologico. From the Tomba dei 7 Camini, Orvieto. A pair of greaves. Anatomically modelled. Bulging muscle on inside of leg not marked off by a ridge, as was no. 1 above. Treatment of edge unknown. Connolly, HER 29 fig. 9, 4th cent. (May be the same as the greaves listed by Hagemann, 134 fig. 150 and 136 n. 3 b, dated to ca. 475 on p. 137.) Associated with a Montefortino helmet, muscle-corselet and hoplite shield.

4. Kassel, inv. no. Br. 703.2-3. Said to come from a grave in Sicily. A pair of greaves. H. 42.7 cm.(right) and 42.5 cm.(left). Soft anatomical modelling with strong, but not sharp, shin-bone. Edge said by Lullies to be similar to that on no. 11 below, i.e. with 2 ridges. Once gilded all over. AA 1966 110-2 figs. 28-9, beg. of 5th cent. (Lullies). Associated with a Corinthian helmet of type 3.

5. London, Armoury of the Tower of London, inv. no. II-197. Said to come from a tomb at Cumae. A pair of greaves. Schematic forms for the bones and muscles of the knee. N.B. the straight, club-like ridges below on each side which are a feature of some Archaic greaves from Olympia: cf. Ol Ber III 117 fig. 101 and pls. 50-1.) Calf muscle modelled and sharp shin-bone with a parallel groove on either side. Possibly holes along the edges for stitching a lining (as reconstructed by Connolly). Two pairs of rings attached to the edge at the back, apparently for ties or

straps. Dated in the Armoury's inventory to "5th-4th century B.C." and described as "Campanian". Connolly, HER 26-7 fig. 14, ca. 375 B.C. Associated with a Chalcidian helmet, a corselet of the Campanian/Lucanian type with square plates and a belt.

6. Munich, Antikensammlungen, inv. nos. 4330b and c. From Magna Graecia. A pair of greaves. H. 40.5 cm. W. 11.5 and 14 cm. Anatomically modelled with sharp shin-bone and schematic treatment of knee. Single and double line parallel with edge all round. Inscribed above the knee on both, Δενδᾶ , "of Dendas", i.e. presumably the owner. MJb 16 (1966) 231-3 figs. 19-21, dated to ca. 490 and compared with sculpture from the east pediment at Aegina (Vierneisel); Kokalos 14-15 (1968-9) 200 n.18 pl. 17 fig. 2 (Manganaro), where it is suggested that they were found in Sicily, at Montagna di Marzo, a site at which another pair of greaves was found with a helmet and vases of the late 6th cent. (Dendā is there interpreted as an epichoric form of Dendilos); probably the same as Connolly, TGA 39 fig. 4, ca. 500. Associated with a Corinthian helmet of type 1 and a spearbutt.

7. Newcastle-upon-Tyne, Greek Museum, inv. no. 236. No provenance. Left leg only. H. 40 cm. Strongly modelled knee, but softer forms for lower leg. Holes along edge. Arch Rep 1969-70 53 fig. 2 and 55, dated to the early 5th cent. and compared with others said to come from Sicily (Shefton); GAA 12.

8. New York Market, Emmerich Gallery. A pair of greaves. H. 31 and 40 cm. Right greave: top and bottom lost. Left: knee-cap lost. Anatomically modelled. Deep channels down both sides of leg, and veins on inside. Smooth edge. Art of the Ancients, Feb. 7-Mar. 13 1968, Cat 34-5, from

Magna Graecia?, 5th century. Associated with an Attico-Chalcidian helmet and a corselet with square plates.

9. Paestum. From the Gaudo Necropolis. A pair of greaves. Anatomically modelled. No holes along edge. BdA 43 (1958) 55-6 (Sestieri). Archaeology 12 (1959) 33-37, bronzes and wall-paintings dated to early 4th cent., but vases ca. 340 (Sestieri); AA 1966 348-9 (Hermann). Found with a Chalcidian helmet, a corselet with square plates and fire-dogs.

10. Syracuse, inv. no. 17402. From Terravecchia di Grammichele. Left greave only. Preserved H. ca. 35 cm. Inside, top and bottom lost. Anatomically modelled. Edge raised. Unpublished.

II From Greece

11. Olympia, B310. From well 1 in the north mound of the Stadium. Left leg only. H. 42.5 cm. Modelled to reproduce the anatomy of the leg, with knee and shin-bones, and calf musculature. Two parallel ridges border the edge. Inscribed around the bottom: Δανκλαιοι [Ρ]ηγινον . Dated by Kunze to ca. 500 B.C. Ol Ber II 69-70, 99-100 fig. 43 pls. 41 right and 42; AA 1966 111-2 (Lullies); Ol Ber VIII 95 n. 22. Cf. Jeffery, 243-4, 247 pl. 49.

12. Olympia, B2777. Left leg only. Anatomically modelled. Raised edge. Inscribed along top edge. Unpublished.

13. Olympia, B4140. From the Alpheios. Right leg only. Preserved H. 29.4 cm. W. 14.1 cm. Most of left side and top lost. Shin-bone and peroneal muscles modelled. Three incised lines along edge. Inscribed down centre front: Διὶ Ῥηγίνοι Λοκρῶν . Dated by Kunze to the

late 480s. BCH 81 (1957) 568-9 fig. 5; Ol Ber VIII 95 n. 22 and 102 pl. 48.1.

14. Olympia, B4863. Left leg only. Anatomically modelled. Shin-bone perhaps less sharp. Two parallel ridges along the edge as on B310. Unpublished.

15. Olympia, B5180. From well 12 in the north mound of the Stadium. Right leg only. Preserved H. 33 cm. Much of top and bottom lost. Gastrocnemius modelled. Broad edge limited on inside by an incised line. Inscribed down centre front: Διὶ [Ὀ]λυμπίο[ι] Μεσσένιοι Λοκ[ρῶν . Dated by Kunze to the late 480s. Ol Ber VIII 95 n. 22, 103-6 fig. 34.5 pl. 48.2-3.

III From Macedonia

16. Thessaloniki Museum, inv. no. A15. From Derveni, tomb A. A pair of greaves. H. 42 cm. Anatomically modelled. Knee-cap softly modelled; incised lines apparently contour the calf-muscles. Raised veins on the inside of the left leg, and possibly the right. Single and double line along edge (cf. no. 6). Treas Anc Mac Cat 61 no. 177, second half of 4th cent.; Philip of Mac 64-5 pl. 43, 4th cent.

17. Thessaloniki Museum, inv. no. B38. From Derveni, tomb B. A pair of greaves. H. 41 cm. Anatomically modelled. Double line along edge. Said to have been gilded. Dotted mark above knee of left leg, ϒ. (unclear on right). AD 18 (1963) Chron 194 (Makaronas); Treas Anc Mac Cat 67 no. 221, second half of 4th cent.

18. Thessaloniki Museum. From Vergina, the antechamber to the Royal Tomb. A pair of greaves. H. 41.5 cm.(right), 38 cm.(left). Anatomically

modelled. Raised edge. Gilded. Treas Anc Mac Cat 50 no. 88, ca. 350-325; Time, 24-11-80, 62 bottom; Philip of Mac 202 pl. 107 (as found), 226 pl. 128 (restored); Lane-Fox, 86.

19-21. Thessaloniki Museum. From Vergina, the main chamber of the Royal Tomb. Three pairs of greaves. H. 41.8 and 42.2 cm.; 41.4 and 41.7 cm.; 40.8 and 41 cm. Simply modelled. Three narrow lines along edges. Treas Anc Mac Cat 54 no. 128; 55 nos. 133 and 133A; Philip of Mac 198-9 pl. 103 (two pairs as found), 200 pl. 104 (one of those again).

IV From Thrace

22. Bucharest, National Museum of Antiquities, inv. nos. AR121 and AR122. From Agighiol. Two silver greaves, though not a matching pair and different in style and decoration. H. 47.8 cm. W. 7.5 cm. at ankle (no. AR121). H. 46 cm.W. 7.2 cm.at ankle (no. AR122). On both the knee area is in the form of a female head with spiral curls. On one (AR122) the face is crossed by gilded bands and snakes and spirals cover the sides. On the other (AR121) the head has ear-rings, necklace[15] and torque, and the lower part has embossed and incised snakes, a horseman, an eagle and a seated man. Both have a central ridge for the shin-bone. Raised edge. Treas from Romania Cat. of the exhibition at the British Museum, Jan.-Mar. 1971 (London, 1971) nos. 155 and 156, described as having figures of Amazons, 4th cent., Thraco-Getic period, on p. 39 and p. 61 ca. 400; Hoddinott, Bulgaria 79, mid 4th cent.; Venedikov & Gerassimov, 368 pl. 236, 4th cent.; Fol & Marazov, 19 and 41; Die Daker. Archäologie in Rumänien, Historische Museen der Stadt Köln. Exhibition 8 July-15 Sept. 1980 (von Zabern, Mainz, 1980) cover and 139 (both), 51 fig. 28 and 140 (details of AR121), 141 cat. no. 34;

Hoddinott, Thracians 115-6. Associated with a silver helmet of local design.

23. Sofia, Arch. Mus., inv. no. 7309. From Assenovgrad. A pair of greaves. H. 42 cm. Anatomically modelled. Deep channel down the outside of the leg. Double ridge along edge. Thrac Treas Cat 59 no. 249, 4th cent., said to have "a stamp on the outer side at the upper end"; presumably the same as Danov, pl. 56 fig. 108 and Fol & Marazov, 96 right (right greave).

24. Vratsa, District Museum of History, inv. no. B-231. From Mogilanska Mound. Right greave only. Silver with selective gilding. H. 46 cm. The knee area is in the form of a female head with spiral curls and a plait over the forehead on which there is an ivy wreath. The right side only of the face is crossed by gilded bands. The lower part is embossed with lions, lion-headed snakes and boar-headed snakes (one attacked by an eagle), large spirals on the area of the calf-muscle with a wing pattern below on the outside. Hoddinott, Bulgaria 76-80 pl. 48, mid 4th cent., called a 'Medusa' head; Venedikov & Gerassimov, 367-8 pls. 231-4, first half of 4th cent. (given inv. no. B 101); Danov, pl. 57 fig. 111-2, 4th cent.; Thrac Treas Cat 65-6 no. 292 and cover, ca. 380-350; Fol & Marazov, 87 and 96, head "probably that of the Mother of the Gods"; Hoddinott, Thracians 113-5 fig. 112. Found with helmet and weapons.

V From South Russia

25. Leningrad, Hermitage. From Kekuvatsky Barrow near Kerch. A pair of greaves. H. 40.4 cm. Anatomically modelled. Holes along the upper and lower edges and below the knee. Reinach, 78 pl. 28.8; Baumeister,

2037 and 2039 fig. 2220, said to have been gilt; Minns, 379; Artamonov, 72 pl. 270. Found with a Chalcidian helmet, sword hilt, arrowheads, and a red-figured pelike, according to Artamonov, dated to the beginning of the 4th cent.

VI Without provenance

26. Amsterdam, inv. no. 9424. Left leg only. Parts of right side lost. Broken down centre. Green patina with brown/red spots. Anatomically modelled. Small bumps below the knee; three channels for the peroneal muscles. Smooth edge. Dated by the museum to 1st cent. B.C. - 1st cent. A.D., but could be Classical. Unpublished.

27. London Market, Sotheby's. A pair of greaves. H. 37.3 cm. Patella modelled, and a series of four grooves outlining the gastrocnemius. No edging or holes. A pair of rings for straps above and below at the back. Sotheby Cat, 9-12-74 172-3 no. 281, 5th or 4th cent. Said to have been found with a pilos.

28. Lucerne Market,Ars Antiqua A.G. Probably from Macedonia. A pair of greaves. H. 42 cm. and 38.5 cm. (as preserved). Muscles and bones very strongly modelled. Raised edge. Antike Kunstwerke 4 (1962) 28-9 no. 119 pl. XXXIX, ca. 500 B.C. Found with an Illyrian helmet, gold mask and pieces.

