

A STUDY OF

THE ΚΕΛΗΣ EVENT

IN ANCIENT GREECE

FROM THE PRE-CLASSICAL PERIOD TO THE 1ST CENTURY B.C.

DAVID J. BELL



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ABBREVIATIONS

AA	Archäologischer Anzeiger.
ABSA	Annual of the British School at Athens.
AM	Mitteilungen des deutschen archäologischen Instituts. Athenische Abteilung.
CAH	Cambridge Ancient History.
CIG	Corpus Inscriptionum Graecarum.
IAG	L. Moretti, <i>Iscrizioni Agonistiche Greche</i> . Rome 1953.
IG	Inscriptiones Graecae.
JDAI	Jahrbuch des deutschen archäologischen Instituts.
JHS	Journal of Hellenic Studies.
LSJ	H.G. Liddell and R. Scott, <i>A Greek-English Lexicon</i> . New Edition, revised by H. Stuart Jones. Oxford 1925-40.
OCD	Oxford Classical Dictionary.
RE	Real-Encyclopädie der classischen Altertumswissenschaft.
SEG	Supplementum Epigraphicum Graecum.
SIG	W. Dittenberger, <i>Sylloge Inscriptionum Graecarum</i> . Third edition, Lipsiae 1915-24.

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ABSTRACT

This thesis covers an area of sport in ancient Greece which has largely been neglected in recent scholarship, namely the single-horse race with jockey, or the keles event.

The work, which comprises five chapters, avails itself extensively of ancient literary, epigraphical and lexicographical sources, and attempts to place its main arguments both in the context of horsemanship and sport in ancient Greece, and also of the social, political and economic background of the periods in question. In addition there are frequent parallels drawn with contemporary horse racing.

The first chapter of the thesis deals with the history of the keles event in ancient Greece from the Archaic period to the end of the first century B.C.. It traces the development of horse racing from its probable origin as a pastime of the mounted warriors of the Geometric period to its zenith in the Hellenistic period when it became the most popular equestrian event at the Panathenaic games.

The second chapter deals with the structure and organisation of horse racing in ancient Greece, and is divided into three sections. The first discusses the social position of owners and jockeys and the importance attached to a Panhellenic victory in the keles event. The second deals with the different formats of the keles event at different festivals and tackles the

difficult problem of the length of this race at the ancient Olympic games. The third examines the age categories set for the horse racing events at sports festivals in ancient Greece, and compares the handicapping system employed in modern racing with the disregard by the ancient Greek authorities for the effect of the weight carried by a horse in a race.

The third chapter concentrates on the hippodrome in ancient Greece. The racecourses described in Homer *Iliad* Book 23 and Sophocles *Electra* are analysed, along with those at Olympia, Mount Lycaeon, Isthmia, Athens and Delos. The chapter ends with a discussion on the alternative uses of the hippodrome, such as for agriculture, cavalry training, and recreation.

Chapter Four deals with the starting mechanism on the Olympic hippodrome. The hysplex type of starting apparatus is discussed first, with an attempt to explain further its working. It is suggested that such a device antedated the prow-shaped starting mechanism on the Olympic hippodrome described by Pausanias. The functioning of this latter device is then studied with reference to the two most recent comprehensive treatments of this subject, namely those of H.A. Harris and H. Wiegartz, and the apparent shortcomings of both are revealed.

In the final chapter, several terms connected with horse racing in ancient Greece which have caused both ancient and modern scholars the greatest problems as regards interpretation are analysed in an attempt to

clarify their various meanings in different contexts.

INTRODUCTION

Horse racing was the glamour sport of ancient Greece, patronized almost exclusively by royalty and aristocracy, for whom it provided a means of parading wealth and splendour before an eager public. From the time of Homer to the end of the Hellenistic period, equestrian events were regarded as the most prestigious contests at the games, a victory in which would confer undying fame upon the successful racehorse owner. Chariot racing, due to the extra expense involved and the more exciting spectacle it provided, was generally accorded greater status than single horse racing, with a victory in the four-horse chariot race at the Olympic games being the most coveted prize in ancient Greek sport. The κέλῆς event, however, from its origins as a form of military training for mounted warriors of the Geometric period to its zenith in the Hellenistic period when it had become the major equestrian event at the Panathenaic games, was regarded as one of the most important sporting contests in ancient Greece.

Read then through a modern bibliography of sport in ancient Greece and, contrary to expectations, you will find countless works on athletics, but not a single study of horse racing written this century. From such a bibliography, selecting a book on ancient Greek sport in general and opening it at the index will reveal a similar picture, with by far the larger part

of the work invariably being devoted to athletics. Turn then to the chapter, or section, on horse racing and you will find not more than a single paragraph on the κέλης event. Such is my apology for writing this thesis.

How is it then that a sport which was of such consequence in ancient Greece has come to be almost totally disregarded in modern scholarship? The answer must lie in the influence exercised by the founding of the modern Olympic games in 1896 on the attitude to ancient Greek sport. In the nineteenth century the German scholars, G. Lehndorff and E. Pollack, wrote two comprehensive works on horse racing and the hippodrome in ancient Greece. However, with the founding of the modern Olympic games at the turn of the century, attention was focussed exclusively on athletic events and amateurism. Proponents of the amateur ideal held up the ancient Greek attitude to sport as a role-model for the athletes of their day and idolized the golden age of Greek athletics in the Classical period. Scholars such as E. N. Gardiner, and J. Jüthner produced works on sport in ancient Greece, but with only a passing mention of the κέλης event. And such has been the situation ever since, albeit perhaps with a different motivation on the part of the authors. The aim of this thesis is, in a small way, to redress the balance.

In respect of the content of this work, I have set out to discover the origins of the κέλης event and to trace its development up to the end of the first

century B.C., and I have attempted to throw light on fundamental questions such as the length of races, the age classes and sex of the horses competing in these races, and the social position of the owners and jockeys involved. Since a study of the hippodrome and its layout is an integral part of any work on horse racing in ancient Greece, whether it concerns chariot racing, the κέλης event or both, I have devoted a considerable portion of this thesis to this subject, and in particular to the tantalizing question of the starting mechanism on the Olympic hippodrome. And finally, I have taken several of the ancient Greek terms connected with horse racing which have caused modern translators and commentators the greatest problems as regards interpretation, and attempted to clarify their various meanings in different contexts.

I have tried to derive my conclusions from an evaluation of the available ancient evidence and have consciously side-stepped the many unsubstantiated modern theories on horse racing to be found in the more popular works on ancient Greek sport. Throughout, I have endeavoured to set my arguments in the context both of horsemanship and sport in ancient Greece in general, and also of the social, political and economic background of the period in question, and where pertinent I have drawn comparisons with contemporary horse racing.

Certain subjects connected with horses and horsemanship have however been omitted. I have not dealt in

detail with the question of breeds of horses, as such a study requires the attention of a zoologist, not a classicist¹. And I have not touched the many subjects which belong under the broad heading of horsemanship, such as equitation, riding tack and stabling, since this constitutes a complete work in itself, and several such works already exist².

The principal ancient sources upon which I have drawn to formulate my theories span a period of nearly 2000 years and fall into three categories. The first are the works of ancient Greek authors which refer to horse racing. Homer, in Book 23 of his *Iliad*, devotes over 250 lines to the chariot race at the funeral games in honour of Patroclus, and Sophocles (*Electra* lines 698-760) provides a lengthy account of a fictitious chariot race at Delphi, based undoubtedly on the Pythian games of the Classical period with which he was personally familiar. The post-Hellenistic authors Nonnus and Quintus Smyrnaeus also contain descriptions of chariot and horse racing, but these are based substantially on the passage of Homer mentioned above and are influenced by the authors' experience of the Roman Circus. The epinician odes of Pindar and Bacchylides constitute a very valuable source of information on horse racing at the Panhellenic games in the fifth century B.C., particularly in respect of the royal owners who commissioned these poets. Xenophon's *Cavalry Commander* and *On the Art of Horsemanship* offer very informative glimpses

of the Athenian cavalry and in particular the displays which they performed, but suprisingly there is an almost total silence on competitive horse racing. On the Olympic hippodrome, Pausanias provides us with a detailed account, but typically, one from which many important facts have been omitted. The chronological listing of Olympic victors initiated by Hippias of Elis in the fifth century B.C., revised by Aristotle and preserved by later Greek scholars, has been enlarged and set out for us in L. Moretti's invaluable *Olympionikai*, and I refer frequently to this work in dating victories in the κέλης event at the Olympic games. Scholiasts, lexicographers and later writers, such as Eustathius and Johannes Tzetzes, offer a very useful source of information as they try to explain some of the more obscure aspects of horse racing in ancient Greece, though much of what they say needs to be treated with circumspection. And there is, of course, a wealth of information to be gleaned from the many passing references to horse racing, metaphorical or factual, scattered throughout the rest of ancient Greek literature.

The abundance of epigraphical evidence on horse racing in ancient Greece provides the second main source of information for this work. Catalogues of victors, especially those from the Panathenaic festivals of the second and first centuries B.C., prove invaluable, listing not only the winners at the games but also the type of events in which they competed. And in-

scriptions on the bases of statues erected by victors at the games often contain illuminating information about the owner or the track record of his horse.

The third source of evidence for my study consists of those archaeological finds connected with horse racing and sport in general in ancient Greece. The scant remains of the hippodrome on Mt. Lycaeon in Arcadia provide a useful insight into the size and layout of a racecourse for a major festival. And the supposed locations of the ancient hippodromes of Olympia, Delos and Isthmia each contribute, albeit in a small way, to our overall understanding of the ancient Greek racecourse. Finally, vase paintings provide a still frame of horse racing scenes, which can be examined and analysed in detail, contributing to our overall picture of the κέλως event in ancient Greece.

1. On horse breeds in ancient Greece, see Grattius *Cynegetica* 1.497-540. Oppian *Cynegetica* 1.158-367. J.K. Anderson, *Ancient Greek Horsemanship*, Berkeley 1961, pages 15-39.

2. cf. Xenophon *On the Art of Horsemanship*. J.K. Anderson, op. cit.. P. Vigneron, *Le Cheval dans l'Antiquité Gréco-Romaine*, Nancy 1968.

A HISTORY OF THE ΚΕΑΛΗΣ EVENT IN ANCIENT GREECE

THE PRE-CLASSICAL PERIOD

The destruction around 1200 B.C. of the Mycenaean civilization, which had predominated for four centuries in Greece and which had been marked by its vast wealth and splendour, precipitated Greece into the so-called Dark Ages. The ensuing period of about 400 years, during which no traces of writing can be found, remains very obscure for the modern historian. What is certain, however, is that the type of society which emerged at the end of this time of chaos was much more simple in terms of structure and organization than that of the earlier Mycenaean period.

The populace was split up into small independent communities in which power belonged to the aristocrat by virtue of land ownership. In the absence of a developed system of trade, the rest of the population depended for its livelihood on farming this land and looking to the landowner for protection. With the burden of agriculture resting on the peasant, the nobility was free to spend its time both dealing with matters concerning the military stability of the community, and also indulging in such leisure pursuits as hunting and athletics. Practically all the wealth in this social structure belonged to these aristocrats, and therefore they alone could afford to arm themselves for the even-

tuality of war. Consequently, military exchanges in the Geometric period must have been, tactically speaking, relatively simple affairs.

It is very probable that the horse played a leading role in battles during this period. Since war and the ἀγών ἵππικός or indeed war and sport in general were closely related throughout Greek history, it is important for our study of the κέλης event that we identify this role and analyse what influence the military use of the horse may have exerted on the inception and development of horse racing in ancient Greece.

There has been much debate¹ recently on the horse's role in war in this early society, much of it based on varying interpretations of the value of the evidence found in the poems of Homer and its applicability to the Geometric period of Greek history. J.K. Anderson² sees the two-horse chariot as having "dominated the battlefield", as was the case in the Homeric epics.

"The chariot carries two men - an armed warrior, who springs down to fight with sword and spear, and a charioteer, less honoured, though still of noble rank, who carries his superior about the battlefield and keeps close to him after he has dismounted in order to bring him safely out of the fight if need be [...]. Such tactics are illustrated on Attic vases of the eighth century B.C. and in my opinion persisted in Greece until then."

He finds little evidence of riding in literature and art before 700 B.C. and concludes that "in the prehistoric period of Greece, cavalry were generally

unimportant or indeed non-existent." From this it is clear that Anderson views the battle-scenes in the *Iliad* as characteristic of the methods of warfare prevalent in ancient Greece at the time Homer was alive.

P.A.L. Greenhalgh³, however, proposes that the mounted horse and not the chariot played the most important military role in the Geometric period. He uses as his starting-point the statement of Aristotle (*Politics* 1297b 16-19) that, in the Archaic period, knights constituted the earliest form of government after kingship and that the strength of the early Greek cities lay in their cavalry, since the tactics required for the effective formation of heavily-armed troops did not yet exist. Greenhalgh tries to prove that Homer and other poets of the Dark Ages

"heroized and archaized warfare of their own experience by transferring to the heroic chariot the military and social functions of the mounted horse."

He achieves this quite convincingly in two ways. Firstly, he parallels this apparent substitution of the chariot for the horse with a similar substitution throughout the *Iliad* of bronze armour, belonging obviously to the earlier Mycenaean period, for the normal iron weapons of the contemporary Iron Age. Secondly, he highlights the lack not only of special vocabulary in Homer concerning chariot combat, but also of the conception of the proper tactical role of massed chariotry. If the chariot was extensively employed in

battle in the time of Homer as Anderson suggests, why then, asks Greenhalgh, does Homer seem to have only a passing acquaintance with the technicalities of its usage? He concludes from this that

"the usage of the Homeric chariot, and the social and political dominance of the chariot-borne warrior, reflect exactly the roles of the mounted war-horse and its rider in the Geometric period."