Commentary

Greek greaves of the Classical period are characteristically made of bronze and carefully designed to envelop the whole of the lower leg from the knee to the ankle.[16] The idea of a simply modelled greave was not in

itself new at this date since some simple greaves are known from Olympia from the late 6th and early 5th century.[17] A large number of Late Archaic greaves from that site are, however, very elaborately patterned, and modelling of the musculature is subordinate to this decoration.[18] This elaborate form appears to have died out early in, if not before, the Classical period, except for a few cases on the northern fringes of the Greek World, and so it is not considered here in any detail. On the other hand, it will be noted that examples of the anatomical form have been catalogued even when they have been dated to the Late Archaic period, in order to illustrate the origin and continuity of the modelled form.

The first subdivision in the Catalogue (nos. 1-10) lists the greaves which have been found (or allegedly found) in Italy. It is the largest group, comprising seven pairs of greaves, two left and one right one. All but one of these are associated with Magna Graecia (two from that area in general, three from South Italy and four from Sicily) the exception being no. 3 from further north, from Orvieto, and therefore probably to be considered Etruscan.

Chronologically, one might isolate as a group nos. 2, 4, 6 and 7 at the beginning of the 5th century.[19] These have all been associated with Sicily. They share the simple anatomical form, but, there are differences between them. For example, the knee modelling of no. 6 is more schematic than on nos. 4 and 7. Nos. 4 and 6 have the double ridged edging, but nos. 2 and 7, surprisingly, still have holes along the edge. Exceptionally, no. 4 was originally gilded.

A second grouping may be made of nos. 5, 8 and 9 which are associated with armour of Campanian/Lucanian type and which may date from the 4th century. (The 5th cent. date proposed by the gallery for no. 8 need not

be pressed.) The strong patterning of the knees on no. 5 which in the catalogue was compared with earlier Archaic examples, also tallies with the modelling of the anatomy of the torso applied to the square breastplate with which the greaves were found. Similarly, the addition of fixtures for ties or straps on these greaves may be compared with the fittings at the sides and shoulders of the corselet. However, whereas these form an essential feature of the body-armour, they can hardly be given a functional purpose on the greaves - they would seem to be no different in shape from other greaves which clipped on to the leg and were held in place by their own exact form and fit.[20] On no. 8 this imitation of the human leg underneath is carried even further, since the veins on the gastrocnemius are reproduced in the bronze - a most unusual detail rarely paralleled in sculpture, e.g. on the figure of Aristonautes (Gk Mus pl. 74). Despite this apparently naturalistic touch, one may note the patterning of the knee where it does survive and the long furrows down the inside of the leg. The Paestan greaves (no. 9) in contrast appear to be remarkably straightforward in shape.

No. 1 is the only pair of greaves specifically from Apulia, and it has been dated later, either to the middle or end of the 4th cent. Here the modelling is strong, but straightforward, especially over the knees. A sharp ridge reminiscent of that on no. 8 marks off the calf muscle on the inside, but there the resemblance ends.

No. 10, the greave in Syracuse, at present cannot be dated or associated with either the Sicilian group of the 5th century or the South Italian greaves of the 4th, because of a lack of the necessary detailed information.

The only other greaves remaining to be discussed in this section are those from Orvieto (no. 3). The formation of the knee area recalls that on the Apulian greaves (no. 1),but the modelling of the lower leg is simpler:

there is no pronounced demarcation of the tibia and gastrocnemius on the inside.[21]

These Italian greaves, therefore, basically fall into two distinct groups: the first from Sicily associated with Corinthian and Corinthian-hybrid helmets and dated to the 5th century (usually very early in that century because of parallels from Olympia which have been dated then by a study of the inscriptions which they carry, and by comparison with the Aeginetan sculptures, although the style could have continued further down into the century in the west); the second from Italy associated with native equipment and dated to the 4th century.

The second subdivision in the Catalogue was headed "From Greece", but in fact three of the five individual greaves listed bear inscriptions which reveal that they were dedicated by cities of Magna Graecia. (Indeed, if one can deduce that they represent captured armour, they came from two cities in South Italy, Rhegion and Lokri Epizephyrii.) It seems quite possible that the other two greaves which, so far as I know, have not yet been published in detail, also originated in the west. If that were so, the evidence from Greece itself would be even less substantial than it appears at present.[22]

Three of the greaves are for the left leg, two for the right. There are then no pairs in this category, and, in fact, the greaves are not identical. Even the two Lokrian greaves (nos. 13 and 15) are differently shaped on the outer side (the channelling of the peroneal muscles on the former is more curved), although they are dated by Kunze to approximately the same period. A sharp ridge down the centre front is prominent on all except no. 14 which also has a straighter top above the knee, instead of the slightly arched top of no. 11.

None of these greaves has the row of holes along the edge which had

been a regular feature earlier and which is sometimes interpreted as evidence for a sewn-in lining.[23] Instead, the edge is generally given a simple raised border which by means of incision may sometimes appear as two parallel ridges.

In the third subdivision six pairs of greaves were listed from tombs in Macedonia (two from Derveni and four from Vergina). All have been dated to the second half of the 4th cent. The anatomy of the leg is on these reproduced simply and smoothly with, it seems, less deep channelling and ridging of the lower muscles than in the contemporary greaves from Apulia (no. 1). Veins could be seen on no. 16, though less clearly marked than on no. 8. None of these has holes along the edges, but instead the simple patterns of lines forming slight ridges and in the case of the pair from the antechamber a higher raised edge which might qualify as a reinforced edge inside and out. Both the last mentioned pair and that from Tomb B at Derveni were gilded.

In the fourth subdivision we encounter three greaves which are made of silver and (in two instances) also gilt, and which are highly decorated, so that they have surely correctly been termed 'ceremonial', and may well have been symbolic.[24] These are more Thracian than Greek and need not detain us long. No. 23, however, illustrates the adoption in Thrace of the normal greave simply modelled to the shape of the leg, and provided with a border of two raised lines. Again all of these belong in the 4th century.

The situation in South Russia among the Scythians seems to have been similar at this time.[25] No. 25 lists a pair of greaves found in the Kerch area. A peculiar and non-Greek feature of these, however, is the holes below the knee-cap as well as along some of the edges, whether for the attachment of padding, a lining or possibly a strap around the leg below

the level of the knee.

Finally, mention was made under no. 26 of a fragmentary greave in Amsterdam. Nothing in its description should prevent its being of Classical date, though no more is known of its origins, or may be said of its type. It is unlikely to be Roman at any rate.[26] No. 27 was another pair of probably South Italian greaves with straps like no. 5, and no. 28 was probably a 5th century pair from Macedonia or Thrace to judge from the related finds.

c. THE ARTISTIC REPRESENTATIONS

GREAVES IN ATTIC VASE-PAINTINGS

Late Archaic Period

Greaves are a regular item in the hoplite panoply in this period: from the vases listed in the catalogue one can study 206 pairs depicted on 88 separate vases.[27] There are, then, 412 individual greaves.

The majority are represented in profile view, and the other angles (front, three-quarter front, back and three-quarter back) are only rarely combined with the profile for variety at this date. The Kleophrades Painter, in particular, draws a range of views including the exceptional one, down on to the top of the greave, on no. 499[3].

The positions in which the greaves are shown are as follows:

Table 100

	Total (412)	%
(a) worn[28]	374	91
(b) being put on - nos. 26b, 106, 132, 137a, 140a, 141, 142, 143, 145, 146a, 147, 148a, 149[2], 150, 489, 491	17	4
(c) standing up (without obvious stand) - nos. 6[2], 10[4], 106, 132, 491	9	2

(d) on stands (hanging up twice; on a shield once) - nos. $4a^2$, 5^2, 304^2	6	1
(e) held - nos. 139^2, 485	3	1
(f) lost - nos. 143, 485, 489	3	1

The majority here are represented simply on the hoplite's legs. Those being put on are either shown with the other greave already on the leg or standing at the side or in the background. Thus, on nos. 106, 132 and 491 the second greave is seen beyond or beside the figure,and, in fact, one may note a mistake on the part of the Tyszkiewicz Painter; on no. 106 both greaves appear to be for the left leg! Indeed, the artists seem to prefer to illustrate the process of fitting on the left greave: of the 17 being put on, 14 are for the left leg, but only three for the right. However, in contrast, the scenes suggest that the right leg was covered first: in nine instances the right one is already worn or is being put on ahead of the left, while the reverse is true in only six cases.[29] The greaves depicted vertically in categories (c) and (d) are all in frontal view with the sole exception of the one on no. 491 which is in profile against the side of the tondo. The three stands on nos. 4a, 5 and 304 are interesting. They seem to consist of a base-plate, seen end on,as a line or rectangle, to which are attached two vertical rods which project above the greaves on nos. 4a and 304; a carrying handle is shown on no. 5 and may be assumed also for no. 4a which is also portrayed hanging up.[30]

The context for the greaves in category (b) is mainly one of arming, as might be expected, but, in addition, two of the cases concern hoplitodromos runners (nos. 489 and 491). Similarly, of the three greaves held (e), two (no. 139^2) are in an arming scene, and the third (no. 485) is in the racing context. Again, two of the standing greaves (nos. 106 and 132) are from an

arming scene, while one (no. 491) is classed as a runner's. The other six, however, (3 pairs on nos. 6, 10[2]) are parts of the arms of Achilles, and that is the case also for two of the pairs on stands (nos. 4a and 5). The remaining pair in category (d) instead belongs to an ordinary departure scene.

A range of artists chose to represent the putting on of the greaves, and the only possibly significant grouping may be around Douris: he himself represents the action on nos. 143 and 150; that on no. 137a is by an artist working in Douris' manner; no. 141 is attributed to the Oedipus Painter and no. 142 to the Copenhagen Painter who were described by Beazley as "close to" and "akin to" late Douris respectively;[31] and no. 145 is by the Syriskos Painter whom Beazley called the "brother" of the Copenhagen Painter. Among the painters of greaves on stands Douris also stands out as the only painter to portray them more than once (on the catalogued vases) on no. 10[2].

These greaves may be considered from the point of view of the shapes and decoration of the various parts. In general terms the knee area is portrayed in the following ways:

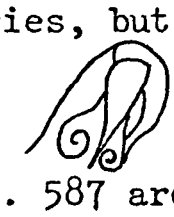
Table 101

	Total(412)	%
(a) with a spiral	145	35
(b) with knee cap (& muscles)	127	31
(c) without inner detail[32]	103	25
(d) with a face - no. 137a[2]	2	0
(e) lost	19	5
(f) hidden	16	4

The large number of greaves decorated with a spiral beside the patella at this date can be further divided according to the direction or form of the coil, as follows:

Table 102

	Total (145)	%
(a) directed outward	108	74
(b) directed inward	29	20
(c) double spirals - no. 587 (2 pairs)	4	3
(d) lost/hidden/unknown - nos. 140b, 300, 646[2]	4	3

Variations exist within these categories, but basically (a) takes a standard form, , and (b) appears thus  , with several minor differences. The extremely elaborate spirals on no. 587 are by Myson and unique to him. Those in (a), on the other hand, are predominantly Brygan, since 80 greaves of the 108 are either by the Brygos Painter or his Circle.[33] The Brygan style is also a factor in (b), but to a lesser extent, since 12 of the 29 greaves are by these artists.[34]

A striking feature too of these patterns on the knees is the fact that the designs may not be the same on both greaves so as to make a matching pair: thus on no. 33a the pair consists of one from (a) and one from (b), and this is so on nos. 45, 268 and 633; on nos. 268, 271a and no. 627 one pair has a modelled knee cap (i.e. from category (b) of Table 101) and a category (a) spiral. These discrepancies can be seen to be related to the viewpoint chosen, for in these cases, category (a) spirals are always drawn on a profile greave, but category (b) spirals occur in three-quarter frontal (nos. 33a, 268) and frontal (nos. 45, 633) views, and the modelled knee in three-quarter frontal views (nos. 268 and 271a). The pair on no. 627 is unusual in having non-matching knees despite the profile view for both.[35] The angle at which the greave is seen, therefore, surely influenced the artist's choice of pattern and overrode any desire for a logical match. (One might, of course, wonder whether it is simply a modern expectation that items like a pair of greaves should be mirror images of each other:

would a Classical Greek have worried if the greaves he wore on active service (as opposed to any he might dedicate at a sanctuary or wear only for special occasions) did not carry matching designs? One recalls the "pair" from Agighiol, no. 22.) These seven pairs are once again Brygan, being work by the Brygos Painter, the Foundry Painter and the Painter of the Paris Gigantomachy.