Thus in the same way as we read in Homer's *Iliad* that heroes travelled to the battlefield in chariots and then dismounted to fight as heavily-armed foot soldiers, so, suggests Greenhalgh, did the warriors of the Geometric period in Greece, except that they used horses and not chariots for this purpose. Technically speaking, however, it might be misleading to call these mounted warriors "cavalry" since they do not seem to have fought on horseback in ordered groups.

This theory that there was widespread use of the mounted horse in the Geometric period is supported also by the work of M. Hood⁴, who states that there was a shift in emphasis from chariotry to cavalry in civilized countries during the first half of the first millennium B.C. and that the cavalry was beginning to play an important role alongside chariots in the Assyrian and other Near Eastern armies at this time. Unlike Anderson, both Hood and Greenhalgh have found considerable archaeological evidence from the Geometric period in the form of vases, craters and figurines to satisfy themselves that this transition was also taking place in Greece. Hood lists several factors as having

had considerable influence on this change: improvements in the art of breeding and horsemanship coupled with the invention of better bits; the much greater expense of keeping chariots as compared with single horses; and the general unsuitability of the Greek terrain for effective military manoeuvres with the chariot.

If then, contrary to Anderson's conclusion, a form of cavalry was known in ancient Greece in the Geometric period, this would have interesting implications for our study of the κέλης event. But in order to understand this connection satisfactorily, we must first briefly examine the beginnings of sport in ancient Greece and the close relationship which existed between sport and war at this period.

Sports historians today generally agree that the origins of ancient Greek sports festivals can be traced back to the ἐπιτάφιοι ἀγῶνες or funeral games of dead warriors in a misty period of the second millennium B.C.⁵ The ancients themselves certainly believed this to be the case, with the foundation myths of the four main Panhellenic festivals centred on such funeral games. These early funeral games, according to J. Ebert⁶, were at first probably influenced strongly by cultic traditions, and took the form of single combat between two warriors in which blood had to be shed to satisfy the gods. This grim custom, however, evolved with time into the more civilized form of ἐπιτάφιος ἀγών, consisting of mere sporting contests such as that for Patroclus which Homer describes in *Iliad*

Book 23. With this development of a more attractive series of athletics contests came the possibility of staging such sporting events on occasions other than just funeral ceremonies. Thus we read in Homer's *Odyssey* Book 8 that the Phaeacian King Alcinous held games as an after-dinner entertainment for his foreign guest Odysseus. As ancient Greek civilization progressed out of the Dark Ages, the popularity of such sporting events grew correspondingly. The inauguration of the great Panhellenic festivals in pre-Classical Greece was almost certainly the inevitable consequence of this increasing interest in sporting competition. And although the Greeks held these games at such cultic centres as Olympia and Delphi, where religious ceremony played an important part in their organization, it is unlikely that one could trace their institution back to the actual ἐπιτάφιος ἀγών of any historical figure, despite the traditional foundation myths.

Throughout this development however, the sporting disciplines themselves never lost the close connection with war which they had from the beginning. The theory that organized sport can trace its roots back to primitive funeral games in honour of a dead hero includes the proposition that the earliest type of athletic contest was itself actually a form of war, i.e. a bloody single combat. However, this remains in many respects only a theory. A more reliable picture of the early relationship of sport to war can be found in the epics of Homer, if these can be assumed to be a relatively

factual representation of the aristocratic way of life in the pre-Archaic period of Greek history, allowing of course for a certain amount of exaggeration and heroizing on the part of the poet.

The heroes whom we meet in the *Iliad* and *Odyssey* are portrayed not just as warriors but also as athletes. In the funeral games for Patroclus in Book 23 of the *Iliad*, all the well-known Greek champions take part, competing intensely to gain honour through a sporting victory. Many of the heroes such as Odysseus⁷, Diomedes and Ajax participate in more than one event, contributing to the image of the typical aristocrat of this period as having time to devote to athletic training and competition, when not engaged in war⁸. The sporting events themselves in which these heroes competed had their origin in the many martial disciplines performed on the battlefield. The complete programme which Achilles drew up for the funeral games of Patroclus is based on a variety of military or combat sports such as chariot-racing, boxing, wrestling, archery and spear-throwing. The Homeric hero competed against his comrades in the games using such skills and techniques as he would employ against the enemy on the battlefield. Thus, preparing for and competing in the athletic ἀγών served as a form of military training and vice versa⁹.

The introduction of the horse into the military tactics of the Greeks and their neighbours some time in the Geometric period would certainly have led almost

simultaneously to the inception of competitive horse racing. The leisurely aristocratic world of the ninth and eighth centuries B.C. allowed the frequent participation in and development of sport. One can therefore conclude that ridden horse race events gradually began to be staged throughout Greece, especially in those regions in which the cavalry played a leading military role, such as Eretria, Chalchis or Thessaly¹⁰. An increasing enthusiasm for this sport would invariably have been developed by its adherents as they not only experienced the thrill of participating in and watching such contests, but also as they appreciated the financial advantages of this equestrian event over its older and more expensive counterpart, chariot-racing, involving two- and four-horse teams.

This evolution of the horse race from a form of training or pastime for the aristocratic knights of the Geometric period, to becoming a standard competitive event at local festivals, reached its first high point in 648 B.C. when the κέλης event was included in the programme of the Olympic games for the first time¹¹. However, at the same time as the κέλης event was gaining acceptance and credibility as a sporting discipline, Greece itself was undergoing major economic, social and political change which would directly affect the complete spectrum of sport and therefore also horse racing.

As the Greek world gradually began to stabilize following the upheaval of the Dorian invasions and the

Dark Ages, its population increased correspondingly under the more settled conditions which ensued. To accommodate this expansion, many Greeks took to the seas and founded colonies on the coasts of Asia Minor and North Africa, and in Italy and Sicily. The new settlements which sprang up retained strong cultural and political links with the Greek mainland, preserving the Greek language and modelling their political system on that of their mother city. By far the most significant consequence of this period of colonization was its revolutionary effect on the development of trade. In the ninth and eighth centuries B.C., wealth had rested almost exclusively in the hands of aristocratic landowners with the remainder of the population depending largely for its existence on farming. Emigration of surplus population, however, opened up the possibility of trade between mother city and colony. Excess corn from Asia Minor could be exchanged on the Greek mainland for wine, oil or manufactured products, encouraging peasants to leave the land and come to the rapidly growing urban centres to set up in business as potters, carpenters or the like. Such a development in trade, and the accompanying movement away from basic farming into various forms of merchandizing, had the effect not only of expanding a hitherto very simple economy, thereby creating considerably more wealth, but also of weakening significantly the economic power exercised by the aristocracy over the ordinary peasant.