Finally, regarding the decoration of the knee area, one may point to the rarity of greaves with a face at this point. Only one pair is shown with such a design on no. 137a, in an arming scene by an artist working in the manner of Douris. The right leg is seen in profile, the left in frontal view.[36]

More than half of the LA greaves on the sampled vases have some indication of the muscles of the leg, the gastrocnemius and the peroneal muscles: 126 pairs have one or more lines on the outside or inside or both. It does not seem profitable to distinguish these further, especially since on many of these greaves these lines are in the diluted glaze and are not easily picked up from photographs. The figure of 68 pairs which may be considered to lack these internal markings, is also, therefore, only approximate, but as exact as possible. The ratio of the two figures, about 2:1, is the important point to be made here. Of the remaining pairs, 11 have lost this detail, while 16 carry spiral ornament on the inside calf muscle, and five on both the inside and the outside.[37] Three of the last five are by Myson; small black petals fill the space at the start of the spiral, and together with the spiralled knees, these greaves on nos. 49 and 587^2 are the most elaborately decorated of the LA examples. The addition of a spiral on the inside seems to be a feature of Dourian and Brygan styles: those on nos. 143 and 509^2 are by Douris himself, on no. 137^2 are in his manner and on no. 141^5 are by

the Oedipus Painter; those on no. 6 are by the Brygos Painter and on no. 268[3] by the Foundry Painter.[38]

When the greaves are depicted in frontal or three-quarter frontal view, the shin-bone (tibia) is regularly marked as a curving relief line: the only exception to this rule among the 43 examples is on no. 500a where it is obscured by another figure.[39] When the greaves are shown in back or three-quarter back view, the opening down the centre back is regularly portrayed: this happens 10 times.[40] In addition, a line within the back outline also suggests the presence of this opening in a further 21 cases on greaves seen from the side![41] The Kleophrades Painter favours the depiction of the opening in back view, on nos. 53, 130 (3 times), 382b and †499, while the Nikoxenos Painter includes it in the profile view, on nos. 2 (4 times), 111 and 388.

The greaves naturally taper in towards the ankle, and a few turn out again slightly over the top of the foot. The shape and length of the greave is strikingly uniform overall: the shape follows that of the leg, and the length is from above the knee at the front, just below it at the back, to a line just above the ankle-bones (malleoli). In only a few exceptional cases is the total length of the back opening noticeably shorter.[42]

More than a quarter of the greaves (54 pairs, 26%) are clearly worn with anklets, presumably as a padded buffer between the metal edge and the warrior's skin.[43] These can be identified as follows:

Table 103

	Total (54)	%
(a) red band - nos. 45, 130[2], 148a, 300[3], 444[4], 500a, 627, 633, 640	15	28
(b) red band with ties - nos. 33a[3], 42a[3], 128[4], 133a[6], 133b, 149, 517, †645	20	37

(c) dilute band - nos. 150b, 652	2	4
(d) thicker black line - nos. 49?, 106^2?, $140a^2$?, 304 (right leg only), 439, 587^2?	9	16
(e) worn without the greave - nos. 10, 132, 489^5 (4 have greaves), 491	8	15

Categories (a) and (b) should amount to the same thing with just more care taken in the case of (b) to indicate the method of fastening. Similarly, (c) and (d) may be ways of representing the anklet without the use of added red. The shape of the anklet in (e), however, is different and worth illustrating: it is essentially a bulging pad with a triangular area above it, i.e. .[44] These anklets in (e), as well as some others, e.g. on nos. 148a in (a) or 149 in (b), are useful for showing clearly that the anklets and greaves are quite separate items. That is to say, the artist is not representing instead the end of a padded lining protruding below the edge of the greave.

However, with another 55 pairs we cannot be so sure. Here the base of the greave is marked by two lines which may or may not seem to bulge beyond the normal outline. Indeed, at least on nos. 28^2 and 316^4 one leg bulges, while the other does not. Is one seeing here on these 55 pairs an indication of anklets below the greaves, or some out-turned lining, or even the edging to the metal surface itself? Only on no. 132 can we be sure that the anklet is not meant, for there the greave is held and not worn. The idea that the painter is showing a lining or metal edge may also be supported by the 12 pairs which have such doubled lines not only at the ankle but also at the knee.[45] The ambiguity of the representation cannot be easily explained, and one should perhaps note that the majority of the greaves in this period (77 pairs, 37%) actually terminates simply in a single line across the ankle; in two cases, in fact, on no. 486, the end is ignored completely.[46]

Extra decoration, beyond that already mentioned (the faces on the knees on no. 137a, the spirals at knee and calf) is very rare on the LA greaves. On no. 150b the edging at the bottom is dotted,[47] and on no. 45 (a white-ground lekythos) the greaves are white with dilute glaze inner markings.

Ordinary warriors are represented with greaves 108 times in the LA sample, i.e. 52%: mythological figures and gods, therefore, are associated with them 98 times (48%), as the lists below show.

Table 104

			Total (206)
Ordinary Figures			108
	in ambush	6	
	arming	36	
	departing	17	
	fighting	11	
	Greeks v. Persians	3	
	in the hoplitodromos	16	
	setting out	4	
	without further context	15	
Heroic/Mythological Figures			98
	Ares	1	
	Hephaistos	2	
	Giants	10	
	Amazons	14	
	Heroes	23	
	Lapiths	14	
	Achilles	10	
	Aeneas	3	
	Ajax	3	
	Lesser Ajax	1	
	Akamas	1	
	Demophon	2	
	Hektor	4	
	Iolaos	1	
	Kyknos	1	
	Memnon	1	
	Menelaos	2	
	Neoptolemos	2	
	Peirithoos	1	
	Telamon	1	
	Theseus	1	

They appear most often, therefore, in arming scenes,[48] and Amazons, Lapiths

and Giants are regularly supplied with them. Achilles again heads the list of heroes.

A list of the painters of these LA greaves follows:

Table 105

		Total
Kleophrades Painter	- nos. 53^{2}, 130^{6}, 132, 147, 193, 307, 313a, 382^{3}, †499^{8}	24
Brygos Painter	- nos. 6, $33a^{3}$, $42a^{4}$, 45, 149^{2}, 439^{5}, $500a^{4}$, 627	21
Foundry Painter	- nos. 4a, 24^{2}, 133^{7}, 268^{6}, 269^{4}, 517	21
Douris	- nos. 10^{2}, 52a, 143, 150^{3}, 471, 509^{2}	10
Douris, manner of	- nos. 28^{2}, 137^{3}	5
Douris, vaguely akin to	- no. 485^{6}	6
Eucharides Painter	- nos. 27, 120^{3}, 146^{8}, 305^{2}, 316^{4}	18
Ptr. of Paris Gigantomachy	- nos. $271a^{6}$, 408, 409^{3}, 444^{5}, 633	16
Proto-Panaitian Group	- nos. 109^{6}, 121^{3}, 489^{5}	14
Painter of Oxford Brygos	- no. 140^{8}	8
Ptr. Oxford Brygos, related to	- no. 144^{2}	2
Berlin Painter	- nos. 26b, 108, 185b, 303, 306, $477b^{2}$, 492	8
Berlin Painter, manner of	- no. 139	1
Tyszkiewicz Painter	- nos. 106^{5}, 442, 513	7
Nikoxenos Painter	- nos. 2^{2}, 111^{2}, 309, 388	6
Oedipus Painter	- no. 141^{5}	5
Terpaulos Painter	- no. †645	1
Terpaulos Painter, probably	- no. 128^{4}	4
Antiphon Painter	- nos. 491, 649	2
Antiphon Ptr., manner of	- nos. 640, 651	2
Flying Angel Painter	- nos. 629^{2}, 652	3
Myson	- nos. 49, 587^{2}	3
Painter of Agora P42	- no. 300^{3}	3
Syriskos Painter	- nos. 145^{2}, 478	3
Dokimasia Painter	- no. 486^{2}	2

Triptolemos Painter	- nos. 304, 396	2
Bonn Painter	- no. 397	1
Copenhagen Painter	- no. 142	1
Dutuit Painter	- no. 5	1
Makron	- no. 148a	1
Painter of Munich Amphora	- no. 310	1
Tithonos Painter	- no. 646	1
Unattributed	- nos. 390, 449, 494	3

Some comments concerning the particular characteristics of the greaves painted by some of these artists have been made earlier in the text and notes. More may be said here when the number of examples by an artist and his associates enables us to distinguish an individual style or development.

The Kleophrades Painter heads the list with 24 pairs of greaves on nine vases. His very early examples on nos. 147 and 193 introduce his simple style with two lines at the ankle and some indication of the knee musculature in diluted glaze. The early (no. 307), late (no. 313a) and later (the remainder) greaves maintain this form, but now include lines to indicate the calf muscles, and on the later vases, the angles of view show more variety, even to the extent of looking down on the top of the knee.[49]

The Brygos Painter and his Circle are responsible for 31% (63 pairs) of the greaves studied. The Brygos Painter's greaves regularly have spirals of type (a) or (b) at the knee, lines down the sides for the leg muscles, and red anklets. Three-quarter frontal and frontal views are included, and on no. 6 he depicts a pair on a stand with spiral patterns on the calf muscles. The Foundry Painter produces a very similar design, but prefers more knees with basic modelling. He offers frontal and three-quarter frontal views (more in fact of the latter), and even supplies the only three-quarter back view in the sample. He too draws a stand on no. 4a, and spiralled calves

on no. 268[3]. The Painter of the Paris Gigantomachy, the Painter of Agora P42 and the Dokimasia Painter each repeat the general Brygan style. The Painter of the Oxford Brygos, on the other hand, whom Beazley disassociated from the Brygos Painter, draws the outward (a) spirals below the knee, but displays a freer and wilder form of the inward one. He also is the only painter, apart from the Kleophrades Painter, to draw the back view (on no. 140a[3]).

The Nikoxenos Painter and the Eucharides Painter are connected by a teacher-pupil relationship, presumably as a result of which they share a common style characterised by its simplicity. Only on no. 2[2] does the former offer anything more elaborate: the sides have spirals and lines. The spiral on Ajax is, in fact, matched by another on his thigh i.e. on a thigh-guard, and it is only the Nikoxenos Painter who, on the vases studied, draws thigh-guards above the greaves, on nos. 111[2] and 309, but not 388 (a later work?). The greaves by the Eucharides Painter, then, continue the simple style: only on no. 316[4] are two lines marked at the ankle instead of one. On his early work, no. 146[8], one may note the shortness of the back edge and the projection of the greave beyond the knee, both features which may be paralleled on his teacher's vase, no. 111[2].

In contrast, a study of the greaves associated directly or indirectly with Douris reveals great variety in the method of portrayal, and, overall, one cannot find a strong Dourian style in greaves.

Early Classical Period

The number of pairs of greaves offered for study by the sampled vases in this period falls to 74 on 41 vases.[50] The profile view, though still the commonest, decreases in number, while the frontal, back and three-quarter

angles all increase. The only view on to the top of the greave is on no. 455, a late vase by the Niobid Painter. The Giant is shown kneeling and his leg is portrayed frontally. The top of the greave should, therefore, have been seen end-on below the muscles and bones of his knee and lower thigh. Instead, however, the impression created is of a greave which is so supple and skin-tight, even at this point, that it can bend with the human limb. One may contrast this with the earlier greave depicted in the same position on the Greek who cowers beneath the Trojan woman on the Kleophrades Painter's hydria in Naples (no. †499). The Niobid Painter is, in fact, responsible for the greatest variety in viewpoints, and the Penthesilea Painter and Pistoxenos Painter alone are interested in attempting some of the other angles regularly.

The EC greaves are depicted in the following positions:

Table 106

		Total(148)	%
(a)	worn	130	88
(b)	being put on - nos. 71b, 152, 162, 164^2, 541, 571	7	5
(c)	standing up - no. 571	1	1
(d)	on stands (all held) - nos. 14^2, 15^2, 153^2, 161^2	8	5
(e)	held - no. 12^2	2	1

As in LA the majority of the greaves are simply represented worn. Those in (b) and (c) represent much the same porportion as in LA, but here there is an increase in the proportion of greaves shown on stands. In fact, the greaves in (e) on no. 12, are held by means of a red strap similar to those above stands, but there is no indication of the base-plate.

Of the greaves being put on, as in LA, the majority are for the left leg (6:1), but again the right leg has usually been covered first (4:3). An odd situation is portrayed on no. 152: the warrior already seems to be

wearing both greaves, and yet his pose is that of the man putting on the left greave which he holds in his hands! Has the Bowdoin Painter merely made a mistake, or did he imagine some legging worn under the whole length of the greave? One may note that the modelling visible on the knee of the greave in his hands does not appear on his legs. However, since we have no other evidence for leggings, it seems more likely that the line above the left knee is an error. The opposite situation is portrayed on no. 162: there is no sign at all of the required right greave.

The greaves in (c) and (d) are seen frontally, as in LA, and the stands follow the same design as earlier. Of the four base-plates one (no. 15) is drawn as a simple,thin rectangle: the other three are thicker with an inner line edging the top and bottom, and a row of dots in two cases (nos. 14 and 161). The vertical rods are omitted on nos. 14 and 153, and, unfortunately, the top is missing on the other two examples. However, on no. 15 the Oreithyia Painter gives us a glimpse of them between the bottom of the greaves and the base-plate. On nos. 15, 153 and 161 one may presume there was a carrying handle at the top. On no. 14 the base-plate is held instead.

In EC all of the greaves being put on come from arming scenes, specifically on nos. 541 and 571, the arming of Nestor and a satyr respectively. The standing greave also occurs on no. 571, and two of the stands of greaves feature in an arming context (nos. 153 and 161). The other stands bear greaves for Achilles, again as in LA. The notable omission here then is the hoplitodromos runner.

There appears to be no strong connection in EC between particular painter(s) and greaves from categories (b) to (e).

The next table illustrates the way in which the knee area is depicted on the EC greaves.

Table 107

		Total (148)	%
(a)	with a spiral	39	26
(b)	with knee cap & muscles	53	36
(c)	without inner detail	8	5
(d)	with a face - nos. 14^2, 35^2, 70^2	6	4
(e)	with a pattern - no. 281	1	1
(f)	lost	17	11
(g)	hidden	24	16

When compared with the LA table, this one shows that the proportion of greaves in (a) has declined, while that for (b) has increased. A greater difference, however, exists with (c), which has dropped from 25% to only 5%. Surprisingly, faced knees are still represented, and actually as a greater percentage than in LA. The artists here are the Geneva Painter (no. 70) and one connected with him (no. 14), and the Altamura Painter (no. 35), so that all of the examples come from the Niobid Group. The unusual form (e) on no. 281 recalls the drawing of the patella on other greaves, but here the oval breaks the upper contour line instead of being well below it. The vase is unattributed, and the greaves cannot be compared closely with any of the others.

Further comments may be made on the greaves with spirals (a), and as in LA these can be subdivided as follows:

Table 108

		Total (39)	%
(a)	directed outward	32	82
(b)	directed inward	4	10
(c)	double spirals	0	0
(d)	lost and hidden - no. 71b and nos. 11b, 416a	3	8

In EC, then, the spirals directed inward form an even smaller percentage of the total than in LA. Of the 32 examples which I have treated as (a),

one may, in fact, distinguish four (on nos. 66, 335 and 678[2]) which are more accurately open-ended hooks rather than spirals. A further nine examples do amount to the LA form (on nos. 332[2], 416a[2], 495[5]); these are all by the Pistoxenos Painter.[51] The remainder (on nos. 62[2], 66, 71a[2], 71b, 164[4], 341[2], 502[5], 541[2]) include a number of variations by a variety of painters: e.g. on no. 62 the spiral is accompanied by a palmette, and on no. 71a the end is covered with (once gilded) added clay. There does not appear to be the same strong association in EC between one group of artists and this motif as there had been in LA.

Similarly, the few greaves in (b) (nos. 11b, 336[2] and 571) are by different painters and take different forms. The open hooks occur on no. 336[2]. Non-matching pairs can also be seen on the EC vases, e.g. on nos. 495 and 571, where the greave viewed from the front is modelled, but the one seen from the side is spiralled at the knee. As in LA, therefore, the angle of view affects the choice of pattern at the top of the greave. No. 495 is by the Pistoxenos Painter. This same artist combines a spiralled knee with a modelled one on no. 416a, although both are here in profile, but on no. 332 one may note that the presentation is more logical: the pair seen in profile has outward spirals, while two pairs which combine frontal and profile views, are simply modelled, so that a match is maintained. Finally, on no. 62 the Niobid Painter presents the spirals in the correct position on greaves seen in three-quarter frontal and profile view, but mistakenly moves the central palmette below the spiral to the side in the latter view.

The ratio of greaves with lines indicating the inner or outer muscles of the leg (or both) to those without these details alters radically in the EC period: just under half of the examples studied (71, 48%) include these

lines, but another 62 (42%) lack them, as far as one can tell.[52] The percentage of greaves with spiral decoration on the side drops in this period, to 5%, compared to 10% in LA, with instances on nos. 35 by the Altamura Painter, 62 by the Niobid Painter, 70 by the Geneva Painter, and 71a by the Penthesilea Painter. These spirals decorate both the inside and outside of the greaves, and all but one on no. 62 include small petals in the space where the coil meets a muscle line.[53]

As in LA, the shin-bone and the back join are regularly included in other than profile views. The former may have been omitted on three vases, on nos. 153 and 594 (frontal) and 62 (3/4 frontal) only. The unusual depiction of the back join in profile views does not continue.

Only nine pairs of greaves are supplied with anklets in the EC period, i.e. 12% which means that they are half as common as they were in LA. Six pairs (on nos. 332^4 and 495^2) have the anklets in the form of red bands, two (on nos. 164 and 336) include the ties as well, and one (on no. 152) has the thicker, black line. One of the anklets on no. 164 is worn without the greave and again shows that the two items are quite separate. The padded anklets of LA category (e) are not found on the EC vases studied.

The double line edging at the ankle occurs on 39 greaves (26%)in EC, with a triple line on the two greaves on no. 341.[54] The problem of how to interpret this detail remains. Some form of edging rather than anklets seems to be intended at least on the 16 greaves which are treated in this way not only at the base but also at the top.[55] A further pair, on no. 11b, exhibits the edging at the top edge only. One may note here the association between these details and particular artists: the Penthesilea Painter is credited with nos. 11b and 71a, and no. 66 is said to be by an artist near him; no. 62 is an early piece by the Niobid Painter; no. 35 is by the Altamura

Painter and no. 70 is by the Geneva Painter. At any rate, as in LA, the majority of greaves is shown with the single line across the bottom (55 examples, 38%), and, also as in LA, two examples lack any line at all (no. 124[2]).[56]

Extra decoration remains unusual. On no. 66 a spiral is added on top of the calf muscle at the back. (This is not the same as the spiral which sometimes covers the calf area.) The three pairs on no. 281 are shaded with dilute glaze.

The contexts in which the EC greaves are represented, are listed below:

Table 109

			Total (74)
Ordinary Figures			37
	arming	7	
	departing	11	
	fighting	12	
	in the hoplitodromos	3	
	Pyrrhic dancer	1	
	at tomb	1	
	without further context	2	
Heroic/Mythological Figures			37
	Ares	1	
	Giants	3	
	Amazons	1	
	Greeks in Amaz.[y]	13	
	Heroes	5	
	Lapiths	3	
	Satyr	1	
	Seven against Thebes	2	
	Achilles	5	
	Akamas/Demophon	1	
	Menelaos	1	
	Nestor	1	

The greaves of ordinary warriors number 37 pairs and represent 50% of the total.[57] Compared with the figures from LA, therefore, the proportions have altered only very slightly. For the ordinary warriors, the ambush, Greeks fighting Persians and setting out contexts no longer occur, but a Pyrrhic

dancer and tomb scene have been added. Both the departure and fight scenes are more common at the expense of the arming scene. The hoplitodromos runners and warriors alone are also less common.

The greaves worn by gods still represent under 6% of the total, but Hephaistos is no longer included. In the second, general, grouping Amazons are now hardly represented despite the fact that Greeks fighting them supply the largest figure in that group. Lapiths continue to appear with greaves, but a satyr now appears, as well as the Seven against Thebes. The range of identifiable heroes is much curtailed; Achilles continues to stand out, while Nestor is added.

The painters of the EC greaves are as follows:

Table 110

		Total
Pistoxenos Painter	- nos. 332^4, $416a^5$, $419a^2$, $419b^4$, 495^3, 664	19
Niobid Painter	- nos. 62, 68^2, 72^3, 124, 126, 330, 334, 339b, 340, 455^3, $504a^2$	17
Niobid Painter, manner of	- nos. 325, 341	2
Penthesilea Painter	- nos. 11b, $71a^2$, 71b, 161	5
Penthesilea Ptr., near to	- no. 66^4	4
Stieglitz Painter	- no. 502^4	4
Geneva Painter	- no. 70^2	2
Geneva Ptr., connected with	- no. 14	1
Bowdoin Painter	- no. $152^{1\frac{1}{2}}$	$1\frac{1}{2}$
Bowdoin Ptr., not remote from	- no. 566	1
Painter of Bologna 279	- no. $125b^2$	2
Telephos Painter	- no. 164^2	2
Altamura Painter	- nos. 35, $162^{\frac{1}{2}}$	$1\frac{1}{2}$
Boreas Painter	- no. 153	1
Cleveland Painter	- no. 678	1
Deepdene Painter	- no. 571	1

Euaichme Painter	- no. 541	1
Inscription Painter	- no. 594	1
Oionokles Painter	- no. 335	1
Oreithyia Painter	- no. 15	1
Pan Painter	- no. 12	1
Providence Painter	- no. 336	1
Unattributed	- no. 281^3	3

The Pistoxenos Painter presents the greaves from a variety of viewpoints. He includes both modelled and spiralled knees, the latter often still with the LA profile form of spiral. Sometimes red anklets are added.

The Niobid Painter's greaves come from all four of the periods which Beazley distinguished in his work. On his early vase, no. 62, he draws very elaborate greaves with the knee decorated with a spiral and a palmette, spiralled calves and edging at top and bottom. Four vases from his middle period (nos. 124, 330, 334, 340) illustrate four pairs in a different style altogether. Here the drawing is sketchier, the knees are modelled, muscle lines included and the ankle line simply indicated. (This line is omitted altogether on no. 124, but doubled on no. 330.) The late vases (nos. 68^2, 72^3, 126, 455^3, $504a^2$) offer the largest number of pairs for study. Here the anatomy is more strongly presented in a variety of poses required by the more active scenes. The ankle lines remain single or double. Finally, no. 339b shows a very late pair in a rather odd back view, but in the same style as the late greaves.

Two vases illustrate greaves by artists working in the manner of the Niobid Painter. The first, no. 325, bears a pair which may be compared with the Niobid Painter's middle style, as seen on nos. 334 and 340 in particular. The stance and modelling are very similar. The second, no. 341, is said by Beazley to be late, but the greaves do not compare well with any of the

late greaves by the Niobid Painter himself. They have a spiral at the knee, three lines at the bottom and no curving line to mark the gastrocnemius, which is usually indicated by the Niobid Painter.

Three artists from the Niobid Group may also be briefly discussed here. The greaves by the Altamura Painter might be expected to resemble the early ones by the Niobid Painter. On no. 35 this appears to be so only so far as the calves are spiralled; the other details, the edging and face on the knee, and the triple ankle-lines are not paralleled in the latter's work. These elaborate greaves are worn by Achilles. For an arming scene, however, on no. 162 simpler greaves suffice, and, in fact, only one of the pair is depicted.

The two pairs by the Painter of Bologna 279 on no. 125b are similar to the late and very late examples by the Niobid Painter, but those on no. 70 by the Geneva Painter and on no. 14, a work connected with him, relate better to the Altamura Painter's, especially with their faced knees.

In the case of a few artists a comparison may be made between their EC greaves and some LA ones. For example, those by the Telephos Painter may be compared with those by Makron, in the light of Beazley's comment that the mannerism of the followers of Makron "culminates in the Telephos Painter".[58] In fact, there seems to be little difference between Makron's greaves on no. 148a and those by his follower on no. 164: both come from an arming scene, and both are provided with a spiral at the knee and red anklets.