This power of the nobility was steadily eroded

and finally broken down in the seventh century B.C. by the transformation of military tactics throughout Greece which followed the increase in wealth enjoyed by much of the population. Many more citizens could now afford to arm themselves for battle, causing a shift of emphasis from the mounted aristocrat to the heavily-armed foot soldier (ὀπλίτης). Farmers and tradesmen fought side by side in organized fashion in the so-called *hoplite phalanx*, which displaced the cavalry as the mainstay of the typical Greek army.

This combination of socio-economic and military change not only had the effect of stripping the aristocratic class of much of its power, but also produced in the average citizen a psychological and political awareness which he had previously not felt. The political status quo of a city-state in which such transformations were being experienced became suddenly very vulnerable to revolution.

The three cities of Corinth, Sicyon and Megara in central Greece were the first to undergo such a revolution in the middle of the seventh century B.C.. In each case power was seized from the aristocracy by one man and his followers and a tyranny established. Although the security of his position was often unpredictable due to his dependence on military strength, the tyrant frequently improved the prosperity of his state by the promotion of trade and manufacturing, and arts and crafts. This form of government, however, rarely lasted longer than two generations and often ended as suddenly

as it had begun.

What effect then did this decline of the aristocracy throughout Greece have on sport? The rise of the *hoplite phalanx* as the main military arm of the state led to military and sporting training being extended to a much wider section of the population. Sport began to lose its aristocratic image and exclusivity due to the increasing demands of the city-state for the services of all its citizens. To accommodate the necessity of preparing a large section of the male population for service in the army, *gymnasia* and *palaestrae* were built in the sixth century B.C. as military and sports training centres, and these facilities were open to all.

The formation of city-states throughout Greece as a result of this economic revolution also played a central role in the development and popularization of sport. Within their framework, religion became more organized, and festivals and holy days were celebrated regularly with sports competitions as part of the programme. The rivalry which inevitably sprang up between city-states both on the mainland and in the colonies found its natural expression at such festivals. Thus the Panhellenic games were born, first at Olympia in the eighth century B.C. and then at the beginning of the sixth century B.C. at Delphi, the Isthmus and Nemea.

Such was the general picture when Crauxidas of Crannon in Thessaly won the first running of the

κέλης event at Olympia in 648 B.C.. It is in many respects fitting that the first winner of this contest should have come from Thessaly, an area of northern Greece especially renowned for horse breeding¹². Although we have no other biographical details about Crauxidas, we can however make several relatively safe assumptions about what type of person he may have been.

To enter and win the horse race at the Olympic games, one had to belong to the wealthiest class in Greek society. Ownership of a horse in the Archaic period of Greek history, as at all other times, was a luxury which could be enjoyed only by the aristocracy. Crauxidas must therefore have belonged to this social class. As a racehorse owner, it is very likely that he was obliged to serve in the cavalry of his city. Although the *hoplite phalanx* had become the dominant force in the military tactics of the seventh century B.C., the flatness of the Thessalian terrain ensured that the cavalry remained a particularly effective instrument of war in this area¹³.

The lists of victors at the Olympic games¹⁴ which have survived until today are silent on the winner of the κέλης event for the next 84 years until we are told that Callias, son of Phaenippus of Athens, won the horse race in 564 B.C.¹⁵. Victories in both the στάδιον race and the four-horse chariot race are better catalogued. This lack of literary information on the horse race from its institution at Olympia to the first half of the sixth century B.C. is not par-

ticularly surprising, since little has been recorded of sport in general before the institution of the three other main Panhellenic festivals at the beginning of the sixth century B.C., apart from the listing of some Olympic victors. As in many other areas of ancient Greek research, the early Archaic period in Greece offers the sports historian little by way of documentary evidence.

The sixth century B.C. has been widely labelled the "century of athletic organization" and justly so. Sports festivals were springing up all over Greece as a result not only of the popularization of sport, but also of the increasing political and social significance attached to an Olympic victory. Since the introduction to the Olympic games of the four-horse chariot race and the κέλης event in 680 B.C. and 648 B.C. respectively, two contests in which only the most wealthy could compete, the festival had grown in splendour and importance. Ambitious statesmen and would-be tyrants saw a victory at the games as an opportunity of gaining fame and recognition, thereby furthering their political careers. Cylon, an Athenian aristocrat, having won the δίαυλος foot race at Olympia in 640 B.C.¹⁶, tried unsuccessfully to seize power at Athens eight years later on the strength of the fame which this victory had brought him. We read also of Cleisthenes, the tyrant of Sicyon, winning the first running of the four-horse chariot race at Delphi in 582 B.C.¹⁷, and the same race at Olympia in 572

B.C.¹⁸.

City-states too realized the potential benefits of a victory at Olympia. Success at the games brought glory not only to the victor but also to the community from which he came¹⁹. Thus victorious athletes were rewarded generously and shown preferential treatment by their home towns. Plutarch (*Solon* 23.3) records that Solon instituted a law by which Olympic victors received 500 drachmas and Isthmian victors 100 drachmas from the city of Athens. Diogenes Laertius (1.55) states that this law was in fact passed to restrict the amount of money bestowed by the state on victorious sportsmen, suggesting that before Solon such rewards were even higher.

As a consequence of this interest shown by city-states and their rulers in sporting competition and its potential political value, three local festivals, the Pythian, Isthmian, and Nemean, were reorganized within the space of about 15 years, modelled to some extent on the Olympic games and accorded Panhellenic status. The Pythian games, which had formerly been celebrated every eight years and which had comprised solely an ἀγὼν μουσικός, were restructured in 586 B.C.²⁰ (some say under the direction of the tyrant Cleisthenes²¹), adopting the equestrian and athletic programme of Olympia, with the exception of the four-horse chariot race which was introduced to the festival for the first time in 582 B.C.. This festival was thenceforth held every four years in the third year of each Olympiad.

The Isthmian games, which had been held annually as funeral games in honour of the hero Melicertes-Palaimon and dedicated to Poseidon, were celebrated every two years from 580 B.C. onwards. The games initially comprised equestrian and athletics events, with the introduction of musical competitions in the Hellenistic period. The fact that this festival was sacred to Poseidon Hippios suggests that considerable emphasis was placed upon horse racing²².

The third local festival to attain Panhellenic rank at the beginning of the sixth century B.C. was the Nemean. This festival was reorganized in 573 B.C. to be held every second year on the model of the neighbouring Isthmian. According to I. Weiler²³, the main focus of the games was the athletics contests, although equestrian events were also part of the programme. Musical competitions, as at the Isthmian games, were added in the Hellenistic period. As regards the κέλης event, there is some confusion as to whether it was included in the equestrian programme of this festival. A note in the scholia to Pindar's *Nemean Odes* - ἦν δὲ γυμνικὸς καὶ ἄρμα, οὐκὶ δίφρος οὐδὲ κέλης - states that, alongside the athletics events, there was a four-horse chariot race but neither a two-horse chariot race nor a single-horse race. However, this may be a mistake on the part of the scholiast, since an agonistic inscription from the beginning of the third century B.C., records the victories of a certain Nicagoras of Lindos, who numbers

among his achievements successes at Nemea with the ἄρμα τέλειον, the συνωρίς τελεία, and the κέλης τέλειος²⁴. These were the main equestrian contests staged at both Olympia and Delphi and are therefore those which we would expect to find at this Panhellenic festival.