In two other instances where a teacher-pupil relationship might have been expected to lead to a similar style, different influences seem to have been at work on the later artists. If one compares the greaves by the Pan Painter with those of his teacher, Myson, a move towards simplification is

apparent. Similarly, there is little resemblance between the greaves of the Berlin Painter and those of his pupil, the Providence Painter; and the follower of the latter, the Oionokles Painter, goes even further towards a simplified form, despite the same profile stance in a similar departure context.

Classical Period

Greaves become less common again in this period; there are only 16 pairs on 15 vases in the sample.[59] The range of viewpoints also decreases. About the same proportion of greaves are seen from the side as was the case in EC. However, back and three-quarter back views are now lacking, and the three-quarter frontal view represents a larger share than the frontal. Only the Academy Painter and the Achilles Painter depict the greaves in both frontal and three-quarter frontal views.

The majority of the greaves in this period are worn (28) as has been the case for the two preceding periods studied.[60] The others in the CL period, however, are held; that is, none is shown being put on, standing up or on a stand. These greaves which are held, are carried by their bases, on no. 235b by a figure of Nike at the departure of a hoplite, and on no. 20 by a Nereid for Achilles. The latter is by Polygnotos, the former by a member of his Group, the Guglielmi Painter.

A decline in the proportion of greaves with spirals at the knee was detected between the LA and EC periods. By the following period no greaves are decorated with spirals at this point. Instead, three-quarters of the total have lines modelling the knee-cap and surrounding muscles, and only four (on nos. 55b^2 and 527^2) lack any inner detail.[61] The problem of non-matching pairs no longer arises.

It is very unusual for CL greaves not to have lines indicating the muscles of the leg: 26 of them do, i.e. over 80%. The single example which lacks any such lines, is actually partnered by another with them (no. 574). The application of decorative spirals to this area of the greave regains popularity now: on three pairs (nos. 235b, 469 and 527) spirals are shown on both the inside and the outside of the leg, while on nos. †351, 526 and 583 they appear on the inside only. The greaves on no. 469, the name-vase of the Hector Painter, are particularly striking and interesting, because the inner lines below the top as well as down the sides seem to reproduce almost faithfully the decoration applied to some of the Late Archaic greaves found at Olympia.[62] The curled upper end to the long, straight line on the side is, I think, unique among the vase-paintings of greaves. The discrepancy in the dating between the originals and this representation is puzzling.

It remains usual for the shin-bone to be indicated in frontal and 3/4 frontal views, except on nos. †351[2] and 363, and perhaps also no. 232b, although the omission here may be the result of surface damage. The strange LA custom of including the back opening in some profile views reappears in this period, on nos. 20 and 574.

No anklets occur on the CL vases studied, nor does a double line form an edging at the ankle only. Instead, one finds that half of the greaves have edging at both the top and the bottom. Two more greaves are edged in this way at the top, but the lower part is concealed (nos. 526 and 527). A single line is drawn across the base on three pairs on nos. †351, 574 and †693.[63]

One cannot speak of any additional decoration on the CL greaves.

The association of greaves with almost equal numbers of ordinary and

mythological figures has already been noted for the LA and EC periods. Here the ratio is again exactly 1:1 as the following list shows:

Table 111

			Total (16)
Ordinary Figures			8
	departing	5	
	setting out	1	
	at tomb	1	
	without further context	1	
Heroic/Mythological Figures			8
	Amazon	1	
	Greeks in Amaz.[y]	2	
	Achilles	1	
	Hektor	1	
	Kodros	1	
	Menelaos	2	

The variety of contexts in both categories is clearly much reduced. One notes the total omission of arming and fight scenes in particular. The gods too are lacking as well as most of the general figures from myth. Of the named heroes Achilles and Menelaos have appeared in the preceding two periods as well; Hektor appeared in LA; Kodros, a semi-historical king of Athens, is a new name.

The following painted the CL greaves under study:

Table 112

		Total
Achilles Painter	- nos. 363[2], 574	3
Guglielmi Painter	- nos. 87, 235b	2
Polygnotos	- nos. 20, 84	2
Academy Painter	- no. †351	1
Aison	- no. 583	1
Codrus Painter	- no. 55b	1
Dwarf Painter	- no. 526	1
Hector Painter	- no. 469	1
Painter of Berlin 2536	- no. 232b	1
Painter of Leningrad 702	- no. 527	1

Painter of Munich 2528	- no. †693	1
Unattributed	- no. 595	1

The greaves by the Achilles Painter represent the musculature of the knee and leg by strong, relief lines, and double lines produce an edging at top and bottom on no. 363[2]. The similarity with the late greaves by his teacher, the Berlin Painter, is apparent. His own follower, the Dwarf Painter, on the other hand, while repeating the double line at the top, adds a spiral to the calf muscle instead.

Polygnotos' greaves indicate the modelling of the leg with a few clear lines also, and in this and the edging at top and bottom he recalls the late Niobid Painter from whose school he came. From Polygnotos' own Group we may note the presence of the Guglielmi and Hector Painters, but their greaves seem to be drawn in their own styles, and individualistic. A noticeable omission is the Group of Polygnotos in general.

Late 5th century

The decrease in the number of greaves depicted on 5th century vases continues until, in this period, the sample offers only three greaves on two vases (nos. 21 and 616[2]).[64] On trying to define the angle from which the greaves are seen, one is faced with a problem. Are they shown from a three-quarter back view (no. 21) and a straight back view (no. 616[2])? The total lack of these views in the preceding period would suggest not. Are these frontal views then, or in the case of no. 21 a three-quarter frontal? The forked lines above the hands on no. 616 would then represent muscles and not the back opening, which seems plausible. But if the inner line at the right on no.21 indicates a gap, why should it run all the way up to the top? No simple answer appears possible.

All three greaves are held, the first balanced vertically on the palm, the other two held along their length.

A description of the portrayal of the knee area on these greaves is dependent on our interpretation of the view-point adopted, and, since that is not certain, neither is this. On no. 21 perhaps a squarish area is marked off at the top to represent the patella in frontal view. On no. 616 a spiral on one and a circle with tail (like a Q) on the other occupy the centre of the top. These, in added clay, stand up from the surface and give an impression of the necessary modelling.

As mentioned above, the lines (also raised) on the greaves on no. 616 may be intended to portray something of the musculature of the legs. Had the back opening been intended, the odd curve in the line to the right below the hand on the upper greave would be inexplicable. No muscle lines appear on no. 21.

If a frontal view is presented on either vase the shin-bone is not obvious.

The bottom of the greave is obscured on no. 21. On no. 616 it ends simply with a single line on both.

On no. 21 the greave is intended for Achilles, since it is carried by a Nereid on a sea-monster. On no. 616 a woman carries the greaves towards a trophy. One notes again the continuation of the association with the hero, Achilles, and the presence of greaves still in a possibly everyday context (although Nike is included at the right).

The artist of the first is the Painter of London E130 - it is his name vase. The second has not been attributed. In both cases it is clear that the style of the representation has moved on since the Classical vases. The very ambiguity of the portrayal suits the freer drawing of the late

5th century.

There are no greaves on the 4th century vases included in the catalogue.

GREAVES IN SCULPTURE

Greaves are not a regular feature of hoplite equipment in Classical Greek sculpture, although a few instances of their portrayal may be cited. But before considering these, one may note their frequent and careful depiction in Late Archaic sculpture. Examples have come from both the Greek Mainland and Lycia.

Catalogue and Commentary

1. The fragmentary warrior from a terracotta group, probably made at Corinth and set up at Olympia ca. 490 B.C. Olympia Museum. Ol Ber III 122-132 pls. 52-57; V 114-127 pls. 64-75; Arch Rep 1981-2 26 fig. 51, the new stance of the figure since the fragments of the left leg have been added to the torso and right leg; BCH 106 (1982) 552-3 fig. 44.
The greaves worn by this figure were painted a golden-brown to imitate the bronze metal, with a narrow red border around the edges. This red trim could represent a turned-out lining. At the back the two red lines mark out the back opening which here leaves a fairly broad strip of the hoplite's skin exposed. The muscles and bones of the lower leg and knee are clearly indicated almost as if the greave were not worn. These greaves are, then, of the anatomically modelled type, not the elaborately decorated one. The only unusual feature is the broad, raised strip above the knee at the top of the right greave. (The left still lacks this area.) The treatment of this strip may be intended to represent the

lower ends of the vasti muscles, but initially it gives instead the impression of a relief edging to the greave itself.

2. Two fragments of terracotta lower legs were also found at Olympia. Olympia Museum, inv. nos. T21 and T92. Ol Ber VI 179 and fig. 120 on p. 180, and 179-180 and fig. 121 on p. 181.
Kunze associated these with the contemporary group of Athena and, as he suggested, three or more warriors.[65] On one a small piece of the greave can be identified above the ankle. It projects slightly from the skin-surface, but there is no definite edging either in relief or paint. The colour of the greave itself has turned a grey-black in a secondary firing. The other fragment has been tentatively identified as the base of a leg on which one may make out the back opening of a black greave with a red edge. In this case the greave meets closely or even overlaps up the back.

3. In the battle scenes from the pediments of the Temple of Aphaia on Aegina it comes as something of a surprise to find that only two figures wear greaves, and both of those are from the later east pediment, ca. 490-480 B.C. Munich Glyptothek, F79 and F80 from O.III. Ohly, 41-50 pls. 19, 24 and 44c. Munich Glyptothek, F54, 1 and 2 and F56, and Aegina, F55, 1 and 2 from O.VIII. Ohly, 87-91 pls. 45-49.
Both the pairs, on O.III and O.VIII, are of the same anatomically modelled type, but they are not identical. On O.III the edging is double, while on O.VIII it is single and even omitted where it was not going to be seen. Even the narrow, back opening is not carved in detail on the left leg of O.VIII unlike O.III; Ohly assumes these details of the edging would have been supplied by paint and in the end the viewer down below would not have been able to tell any difference. He also believed the

surface of the greaves, as well as the edges, would have been painted originally to reproduce the colour of the metal, as in the terracotta greaves already discussed. This seems quite plausible. However, Ohly then went further and suggested that the greaves would have been decorated, and he accordingly restored spirals on the sides of both pairs. This it must be understood is not founded on any evidence of traces of painted patterns on the greaves, unlike the restored patterns on some of the helmets, and remains highly speculative. The modelling of the muscles of the leg is clear and anatomically sound, save that again there is a bulge over the left knee-cap on O.VIII.[66] One may compare something similar in the treatment of this area on the LA vase-paintings, e.g. cat. nos. 141 by the Oedipus Painter and 492 by the Berlin Painter. At the ankle edge on both pairs the sculptor portrayed the anklets worn beneath the greaves as bulging pads "oozing" out below the metal-edge. There is, naturally, no sign of the flimsy ties of the vase-paintings, and Ohly talks of "Knöchelstrumpf", that is, "ankle-stocking". Presumably, again, the paint, if it were applied to this anklet, would have indicated its upper limit in the gap at the back.[67]

4. The alternative, decorated type of greave from this period was worn by the marble warrior from the Spartan Acropolis. Athens, N.M., inv. no. 3613. BSA 26 (1923-5) 256-7 fig. 3, a and d (Woodward).

Only his left leg has survived from below the knee to above the ankle, but on it the greave is clearly modelled in relief. The back opening is wide like that of the Olympian warrior first mentioned. The edges here, however, are raised, not only down the back but also at the top and the bottom.[68] The relief decoration appears to be on the inside only, a detail which could suggest that the leg was intended to be viewed primarily from that side.[69]

The decoration actually consists in a large spiral over the calf muscle in front of which is a vertical ridge which terminates above in the head of a snake. Just in front of the head is the lower end of a spiral pattern which modelled the base of the knee originally. Greaves with just these decorative features have been excavated at Olympia.[70]

5. Finally, for the Late Archaic period we may point out the presence of greaves on the warrior on the Harpy Monument from Xanthos in Lycia, ca. 480. London, Brit. Mus., B287. Fifty Masterpieces no. 21; Ridgway, SS 95-6 and 108 fig. 128.
Their upper limit is visible now only on the left leg, but at the ankles one can just detect the bulge of the anklets below the bottom edge. No comment is possible regarding the area in between.

For the rest of the fifth century greaves are notable for their absence in sculpture. None is depicted on the Parthenon Frieze, not even on the apobatai. Nor are there any on the Attic and Boiotian reliefs of the late 5th century. It is not until the last decade that one can again note their presence though not their details.