Seven years later in 566 B.C., Peisistratus, the future tyrant of Athens, is said to have instituted the Panathenaic games²⁵ during the archonship of Hippocleides²⁶. As will be seen later from an examination of several important agonistic inscriptions from the fourth and second centuries B.C., horse racing played a very significant role at this festival.

The mythical origin of the Panathenaic festival is well attested by ancient literary sources. Apollodorus (3.14.6) tells us that Erichthonius, a son of Athena and Hephaestus, became king of Athens, set up a wooden image of Athena in the Acropolis and instituted the festival of the Panathenaia. According to the Parian Marble²⁷, Erichthonius is reputed to have invented the chariot in connection with this festival.

Ἐριχθόνιος Παναθηναίοις τοῖς πρώτοις
 γενομένοις ἄρμα ἐξευσε καὶ τὸν ἀγῶνα
 εἰδείκνυε

(When the first Panathenaic games were held, Erichthonius yoked a chariot and staged the contest).

And a work attributed to Eratosthenes (Καταστερισμοί 13) records that Erichthonius himself took part in the chariot race which seems to have been a forerunner of the ἀποβάτης

(dismounting) event. This festival instituted by Erichthonius was called originally the Athenaia²⁸ until the time of Theseus, when legend has it that all the inhabitants of Attica were brought together into the city of Athens. To mark this gathering of the people into a single city, the Athenaia became known as the Panathenaia. However, Plutarch (*Theseus* 24.1) mentions neither Erichthonius nor a previous festival called the Athenaia, and suggests that Theseus alone was responsible for the institution of the Panathenaic games. This version, of course, does not agree with Apollodorus and Pausanias, and indeed according to Harpocration (s.v. Παναθήναια) both Hellanicus and Androtion, authoritative historians of the fifth and fourth centuries B.C. respectively, support the Erichthonius myth in their works on Attica. A scholiast on Plato (*Parmenides* 127a) combines both myths, offering the version which was probably accepted by the ancient Athenians.

ἡ τῶν Παναθηναίων ἑορτὴ καὶ ὁ ἀγὼν
 ἐτέθη μὲν πρῶτον ὑπὸ Ἐριχθονίου τοῦ
 Ἡφαίστου καὶ τῆς Ἀθήνης, ὕστερον δὲ ὑπὸ
 Ἐθεσέως συναγαγόντος τοὺς δήμους εἰς ἄστυ.

(The Panathenaic festival and its contest were instituted first of all by Erichthonius, the son of Hephaestus and Athena, and later by Theseus, when he had brought the people into the city).

Almost nothing concrete is known of the historical beginnings of the Athenaia, which was later to develop into the Great Panathenaic festival. Its institution, it seems, took place at a very early date. As regards its position in order of inauguration of the famous

Greek festivals, Aristotle places it second in chronological sequence only to that of the ancient Eleusinian mysteries²⁹. Helladius puts it even earlier - in fact naming it as the oldest of the major Greek festivals³⁰.

But which competitive events did this festival comprise in its earliest form? Most modern commentators propose that, alongside a sacrifice and a procession, the original contests at the Athenaia were equestrian events, mainly on the strength of the Erichthonius myth.

"Le concours hippique (ἵππικὸς ἀγών) est le plus ancien dans les fêtes panathénaïques. Il remonte, d'après la tradition, à Erichthonius lui-même."³¹

A. Martin³² agrees with this theory and believes that the reason why the Athenaia initially had only an ἀγών ἵππικός in its programme might be found in an examination of the origins of the Athenian people. He suggests that while the Olympic and Pythian festivals had a Dorian origin, the Athenaia was instituted by a rich and powerful Ionian aristocracy which enjoyed parading its wealth through the medium of equestrian events. The staging of equestrian contests in early Athens, perhaps as a part of funeral games, is attested by the depiction of chariot racing on vases from the late Geometric period found in Athenian graves³³.

This apparent monopolization of the games of the Athenaia by the ἀγών ἵππικός ended in the sixth century B.C. with the reforms of Peisistratus. From 566

B.C. the annual festival was supplemented every fourth year by a much larger festival, the programme of which included musical and athletics events in addition to horse racing. There is little doubt that this reorganization by Peisistratus was greatly influenced by the institution of the three Panhellenic festivals earlier that century. It has also been suggested that Peisistratus, an opponent of the nobility, introduced musical and athletic events to the festival in order to popularize the games and eradicate their purely aristocratic exclusivity³⁴.

In the Olympic victory lists, which serve as our principal source of information for horse racing in the sixth century B.C., there is no record of the winner of the κέλης event during the 50 years after Callias' victory in 564 B.C.. This half-century, however, brings to an end a long period of obscurity for the historian concerning the κέλης event which exists from its inclusion for the first time in the Olympic games of 648 B.C. to the end of the sixth century B.C.. The following two hundred years, which fall into the Classical period in Greece, have, by contrast, provided us with much more evidence on horse racing, not only increasing our knowledge of the victors in the κέλης event at Olympia and at many other Greek agonistic festivals, but also giving us valuable insights into the organization and development of this sporting discipline.

The list of κέλης victories at Olympia resumes again at the end of the sixth century B.C. with two

victories won by members of the family of a Corinthian called Pheidolas. Details of both these victories have been recorded by Pausanias (6.13.9-10). The first, which Pausanias does not date, but which L. Moretti³⁵ suggests occurred in 512 B.C., was won by Pheidolas with his mare Aura in rather extraordinary circumstances. According to Pausanias, the horse threw her jockey at the start of the race, but nevertheless continued running, crossed the finishing line first and was awarded the race by the judges. Were such an incident to happen at a race meeting today, the horse in question would be disqualified immediately due to its unfair weight advantage over its rivals³⁶. Such considerations were obviously mere trivialities to the Greeks, who would have regarded such a freak success as a blessing from the gods.

If indeed Pheidolas did feel so divinely favoured after his fortuitous victory with Aura at Olympia in 512 B.C., he must have felt equally blest when, according to Pausanias, his sons won not only the very next running of the κέλης event at Olympia in 508 B.C., but also a victory in the horse race at the Isthmian games, and both with the same horse, Lycus. Pausanias mentions that the inscription which he read at Olympia recording these victories stated that Lycus had won also a second Olympic victory.