6. Two of the Nikai decorating a trophy on the Athena Nike Parapet held, it seems, a greave against their left arms. SNTP 27 pl. IX no. 8 and 33 pl. XII no. 10 right half.[71]
Unfortunately, in both cases, the style of the greave cannot be discussed. Ridgway maintained that, "there is no need to interpret the victories of the balustrade as a definite allusion to contemporary events," and that "allusions must therefore be generic rather than specific."[72]
If such a view is accepted, one cannot use the greaves on the reliefs to conclude anything about the continued use of this armour down to this

date by the Athenian forces, or their enemies whose captured greaves would be put on the trophy.

7. The only other depiction of greaves in sculpture from the period around 400 B.C. takes us back to Lycian art, to the lid of the Tomb of Merehi. London, Brit. Mus., 951. Xanthos V pls. 50.1 and 2; 51.1 and 52.2. A ridge around the ankle of the apobates on each side may be interpreted as the bottom of a greave and/or its anklet.[73] The knee edge is in both cases concealed by the chariot wheel, unfortunately.

In the 4th century Lycia again provides some evidence for the use of greaves there at least in funerary art, but, generally, precise details cannot be made out.

8. On the Nereid Monument, ca. 380 B.C., greaves are not worn on the first frieze and, as far as can be made out, they were not numerous on the second. Only on slab 868b may one tentatively identify some on the fourth and fifth figures from the left: MTP pl. 13b; AA 1970 379 fig. 32; IEE 2 210-211; Borchhardt, pl. 32.1.[74] One presumes the now damaged legs of the other hoplites in the phalanx were once similarly protected. Only the top edge standing out in relief over the knees of the two advanced right legs betrays the presence of the greave: the bottom edge is apparently ignored in the carving. The forms of the knee and lower leg, therefore, are created by the greave and not by the human limb itself.

9. On the Heroon at Limyra, ca. 370 B.C., another rank of hoplites is portrayed. IstMitt 17 (1967) pl. 14.2; AA 1970 374 fig. 25; Borchhardt, 64-5 pl. 20.

This time the greaves can be made out more clearly not only on the

advanced legs but also on those behind, with a ridge at the top and the bottom. It is once again the simple, modelled type of greave which is worn.

10. Because of the condition of the surface of the stone used at Trysa (ca. 370 B.C.) it is now almost impossible to determine whether any greaves were originally represented on any of the battle friezes.[75]

11. However, on the Tomb of Payava from the following decade at least four pairs may be identified. Lid: Xanthos V pls. 30.2, 32.1 and 2, 38.1 and 2. Base: Xanthos V pls. 28.2, 30.1 and 44.1.
Both the apobatai on the two sides of the lid wear modelled greaves on which the knee and peroneal muscles, and the top and bottom edges are clearly indicated. One recalls the same theme and the inclusion of greaves on the Tomb of Merehi.[76] However, this does not seem to be a simple case of a later sculptor slavishly following the design on an earlier work, for there are differences in the dress of the apobatai, and on the Payava Tomb greaves also appear on the standing figures on the south side of the base; again the close-fitting greaves are marked out by their upper and lower raised edges.

All in all, there seems to be a case for believing that in Lycia at least the wearing of greaves is attested through the first half of the 4th century. This is hardly the case elsewhere. One notes the lack of greaves on the fighting figures of the Bassae and Mausoleum friezes at the beginning and end of this period. While it may be argued that these figures are mythological and not contemporary hoplites, and therefore are not necessarily going to reflect current trends in armour, it must, on the other hand, be pointed out that the vast majority of hoplites represented on grave reliefs

of this period are likewise greaveless, and that in contexts where there can be little question of so-called "heroic nudity". These men wear tunics at least, if not also cloaks and sometimes corselets. At present, I am aware of only three grave monuments from Athens on which greaves are worn by the deceased.

12. The lekythos of Kleochares, Copenhagen, Ny Carlsberg Glyptothek, 221. Conze, no. 1063 pl. 217; Stupperich, cat. no. 440 (late in the first quarter of the 4th cent.).

13. The loutrophoros of Leophoreides, Athens, N.M., 1069. Conze, no. 1072 pl. 217 (the greaves are not mentioned on p. 231); Stupperich, cat. no. 85 (towards the middle of the 4th cent.).

14. The Stele in East Berlin, K25 (1473). Conze, no. 463; C. Blümel, Katalog der Griechischen Skulpturen (Berlin, 1928) 27 K25 pl. 35; Stupperich, cat. no. 373 (third quarter of 4th cent.).
Two pairs are, in fact, depicted on the second of these, and in all four instances it is only the raised edge across the leg at top and bottom which betrays the presence of the greave.

Why should only these hoplites be represented wearing greaves? Could this reflect the actual contemporary situation, one in which most hoplites chose not to bother with these items? Are these men being very old-fashioned? Or is it only the artists who have chosen to ignore the fact that greaves were still being worn in battle? The last possibility seems unlikely, since other pieces of armour are regularly included, for example, the shield or helmet which may often be held by a small attendant when they are not actually worn by the main figure. Surely, if greaves were still an important part of the panoply, they could have been depicted in the hands of a figure at the side,

as on some of the red-figure vases. One solution to this problem may lie in the compromise view that indeed most hoplites did fight without leg-armour in the Classical period, but that greaves themselves were not entirely forgotten by everyone. On the fringes of the Greek World, as we have seen, greaves were still regularly made (e.g. in Italy) and represented (e.g. in Lycia) in the 5th and 4th centuries, and their presence here and in Hellenistic art (e.g. on the Alexander Sarcophagus)[77] may suggest a thin line of continuity rather than reintroduction.

GREAVES IN PAINTING AND MINOR WORKS OF ART

As with sculpture, so with painting and metalwork greaves are seldom depicted in the Classical period; even the examples which will be discussed here, come from the perimeter of the Greek World and not from Greece itself.

Catalogue and Commentary

1. We begin with the early 5th century wall painting from the second tomb at Karaburun in Lycia. AJA 76 (1972) 267 pl. 60 fig. 23 (Mellink). The hoplite who falls in front of the rider on the north wall, wears greaves. They are barely visible in the published photograph, and the top part of both has apparently been lost. The back opening seems to be represented even in the profile view - a detail we have already met on some LA vases, and just above the warrior's ankles two lines suggest the presence of anklets (they curve down lower at the front) or edging (they appear to be continuous up the back edge as well). The colour of the greaves is not mentioned by Mellink, but they seem to be light-coloured, possibly white like the corselet or the internal strip across the shield. They bear no surface decoration, or even, it seems, modelling lines.

From this painting we must next turn to metalwork for more examples of Classical greaves.[78] These are to be seen on gold and silver items from the northern regions of Thrace, Scythia and Macedonia.

2. There are four pairs worn by apobatai on the inside of the silver phiale from the Bashova Mogila near Duvanli, of late 5th century date. Plovdiv, Arch. Mus., inv. no. 1515. IstMitt 19/20 (1969/70) 201-2 fig. 6 (Borchhardt); Hoddinott, Bulgaria 65; Venedikov & Gerassimov, 362 pls. 170-2.

   The technique here, as previously noted, has much in common with red-figured vase-painting, the incised details resembling the brush-painted lines of the vase-painting technique. The greaves, therefore, are represented in much the same way as the greaves on vases, with lines to indicate the knee area, the peroneal and calf muscles and, twice, the double-line edging at the ankle.

3. Greaves are also worn by the rider in the centre of the gold comb from Solokha from the early 4th cent. Leningrad, Hermitage, Dn 1913, 1/1. Artamonov, 45-50 pls. 147-8 and 150, dated to about the end of 5th or beginning of 4th cent. on pp. 56-7; IEE 2 180 above; FLS 109 cat. no. 71 pls. 12-13; Grakow, pls. 10-11.

   It is, however, clear that one is not dealing here with the usual hoplite greaves, for not only are they obviously worn by a cavalryman but also they are worn over trousers, not the bare leg, and are held in place by means of a strap just above the ankle. (The straps are incised notably only on the outer sides of the legs of the figure.) Despite the fact that the trousers intervene, the greaves are still modelled in the Greek fashion. The top is edged in relief, the bottom smooth.

4. From the middle of the 4th century comes the gold scabbard which was found at Chertomlyk. Leningrad, Hermitage, Dn 1863, 1/447. Minns, 286-7 fig. 207; Artamonov, 57 pls. 183 and 185, mid 4th cent.; IEE 2 97 and 180 below; FLS 109 cat. no. 68 pl. 10.

At the left end of the battle frieze between Greeks and Persians two bearded Greeks are depicted wearing greaves, but not of the same type. On the third figure from the left one may make out a regular pair of modelled greaves with raised edges at top and ankle. On the figure farthest to the left, on the other hand, the upper and lower limits of the greaves themselves are now barely distinguishable. Nevertheless, their presence is betrayed by the incised straps which encircle the hoplite's legs just below the knee and above the ankle. One could easily be misled into interpreting these details as boots, especially if one has been led to believe that such greaves with straps were not in use until the Hellenistic period. If the representation of such greaves on the Alexander Sarcophagus (ca. 312 B.C.) were taken to be the earliest representation of them, one would indeed be surprised to see them here. Either the scabbard is not Late Classical but Early Hellenistic, or one must accept that strap-on greaves were known and worn already at this date in the north. The greave just discussed on the rider on the Solokha comb would seem to lend strong support to the latter view.

5. Finally, from Macedonia there are the greaves on the gold quiver found in the antechamber of the Royal Tomb at Vergina. Thessaloniki Museum. Treas Anc Mac Cat 50 no. 89 pl. 22; Philip of Mac 218-9 and 221 figs. 122-3; VDI 1980:3 163 fig. 17 and 164 fig. 18 (Mantsevich); Lane-Fox, 87.

Here they are not worn as one might first expect by any of the fighting figures in either of the two friezes on the side, but by the solitary hoplite who stands on the lower projection. Little can be said of them save that they model the leg closely and have no obvious edging or decoration. This gorytos, however, was probably not manufactured in Macedonia, but imported ready-made from further north and east, for another quiver, apparently with exactly the same relief decoration from the same matrices, is known from Karagodeuashkh.[79]

GREAVES ON GEMS AND RINGS

There are very few greaves represented on Classical gems and rings, presumably because they would be too small to be included on subjects like a standing warrior. Even the theme of a Nike and trophy does not seem to inspire their inclusion among the arms and armour on a regular basis, though we note one instance below.

Catalogue and Commentary

At the beginning of the 5th century among the many hoplites on Late Archaic gems the omission of the greaves is very noticeable.

1. A rare exception is found on a rock crystal scaraboid in Cambridge, Fitzwilliam Museum. Richter, EG 49-50 no. 90 (14 x 17 mm), dated to the early 5th cent.

   The theme here is one already familiar from LA and EC vase-paintings: the warrior raises his left leg (in the impression) to put on the greave held in his hands. As we saw when studying the vase-representations, the artist chooses to show the left greave being put on after the right,

rather than vice versa. Little need be said of the form of the greaves themselves here, save that they seem perhaps to be less exaggeratedly modelled than the figure himself.

On gems from 480-400 B.C. no interest is shown in the depiction of greaves, and indeed from the 4th century I know of only one very clear portrayal of not even a pair, but only a single example.

2. This is on a large, blue chalcedony scaraboid in London, Brit. Mus., 601. GGFR 206 pl. 590, 4th century, Fine Style; Anc Art in Seals fig. IV-11, second half of the 4th cent. (L. 33 mm.)
It is noticeably about twice the size of the last gem, and this increase in the field available may help to explain the range of, and detail lavished on, the arms and armour which a half-draped Nike here attaches to a trophy. The greave is found fixed to the tree trunk near the base at the side of a hoplite shield. It is not made clear how it is attached, but presumably a nail has been driven through it. The anatomical contours are barely suggested, but a strong ridge outlines the edges.

3. Another greave may be depicted in a similar position on another trophy on a gold ring in the Hoek Collection in Riehen. GGFR 226 pl. 747.
It is possibly a greave which stands at the right side of the bottom of the tree, but it is by no means clear. (Boardman interprets the projection at the left as a stump from which a new branch is growing.) In any case this ring may well date after 300 B.C., and is surely Early Hellenistic at least, not Classical.

We may conclude, therefore, that greaves were not often depicted on gems or rings in the 5th and 4th centuries.

GREAVES ON COINS

In the light of the situation regarding gems and rings it comes as no surprise to find that there are few representations of greaves on Classical coins either. The usually small scale of hoplites on coin dies surely again helps to explain their omission there.

Catalogue and Commentary

1. A striking exception, however, occurs on the coins of Kamarina in the Late Archaic period. Kraay & Hirmer, no. 146, ca. 490-484; ACGC pl. 49 no. 844, on pp. 216-7 Kraay here accepts the alternative, later date of ca. 460; Westermark & Jenkins, 18ff., 142ff. (cat.) pl. 1, period I ca. 492-485.

   Here, the reverses of an issue of didrachms probably in the period ca. 492-485, spotlight a pair of greaves standing frontally on either side of a palm tree. The knee, shin-bone and calf muscle are strongly modelled. When one remembers that the obverses of these coins offer a Corinthian helmet and a hoplite shield, one realises that both types may constitute a special panoply, either as prizes to be awarded to victors in some games or the dedicated spoils of war.[80]

2. Another panoply which includes greaves, appears on the well-known dekadrachms issued by Syracuse, probably ca. 405 and again ca. 390 B.C. Kraay & Hirmer, no. 116, ca. 405 and no. 104, ca. 395-380; Jenkins, nos. 438 and 440; ACGC pl. 48 nos. 814-5, ca. 405 and ca. 390.

   The long time-gap would suggest that there is no connection between the two different cities' use of a similar theme. Here the panoply is restricted to the exergue below the four-horse chariot. The greaves are

again seen frontally, one on either side this time of a corselet, with a shield further to the left and an Apulian helmet to the right. As a result of the smaller scale here, however, the details of the greaves are harder to discern apart from their general outlines. Some of these dies include the word "athla" or "prizes", but even so the exact nature of the armour and the occasion which they record is still subject to discussion.[81] If these greaves represent part of the booty taken in a recent battle, then one may assume that greaves were still a feature of the enemy's equipment. If, on the other hand, they have been specially produced to be presented to a victor in whatever contest, they could easily represent very special items for show and parade purposes only. In either event, greaves remain a very rare object on the coin-dies of the 5th and 4th centuries B.C.

3. The only other instance of a greave on a coin known to me appears on the reverse of a 5th century silver coin issued by Thronion in Lokris. BMC Central Greece 12 pl. II.14.

The greave appears to be shown in profile with a well-developed calf muscle, but the details are not very clear. The real importance and interest of this representation lies instead in the choice of the greave as a canting device for the Lokrians who lived below Mount Knemis, and accordingly were known as Hypoknemidii and later Epiknemidii, to distinguish them from the inhabitants of Lokri Epizephyrii, their colony in the West.[82]

d. CONCLUSION

We have considered the literary references, the surviving evidence and the artistic representations of greaves in the 5th and 4th centuries B.C., and we may now summarise the conclusions we have come to in the text. The detailed descriptions given in each section have provided information on the nature of the Classical greave, but some aspects still remain unclear and some questions unanswered.

The literary evidence, though scanty, must lead us to the conclusion that greaves were indeed still worn in the period in question. Xenophon supplies the clearest proof of that, and nothing suggests that they were by now very old-fashioned or limited in use. However, as we saw, the find-spots of the originals and the decreasing number of illustrations of them in art implied a decline in popularity and use during the period, at least as far as the cities of the Greek Mainland were concerned. The presence of greaves in the Hellenistic period appears to depend upon their survival in Macedonia rather than uninterrupted use in Greece. By then the form of the greave had, in fact, changed from the Classical one to a strap-on variety.

The Classical greave is formed of a supple sheet of bronze which reaches from above the knee to just above the foot. It is therefore generally approximately 40 cm. in height depending upon the actual measurement of the owner's leg. One may note that very minor differences in size between the left and right greaves seem to have been quite normal, but the extreme discrepancy of 3.5 cm. exhibited by the pair found in the antechamber to the Royal Tomb at Vergina is puzzling. The anatomy of the leg is modelled in the bronze, and the details of bones and muscles are usually represented in the art. One might note that the form of, for example, the knee-cap,

cannot copy both the bent and the straight knee, i.e. the bronze, of course, cannot move with the limb underneath, and so some degree of leeway had to be allowed for in the fit. It is, therefore, quite likely that a lining, if not actual padding, existed between the metal and the wearer's skin. The evidence for such a lining is not clear-cut, but the edging visible not only in the vase-paintings but also in the sculpture could certainly be interpreted as the out-turned edge of a lining. This lining, if it existed, must have been glued to the inside surface - few of the originals had holes along the edges which could have been employed for a sewn-in lining. In the LA sculpture and LA and EC vase-paintings we found signs of separate anklets tied around the leg to cushion the point of contact between the bottom of the greave and the ankle-joint. Surprisingly, their existence is not hinted at later unless we should interpret some of the double-line edgings here as anklets and not lining. Were anklets no longer worn or required, or were the artists just not aware of, or interested in, such a minor detail?

The Classical greave, as stated above, is anatomically modelled. In this it contrasts sharply with the Late Archaic examples, both in the originals and in art. Exceptionally, we found that Attic vases from the EC and even to a small extent the CL periods continued to reflect these decorated greaves with spiral patterns below the knee or on the side. One of the CL vases, no. 469, even seemed to portray the Late Archaic patterned greaves found at Olympia almost exactly. One wonders whether the more elaborate form had a longer life than we have imagined. Or are we dealing here with archaising tendencies on the part of the artist? The greaves in question are after all worn by Hektor. Did the painter wish to distinguish him with a piece of armour from the past? Or could he have been simply influenced by traditional patterns current among some of the vase-painters and workshops?

As we pointed out in the course of the vase section, there is plenty of evidence for these traditional motifs and styles in the depiction of the greave on the red-figured vases.

Among the original greaves dated to the 4th century there were two examples which were the exception to the rule that Classical greaves are simply modelled. Both of these (nos. 22 and 24 in the catalogue) came from Thrace, and we were happy to treat them as more Thracian in style than Greek. However, the Attic vase-paintings served again to remind us of the variety which can be found in Greek art, for among the LA and EC greaves examples with a face at the knee could also be found. Significantly, three of the vases in question had been exported from Athens not to the Black Sea, but to Italy, specifically to Vulci, Tarquinia and Agrigento (no. 70 has no provenance). So far as I know, a faced greave has not been discovered there - yet, but its existence is not at all impossible.

The vase-paintings are, then, extremely useful in broadening our knowledge of greaves at the time, and in some areas they provided our only source of information. For example, without the LA and EC vase-paintings we would not be familiar with the greave-stands at all. And, although the complete absence of greaves on vases from the 4th century in the sample deprives us of detailed information of them then, for the 5th century they may in an unexpected way help to confirm the continued practice of greave-wearing among at least some of the Athenian hoplites. For, as was indicated in the text, the ratio of ordinary to mythological wearers or owners remained almost even at about 1:1 on the vases after the first quarter of the century. One can contrast the figures for the Corinthian helmet over that period. If greaves were no longer regularly worn by Athenian hoplites after the 5th century, a conclusion which seems to be supported not only by their

disappearance off the vases, but also more significantly, by their poor showing on the grave reliefs of the first half of the 4th century, we should surely look for a possible explanation in the economic situation of Athens after the Peloponnesian War, and perhaps in the changes taking place towards more mobile and lighter-armed forces. This is not, of course, to say that the professional hoplites, like Xenophon's troops, gave up wearing greaves. In the different circumstances pertaining throughout the various parts of the Greek World, there can have been no uniform custom with regard to the use of them.

Certainly, as mentioned above, greaves continued to be worn in the Hellenistic period, though in a slightly different form. The bronze now required one or two straps to keep it in place. The exact time at which this change in design took place cannot be determined, but our study of the Classical material has perhaps indicated that it had already done so early in the 4th century. Not only were there loops for straps on the surviving greaves (nos. 5 and 27) and holes under the knee on no. 25 which could have been related to a strap there, but also straps were indicated on the gold relief on the Chertomlyk scabbard and the Solokha comb. In the case of the last of these we may readily understand the need for straps - the greaves are worn over the rider's trousers and so cannot fit so closely around his leg. For the others, when the greaves still seem to reach as far around the leg, the addition appears unnecessary, but we must assume that the chance existed of the greave falling off without the strap fastened. Had the bronzeworker's skill decreased, or was a compromise being sought in which the quantity of the bronze worn was reduced because of cost or for the sake of lightness, while the front at least of the leg was protected?[83]

CONCLUSION

Perhaps one should emphasise first the great quantity of material available for this study and the variety within it, between the originals, the different media and the different regions in which it originated. Even if one accepts that all the helmets, for example, were not in use at the same time throughout the whole period, the range available is still impressive.

The Corinthian helmet is handed on from the Late Archaic period, and one can well believe that it soon came to serve only artistic or perhaps symbolic purposes - to set the wearer apart from the crowd. The decline in the quality of the representations of it through the later fifth and fourth centuries seems to betray a lack of familiarity on the part of the artists, but one cannot be sure that the portrayal is not accurate. Was a debased Corinthian helmet perhaps still being worn by a few men, pushed back on the crown of the head - a position never popular for the other types of helmet? Was it the continuing custom or merely the representation of it which inspired the distorted descendants of the type, as we seem them from South Italy? Until an example is found in Greece itself, one cannot be sure of the answer.

The presence of the projecting frontlet was taken as the type-characteristic for the Attic helmet. Its association with Athena was patently clear, and the continuing attachment of the (less practical) stilted crest to this type helps to confirm its special position in the representations. There seems to be no reason why the form could not have been made in reality, but its realisation as a possible alternative for the average hoplite is unlikely to have taken place before the late fifth century and then one suspects it still had divine overtones.

The basic hoplite helmet of the early and mid fifth century was instead the so-called Chalcidian type which represented an improvement on the Corinthian with ear-hole and hinged cheek-pieces. The design can be traced through later stages of development in a series of originals, including the Attico-Chalcidian Group, from the fourth century. Here regional variation could best be detected as well, with examples assigned to the northern and western regions, in particular. The artistic representations were, surprisingly, lax in capturing the exact details of the design, but the Chalcidian remains recognisable - and remarkably absent from the numismatic evidence, presumably because it was associated more with the ordinary hoplite than with any deity or hero.

Despite the theory which sites the origin of the Illyrian helmet in the Peloponnese, the Classical evidence for this type had a strong northern base. Its use and portrayal in Macedonia was assured for the fifth century, and its often bare, primitive design seems to confirm the backward state of that area before the fourth century developments. On the other hand, we must be grateful for their continuing habit of burying the dead man with his equipment - a practice sadly dropped further south.

The supposed association of the Thracian helmet with the north was shown to be false, and we traced its development in shape through the vase-paintings and sculpture. In the former, in particular, one followed the steps made by the painters towards a greater understanding of the nature of the new type. To judge from the art, the simple version of form III attracted the attention of the Athenian hoplite in the fifth century, while the higher version of form VI reached a peak of popularity later in the fourth. One may reflect on the reasoning behind the adoption of a crown-design which, if we are right, had eastern connections. The other parts, the neck-guard, peak

and cheek-pieces, were, nevertheless, drawn from the Greek tradition; the cheek-pieces of shape C, in particular, though closely associated with the Thracian helmet, had a long pedigree on other types in the art.

The pilos saw the need for head protection reduced to its minimum - a simple crown-cap of rounded or more often conical form, translated from a soft felt original, from which it could not always be clearly distinguished in the art.

Although these helmets were treated independently in our study, some attention must be paid to the quantity of evidence indicating the creation of hybrids between the types. As stated, the Chalcidian may be seen as a development from the Corinthian, and it forms the basis of hybrids with the Attic, Thracian, Illyrian and, of course, Corinthian itself. The form of the neck-guard is shared by most as are the cheek-pieces of various shapes which we defined while considering Chalcidian. Both Chalcidian and Attic are at times provided with locks of hair at the front; the Thracian may occasionally display an Attic-like frontlet. Even the pilos is not above the addition of the neck-guard or a cheek-piece.