ὠκυδρόμας, Λύκος Ἰσθμι' ἅπας, δύο δ'
 ἐνθάδε νίκαις
 φειδώλα παίδων ἐστεφάνωσε δόμους.

(Swift-running Lycus was victorious once at the Isthmus and twice here, crowning the house of the

sons of Pheidolas.)

But since he was unable to locate this second success of Pheidolas' sons in the Elean records of Olympic victors, he dismisses the inscription as inaccurate on this point. However, it is difficult to believe that such a mistake could have been made, and Moretti³⁷ offers the simple solution that one of the victories was in fact that of Pheidolas himself.

"Perciò la seconda vittoria (prima però in ordine di tempo) cui allude l'epigramma è senza dubbio quella stessa conseguita dal padre Pheidolas".

The epigram itself is of considerable interest for sports historians since it is one of a particular genre in which victorious athletes or horse owners listed the victories which they had achieved at the major festivals. From the first half of the sixth century B.C. onwards, after the Pythian, Isthmian and Nemean games had achieved Panhellenic status alongside those at Olympia, these four festivals together formed a circuit (περίοδος) with athletes competing at each in turn. If an athlete managed to win in the same discipline at all four festivals, he received the right to call himself περίοδονίκης, and this title became the most coveted in sport in ancient Greece.

The περίοδος took two full years to complete. The first year began at Olympia in August: the athletes then proceeded the following July to the Nemean games, after which they competed in the spring of the next year at the Isthmus, and finally in August of the same year at Delphi. An athlete who succeeded in winning at

these four festivals one after the other and in the correct sequence enjoyed the extra distinction of being called a περιόδονίκης ἐν τῇ περιόδῳ. However, one received the title περιόδονίκης as long as one won at all four festivals, no matter how long it took, or in which order the victories were achieved.

Success at all four festivals of the περίοδος was likewise the aim of racehorse owners. Pausanias (6.1.7., 6.2.1-2) records having seen inscriptions on two statues of equestrian victors at Olympia which stated that their respective owners had won also at Delphi, the Isthmus and Nemea. The first statue was dedicated by Polycles of Sparta for his Olympic victory in the four-horse chariot race dated by Moretti³⁸ to 440 B.C.. His other three Panhellenic victories were also with the chariot. The second statue was erected by Xenarces, a Spartan horse-breeder. However, we are not told whether Xenarces won with the chariot or with the κέλης. Moretti³⁹ assumes it was with the chariot and dates his Olympic victory to 388 B.C..

Three Hellenistic epigrams⁴⁰ suggest further that the title περιόδονίκης was also sought after by racehorse owners. In each, an old racehorse, which in its retirement is chained to a millstone for grinding corn, looks back to when it won victories at the four Panhellenic festivals, and bemoans its undeserved fate. Whether these epigrams have any basis in historical fact is impossible to say, but the very mention of racehorses winning at all four Panhellenic games indi-

cates that such a feat may not have been unusual in ancient Greece. Returning then to our original inscription in Pausanias celebrating the victories of Pheidolas' sons, we see that they were successful at only two of the festivals of the περίοδος - Olympia and the Isthmus, which for them as Corinthians would



have been their local festival. It is likely that they also competed at Delphi and Nemea, but since they were unsuccessful, their efforts went unmentioned on this dedication. What is however of considerable importance for our study is the fact that they won their victories with the same racehorse. Was it a greater distinction to gain the title περιόδονίκης with the same racehorse or chariot team at all four festivals? Or was

it indeed a *sine qua non* of ancient Greek horse racing that one had to win at all four Panhellenic games with the same horse or chariot team before even being entitled to the epithet *περιοδονίκης*? In the three epigrams from the Hellenistic period mentioned above, we read of the same racehorse winning at all four Panhellenic festivals, but the nature of this evidence makes it difficult to draw any reliable conclusions⁴¹.

The closest parallel in modern Britain to an ancient Greek *περιοδονίκης* in horse racing would perhaps be the winner of the so-called "Triple Crown". To receive this title, which can be contested only by three-year-old racehorses, a colt must win the 2000 Guineas over one mile (1600m) at Newmarket in the spring, the Derby over one mile and a half (2400m) at Epsom in the summer, and the St. Leger over one mile and three quarters (2800m) at Doncaster in the autumn. There have been only four winners of the English Triple Crown this century, the last being Mr. Charles Englehardt's brilliant Nijinsky in 1970.

From the introduction of the four-horse chariot race and the *κέλης* event in 680 B.C. and 648 B.C. respectively, the *ἀγὼν ἵππικός* of the Olympic games remained for about 150 years a two-event programme. Its counterpart, the *ἀγὼν γυμνικός*, on the other hand had been steadily expanding since the institution in 776 B.C. of the *στάδιον* race and, by 520 B.C. when the *ὀπλίτης* (foot-race in armour)

was included for the first time, its programme had increased to comprise twelve events and was as such virtually complete. Influenced perhaps by this imbalance, the Olympic authorities added two new disciplines to the equestrian programme at the beginning of the fifth century B.C., thus at a stroke doubling the size of the ἀγῶν ἵππικός. The first of these new events, the ἀπήνη (mule-chariot race), was introduced, according to Pausanias (5.9.1), in the 70th Olympiad (500 B.C.) and the second, and more interesting for this study, the κάλπη (dismounting race), four years later in 496 B.C.. To appreciate how such a situation could have arisen whereby at the end of the sixth century B.C. the athletics events at Olympia outnumbered the equestrian events by a factor of six to one, one must look at the development of the ἀγῶν ἵππικός at the Olympic festival and see how it fitted into the games programme as a whole.

Before tackling such a problem, one must take into consideration the fact that the early chronology of the Olympic games is by no means certain. Towards the end of the fifth century B.C., the philosopher and orator Hippias of Elis compiled a catalogue of Olympic victors which Aristotle revised and improved a century later. Unfortunately neither of these lists has survived, but both were known to later Greek writers who based their own catalogues on them. And it is from the works of these later Greek authors that modern sports historians have been able to draw up a reasonably comprehensive

Olympic victory list. However, the most obscure period of this Olympic chronology remains today, as it undoubtedly was in the time of Hippias, the first two hundred years. For it is highly unlikely that the organizers of this festival kept any form of systematic records at this early stage, and therefore the validity of our victory lists at this point must be called into question. Thus one should not simply assume that for the first 52 years the Olympic games consisted solely of the στάδιον race merely since for the initial 13 Olympiads Hippias listed the victors in only this event. It is quite possible that from the beginning the games included additional events, but that the victors in these other disciplines were not recorded. Until more conclusive evidence appears, which is itself unlikely, there will always be some justifiable doubt as to the reliability of the traditionally accepted Olympic programme and its catalogue of victors.