For the protection of the torso only two major alternatives existed, and one may question the extent of their use in reality. The commonest version is the corselet made of linen (probably not leather) and for it we are totally dependent on the artistic representations, especially the Attic vase-paintings. Fortunately, a consistent picture is presented to us, and we may be fairly sure of the accuracy of the reproduction. It is always worn over the chiton for comfort, as is the other corselet, which is made of metal and labelled a muscle-corselet from the way in which the details of the anatomy are modelled in the form. It goes back to the Archaic bell-corselet, and from the vase-paintings a line of continuity has been postulated through

a LA-EC improved bell-corselet. No other evidence for this survives, but its existence seems credible, unless one explains these as the sign of the painters' formulaic system only slowly coming to grips with a new object. The muscle-corselet seems always to have been rarer than the linen one, and its wearer must always have been marked out as someone of importance, especially when the plates were decorated even further with floral and figured patterns. Not all hoplites were fortunate to possess corselets of these two types, but a study of the simple alternatives which probably offered little or no protection, the chiton, chlamys, exomis and even the thick, patterned tunic or skirt, which are portrayed in the art, is outside the central theme of this thesis.

To protect the legs below the limit of the shield, the hoplite might have bronze greaves which must represent an extraordinary example of the skill of the bronzesmith. Had this skill declined, when in the fourth century at least it was found necessary to add rings at the back for tying them on? Or were they being worn with thicker padding, in the way that the muscle-corselet, although matching the forms of the body, did not rest directly on it? In the art their presence is less noticeable as the fifth century wears on, but the finds from the West and Macedonia betray their continued popularity there later. Their absence in sculpture may perhaps be explained by the (now lost) layer of paint which could have depicted them on the legs without additional modelling being necessary. Unlike other items of the body-armour they seem to have had no strong associations with either heroes/gods or ordinary warriors, being represented equally on both.

So much for the pieces of armour themselves, what of the media studied? The bulk of the material was found on the vases, and, despite the limitations imposed by technical factors, the amount of detailed information gleaned from

them was enormous. Here we found evidence for the use of stands for greaves, anklets to prevent chafing, hooks for helmets not in use. The patterns decorating the armour were well-represented, and, if one could detect the preferences and stylistic traits of individual painters, the overall variety and features were no less credible for that. Sculpture provided our second source of information. Here one felt the lack of the added details supplied by paint or piece-work, but one gained instead the three-dimensionality of the medium.

The minor works of art covered a range of materials and techniques from small statuettes, to gold relief-work, and engraved gems and rings. Frequently, the small scale of the image proved no obstacle to the artist's faithful rendering of the armour, and that applies especially to the representations which we looked at on coins. The numismatic tradition was at times very strong, for example, in the representation of Athena's helmets, both the Attic and the Corinthian. Here, we saw especially the decoration of the sides of the helmet with figures, the attachment of triple crests, and uniquely the small 'rotelles' of the Corinthian helmet. The coin-type of course, reflects the public image of the city or state which issues it, and the design may consequently be propagandistic in aim; so much the more interesting, then, is the choice of the Illyrian helmet on the Macedonian coinage, for example.

The literary evidence supplemented that of the art with references to materials or processes not known elsewhere, e.g. we learn of the horsehair, as opposed to boar's bristles, for crests, the habit of whitening helmets, though how and with what is, unfortunately, not explained. It also provides us with an indication of the attitude of the Classical Greek to his armour. In particular, one perceives a love of elaborate decoration and precious

materials; Xenophon refers to his finest armour (An. 3.2.7 and cf. Aelian VH 3.24) and later in the 3rd century Philopoemen directs the Achaeans' love of finery into their equipment for battle (Polybius, 11.9.4; Plut. Phil. 9). Our modern idea of functional simplicity and the avoidance of waste and damage to what one values is diametrically opposed to the ancient desire to show off even in battle, to friend and foe alike. In such an atmosphere even the odd examples of armour some of which could not be fitted into the scheme adopted here, if not attributable to poor drawing and misunderstanding, cease to be far-fetched and incredible.

All this the art and the literature can tell us to fill in the gaps which a study of the surviving originals must leave. The metal remains of a piece of armour are only a shadow of its former self. We lack the organic materials, the padding, lining, chin-straps, appliqués, plumes, crests, feathers, paint perhaps, which made it what it was originally. Just as the ancient hoplite shield was not the bronze facing but the wooden core and (leather?) lining, so in so many cases we have only a small part of the whole, and to appreciate it in its former complete state we must turn to the art and literature.

In the art armour is represented on ordinary hoplites and heroic/mythological/divine figures alike. As Anderson pointed out (MTP 22), the Greek artist does not employ the idea of "period dress"; real, contemporary life is instead projected into the past, or into the mythological context. Giants, Lapiths and heroes fight using contemporary equipment. The departure of the eponymous heroes, Pandion and Oineus, on CL no. 375 calls for no more elaborate armour than the average Athenian's departure at that time. And, when one may believe a hero is being treated to a particularly complete or elaborate panoply, as may be the case for Hektor's departure on LA no. 467a and CL no. 469,

the changes apparent in the type of helmet and corselet chosen certainly appear to be consistent with what we may deduce of fifth century developments in reality. (A Thracian helmet replaces the Corinthian, a muscle-corselet the linen one, and the shield loses its apron.)

Certainly, some pieces of armour do have particularly heroic or divine associations. The Attic helmet is the example par excellence for this with its close connection with Athena from the beginning. On the vases she regularly owns 50% of the examples, and, although she may also appear with a steadily growing proportion of the Corinthian helmets, only 3% and under of the Chalcidian and a single CL Thracian helmet are given to her. She never has an Illyrian or a pilos, or for that matter greaves, and, because of her aegis, she has no need of torso-armour except for one linen-corselet on CL no. 234.

Between them, Athena and Amazons regularly wear over 70% of the Attic helmets depicted on the LA-CL vases. But the Amazons are also equipped with a roughly similar proportion of the Chalcidian helmets (i.e. between 7% and 19%). Surprisingly, not a single Corinthian helmet is given to them. One might wonder whether this is not directly attributable to the fact that the shape of the crown and its offset-edge at this date is modelled on, or at least closely resembles, the tip of the erect phallus. Again, no piloi are worn by these female warriors, but the Illyrian and Thracian helmets are found. The single example of the Illyrian on an EC vase might suggest that the foreign status of the Amazon was being emphasised, but only 14% of the CL Illyrians are associated with Amazons so that the emphasis cannot be sustained. Similarly, it is only 3% of the Thracians on the CL vases which are given to Amazons - hardly a sufficiently large proportion to support the idea of a connection between the Amazon and the 'Phrygian' cap with which the Thracian

may be associated. For the rest of their dress, their patterned combinations may serve to set them off as easterners, but over them they may wear the normal linen-corselet or even don an adapted version of the modelled muscle-corselet.

Among the popular heroes Menelaos and Achilles appear frequently in the lists. Neither of them receives Attic helmets, Menelaos no piloi and Achilles no Illyrian. Corinthian, Chalcidian and Thracian are shared types. If the Illyrian had northern associations, it may seem strange to see the one LA and another CL example on Menelaos, a Spartan. However, this connection between hero and helmet might instead go back further to the period of the origin of the type in the Peloponnese. Alternatively, since Menelaos is also depicted in a Chalcidian helmet of Group V which was only represented by northern originals, there may be some substance to the idea of his being portrayed as something of a barbarian. On the whole, however, one cannot detect any strong connections between particular pieces of armour and individual characters, save that an item like the muscle-corselet designates its wearer as someone special, whether mortal or immortal.

When we are looking at a supposedly ordinary mortal on a vase or a grave relief, the exact status of the warrior comes into question, and the interpretation is further complicated by concepts like "heroic nudity". That the citizen who died in battle, defending his native land, was someone extra-special is supported by the literature and inscriptions, but whether he did, in fact, assume the status of a hero is not at all certain. Precisely what constitutes a hero and how he is to be recognised is a topic beyond the scope of this thesis, but it has been my belief that nudity is not one of the distinguishing features, where hoplites are concerned. No thorough study has been undertaken, as far as I can tell, on the attitudes of ancient Greeks to

the naked male body at different periods in their history. One hears much of their love of male beauty, the ideal of the athletic young man, the nudity of the gymnasium and race track, but little account of the habit of doing dirty jobs in the nude, so as to save one's cloak or tunic from excessive sweat and dust, which could not easily be washed off in a time without detergents or even a basic soap. The nature of most Greek male clothing which was simply wrapped around the figure and surely frequently slipped off and needed repositioning must have made the sight of the naked body, even of older men, a common one in public places. One cannot here collect all the evidence for one view or another, but I suspect that the ancient attitude may not have been so much one of undressing for certain occasions as the opposite, of dressing for others. In such a situation fighting must have ranked as one of the dirtiest tasks to be undertaken. The wearing of armour on the body was, then, a very conscious and deliberate decision taken by the hoplite for the sake of personal survival, not modesty. A helmet appears to have been considered a necessity, but behind the protection of the shield, further protection in the form of a linen- or metal-corselet was optional, as were the greaves. Indeed, one might deduce from Thucydides' famous comment on the tendency of the phalanx to move to the right (5.71.1) that the hoplite placed very little confidence in what he was wearing behind the shield on his arm. In such a situation, one suspects that by the late fifth century the average hoplite was no longer as heavily-armed as he may have been in the Archaic period. The wearing of simply a tunic, exomis, chlamys or nothing at all seems to have been a feasible possibility. Even at Limyra where the frieze of the Heroon offers a phalanx of hoplites, some wear linen-corselets, some tunics, and only one a muscle-corselet. The reference in the Athenaion Politeia (42.4) to the state's provision of

shield and spear to the ephebes indicates that by the third quarter of the fourth century the emphasis was placed on these two items; the rest was up to the young man's family to provide, and, one may suspect, they had become loathe to supply even the basics. Fighting for one's country was no longer so acceptable - hence the employment of mercenaries, and, while they and generals might equip themselves as well as possible for the sake of their own personal safety and glorification, the average citizen was less likely to sink his money into expensive armour. Indeed, could an Athenian at the turn of the fifth to fourth centuries afford to? Thus, the gift of a panoply to the Thasian orphans mentioned at the beginning was, indeed, a privilege which set them off from other citizens' children.

What would this Thasian panoply have looked like? Would it have borne more resemblance to what the Athenians were wearing, or to what the Macedonians and Thracians might wear? One cannot tell, but it has been emphasised throughout the thesis that regional variation did exist and can be detected in the surviving armour and art. In particular, northern, eastern and western styles emerged which grew in importance in the face of the lack of original material from Greece itself.

And, just as the quantity of body-armour worn varied over the period studied, so too details of its design could be dated roughly to different stages, for example, in the transfer of the pteryges and shoulder-flaps from the linen- to the muscle-corselet, or the gradual disappearance of the Chalcidian helmet's nose-piece. A problem was found in defining the exact point at which an object might have ceased to be worn in reality but continued to be depicted in art. This was especially the case with the Corinthian helmet, and no simple answer could be suggested.

Finally, one may briefly outline some ideas for future work in this

field. More could be done to compare the representations of the different types of helmets and corselets in the art. For example, how do the numbers of each compare in each of the general periods? On the vases, for example, the Chalcidian helmet was commonest in LA, but by CL the Thracian had replaced it at the top of the list. Are some forms of armour more closely associated with some scenes rather than others? For example, hoplitodromos runners wear only Corinthian and, most often, Chalcidian helmets; in arming scenes the Chalcidian helmet is commonest in LA but the Thracian in EC, and the muscle-corselet and Illyrian helmet are not represented at all.

The approach could be applied to later material from the Hellenistic period, and the development of Classical armour into Roman works and originals could be traced. In particular, a study might be made of the variations introduced by the copyists of the Classical sculpture.

More emphasis could be placed on the regional variety exhibited in the areas of Italy, not least the Etruscan, which has not been touched on here. And the significance of the coin-types, not only in the West but also the East, warrants further study into their artistic and historical contexts.

Lastly, the Athenian lists recording the treasures stored on the Acropolis deserve more attention. The vocabulary used, both for nouns and adjectives, could supply yet more detailed information on what was really in existence at the time, whether as booty or special artistic dedications. As suggested earlier, we look to the different geographical adjectives to characterise the various types of objects, but what relevance have the actual nouns and adjectives used by the Greeks themselves? Were they vague synonyms or specific terms? Can we identify Xenophon's "Attic corselet" with the linen-corselets of the Attic vase-paintings?