Concerning the ἀγών ἵππικός itself, sports historians have for a long time regarded the placing of the equestrian events within this Olympic programme as something of an enigma. Why, asks I. Weiler⁴², did the Olympic authorities wait nearly 100 years after the institution of the festival in 776 B.C. before introducing chariot racing, the most important sporting event in Homer's epics? J. Ebert⁴³, who opens his discussion on horse racing at Olympia with this very problem, believes that the answer is to be found primarily in cultic tradition. He also considers it possible that

the newly-instituted festival needed time not only to ensure that the Olympic truce was being widely observed, thus guaranteeing the safe transport of expensive racehorses from distant areas of Greece, but also to erect appropriate buildings for the stabling of these horses. Other scholars, notably E.N. Gardiner⁴⁴, have suggested that equestrian events must have been part of the Olympic festival much earlier than 680 B.C..

"There can be no doubt that in the first Olympiad the programme included at least [...] the foot-race, the diskos, the spear, boxing, wrestling and the chariot race. If the Olympic games did develop from a single event, it was probably not from the foot-race, but rather from the armed fight or the chariot race."

There is much to be said for such a theory. Pelops, the mythical figure who competed against Oenomaus for the hand of his daughter Hippodameia in the chariot-race described by Pindar in his first *Olympian* ode, was, according to Pausanias (5.13.1), the most honoured hero at Olympia. At one of the turning posts on the Olympic hippodrome, there was a statue of Hippodameia about to crown the victorious Pelops with a ribbon⁴⁵, and during each Olympic festival a black ram was sacrificed in his honour⁴⁶. Thus the mythical tradition of Olympia was closely bound up with chariot racing. This connection is further strengthened by a reference in Homer (*Iliad* Book 11 lines 698-700) to four-horse chariot racing at what could have been an early form of the Olympic games. Nestor, the horseman (ἵππότης), mentions that his

father Neleus sent a four-horse team to compete for a tripod at Elis. However, perhaps the most compelling reason for questioning the relatively late introduction of chariot racing into the Olympic games is the fact that in the funeral games for Patroclus, the main description of sporting events in Homer, the chariot race is the first and unquestionably the most important contest.

Another ground offered by some for doubting the accuracy of the first two centuries of the Olympic programme with particular regard to the ἀγῶν ἵππικός is the fact that the first equestrian event to be introduced was for the four-horse chariot and not for the more common two-horse team. The warriors in Homer's *Iliad* both drove to battle and competed in the games in the two-horse chariot. Why then, was the four-horse chariot race instituted first at Olympia and the two-horse chariot race some two and a half centuries later? Some sports historians have concluded that the race for the two-horse chariot must have been the earliest equestrian event at Olympia and that it was later replaced by the four-horse chariot race. However, the diminishing role of the two-horse chariot in the military tactics of the Greeks in the Geometric period and the subsequent rise of the cavalry may well provide the main reason why in 680 B.C. the Olympic authorities introduced the purely sporting four-horse chariot race as the first equestrian event in the games programme.

The whole question of the validity of the early part of the Olympic programme, especially where it concerns the late introduction of equestrian events, arises for many sports historians from the assumption that the Olympic games were an important sports festival right from their supposed institution in 776 B.C.. They find it inconceivable that for the first 52 years this festival could have comprised only one event, the *στάδιον* race, and that the exciting and brilliant chariot race had to wait almost a century before being included in the programme. Thus they deduce that our sources are unreliable and that the dating of the introduction of particular events to the Olympic programme is inaccurate. If one assumes however that the great Olympic games of later centuries had their origin simply in the *ἀγὼν γυμνικός* of a local religious festival in the Geometric period, which, as it added more sporting disciplines to its programme, gradually grew in importance, then the late introduction of the prestigious equestrian events can be logically explained as being a significant step in the evolution of a purely local event into a festival of Panhellenic status. So much then for the arguments concerning the introduction of the *ἀγὼν ἵππικός* at Olympia.

Shortly after the institution of the *κέλης* event in 648 B.C., the Olympic authorities, prompted by the changing social and military situation in Greece, added four athletics contests for boys to the games

programme. These events - the στάδιον race, wrestling, boxing, and the pentathlon - provide a clear indication of the important rôle which athletics exercises were beginning to play in the education and development of the Greek youth. At a time when the emphasis in military tactics had shifted from the aristocratic knight to the armed foot-soldier, and when the security of individual city-states depended on their ability to prepare an effective armed force from their adult male population, it is only natural to find boys being trained as the future defenders of their community.

In the following century, city-states began to build *gymnasia* and *palaestrae* as military education centres for the whole male population, in which both the young were prepared for future service in the army, and adult soldiers themselves could train for battle. The Olympic games programme again reflected this development by the institution in 520 B.C. of the foot-race in armour for hoplites.

The ἀγών ἵππικός at Olympia was regarded not so much as providing an opportunity for testing military training in public competition (the four-horse chariot was almost never used in battle⁴⁷) as was the case with the ἀγών γυμνικός, but rather as attracting aristocratic horse owners to the games. This accorded the Olympic festival a degree of splendour which it otherwise would not have enjoyed, and also provided breath-taking sporting spectacle in the long,

hazardous chariot race and, to a lesser extent, the short but dynamic κέλης event.

The doubling of the ἄγων ἵππικός to four contests at the beginning of the fifth century B.C. with the introduction of the mule-chariot race and the κάλπη event was brought about probably by the inequality in number between athletic and equestrian events. The Olympic authorities, confronted with this unevenness, were perhaps pressurized not only by horse owners who demanded a greater number of events in which they could win an Olympic crown of olive leaves, but also by spectators who would have sooner considered travelling to Olympia from all over Greece if they were to be offered a longer, more attractive horse racing programme.

The most difficult decision faced by the Olympic authorities was probably that of determining which new events should be introduced. The mule-chariot race was instituted in 500 B.C. but, according to Pausanias (5.9.2), it was neither a traditional event nor a dignified spectacle, and it was dropped from the programme in 444 B.C.. The same fate befell the other new addition to the equestrian programme, the κάλπη, introduced in 496 B.C.. This discipline was closely related to the κέλης event in that it was a race for horse and jockey, the difference being that the jockey dismounted at the last part of the course, probably at the entrance to the final straight, and ran alongside his mount to the finishing-line⁴⁸.

This event had distinct military associations. During the Geometric period, warriors rode to the battle-field and dismounted to fight on foot, and it is this practice which is reflected in the κάλπη. A similar dismounting event involving the chariot (ἀποβάτης) seems to have been traditionally the most important contest in the ἀγών ἵππικός of the Panathenaic games, tracing its origin back to the foundation myth of the festival. A work attributed to Demosthenes (61. 24) praises the ἀποβάτης as the noblest and finest of contests - τὸ σεμνότετον καὶ κάλλιστον τῶν ἀγωνισμάτων.

The Olympic authorities, however, obviously did not hold the κάλπη in quite such high regard as did Demosthenes the ἀποβάτης, for in 444 B.C. it was dropped from the games programme along with the mule-chariot race, reducing the ἀγών ἵππικός to its former state of two events. A number of factors may have contributed to this decision, such as a lack of interest on the part of the spectators, an insufficient number of participants, or perhaps the fact that the last stage of the race may have been an anti-climax being slower than the earlier part. It is worth noting here that the κάλπη does not appear to have been part of the ἀγών ἵππικός of the three other main Panhellenic festivals.

In 496 B.C., the same year as the κάλπη was introduced to Olympia, the κέλης event at this festival was won by Empedocles from Acragas in Sicily, the

grandfather of Empedocles the famous philosopher from the same city⁴⁹. His victory is made more significant by the fact that it marks the beginning of a remarkable period of success by Sicilian racehorse owners in the ἀγῶνες ἵππικοί of the four main Panhellenic festivals in the fifth century B.C.. From our reconstructed list of Olympic victors and from the epinician odes of Pindar and Bacchylides, we have evidence of at least 15 Panhellenic equestrian victories won by Sicilians over a period of 50 years. If our records were complete, this figure would without doubt be considerably higher.

This period of success for Sicily in the ἀγῶνες ἵππικοί of the Panhellenic games coincides with and finds its explanation in the rule of a family of Sicilian tyrants. In 491 B.C., Gelon, son of Deinomenes and a former cavalry commander, became tyrant of Gela in Sicily. Six years later, he proclaimed himself ruler of neighbouring Syracuse and handed the control of Gela over to his younger brother Hieron. Meanwhile his father-in-law Theron had established a tyranny at Acragas in 488 B.C.. Under the government of these three tyrants, Sicily became one of the richest and most powerful areas of the Greek-speaking world. Having achieved supremacy at home, Theron, Gelon and Hieron desired, as did the rulers of all Greek colonies, to win fame and recognition for themselves and for their cities on the Greek mainland. They realized that victories in the Panhellenic games

would guarantee the renown they sought - a renown which was frequently attended by substantial political and economic benefits.

Several factors contributed to focusing the attention of these Sicilian tyrants on the equestrian events at the Panhellenic festivals. Firstly, the chariot and horse races had always been the most prestigious events at the games due to their associations with the aristocracy and the expense involved in competing in such contests. Sending chariot teams or racehorses to Olympia and Delphi placed no appreciable financial burden on these rulers, whose coffers had been swollen by revenues from trade and also the spoils of war, such as those taken from the Carthaginians at Himera in 480 B.C.. Rather such displays of extravagance served as an effective advertisement for the wealth of Sicilian cities.

Secondly, Sicily was renowned in the ancient world for its horse breeding and cavalry⁵⁰. In the few works which have survived from antiquity in which horse breeding is mentioned, Sicily is ranked frequently beside Thessaly for its famous horses⁵¹. Like the Thessalian, the Sicilian cavalry was particularly strong. At the battle of Himera in 480 B.C. in which the Sicilians defeated the invading Carthaginians, the 5000-strong Sicilian cavalry played a decisive role. And in his history of the Peloponnesian war, Thucydides describes the effectiveness of the Sicilian cavalry in harassing the Athenian enemy.

The Sicilian tyrants themselves had direct links with horses. As already mentioned, Gelon was the commander of the cavalry at Gela before he became tyrant in 491 B.C.. With such a high military rank, he would have spent considerable time on horseback, either in combat, training or taking part in horse racing. His brother Hieron was called by Bacchylides (5.2) Συρακοσίων ἵπποδινῆτων στρατηγέ (general of the horse-driving Syracusans⁵²), and it could be inferred from Pindar's second *Pythian Ode* (lines 5-12) that he personally drove his own team to victory in the four-horse chariot race at the Theban Iolaia in 475 B.C.⁵³.

Of the fifteen recorded Panhellenic victories in equestrian events won by Sicilians in the first half of the fifth century B.C., five were achieved in the κέλης event. The first, as already stated, was recorded by Empedocles in 496 B.C. at Olympia. The remaining four were all won by Hieron, by far the most successful Sicilian racehorse owner of this period, with six Panhellenic victories in all. Hieron's desire to win further renown for himself and his city by commissioning the most gifted poets of his time, such as Simonides, Pindar and Bacchylides to commemorate these victories in song has had the fortunate result of substantial literary evidence of his successes surviving from antiquity⁵⁴. However, there still remains a degree of uncertainty as to some important details of his victories.

In his third *Pythian Ode*, Pindar celebrates Hieron's success at Delphi with his racehorse Pherenicus. The scholiast states that Hieron won the horse race at the Pythian games in 482 and 478 B.C. - ἐνίκησε δὲ ὁ ἱέρων τὴν μὲν κτ' Πυθιάδα καὶ τὴν ἐξῆς κέλητι. The plural στεφάνοις (crowns) in line 73 of this ode suggests that both victories are being celebrated here, and that both were therefore won by the same horse, Pherenicus

τῷ μὲν δίδυμας χάριτας,
 εἰ κατέβαν ὑγίειαν ἄγων χρυσεάν κῶμόν
 τ' ἄέθλων
 Πυθίων αἴγλαν στεφάνοις,
 τοῦς ἀριστεύων φερένικος ἔλ' ἐν Κίρρα ποτέ
 [...].

(If I had disembarked with a double favour for him, bringing with me golden health and a shining victory-song celebrating the Pythian crowns which the all-conquering Pherenicus won once at Cirrha [...]).

We know from the *Oxyrhynchus Papyrus* victory list that Hieron also won two Olympic victories in the κέλης event in 476 and 472 B.C.. Both Pindar (*Olympian* 1) and Bacchylides (*Ode* 5) celebrate the first of these victories, and both mention that Pherenicus was Hieron's racehorse on that occasion. It would thus appear that Pherenicus won one Olympic and two Pythian κέλης events over a period of six years. If we assume that he did not begin his racing career before the age of three, then he must have been at least nine years old when he won his Olympic victory in 476 B.C.. Some commentators have rightly questioned the likelihood of such a feat.

H. Maehler⁵⁵ suggests that Pherenicus may not have won at Delphi in 482 B.C., and that the plural στεφάνους in Pindar *Pythian* 3.73 could be a poetic plural. He also considers that Bacchylides (5.41) seems to refer to only one previous Pythian victory. If Pherenicus had won twice at Delphi, argues Maehler, why does Bacchylides not mention it? This argument however, as Maehler freely admits, is by no means conclusive.

Having examined the literary evidence which supports this standpoint, let us now regard such an achievement from a sporting point of view. To make an adequate assessment of the feasibility of this performance of Pherenicus, we need to consider such factors as the distance of the race, the age of the horses involved, the weight of the jockeys and the standard of the competition. Unfortunately, as regards ancient Greek horse racing, most of these points remain unclear. However, a brief examination of the available evidence may prove useful.

One of the most important factors to be considered is the distance over which Pherenicus would have had to compete to win these victories. It is argued elsewhere in this work that the κέλης event at Olympia may have comprised only one circuit of the track, a distance of probably four furlongs (800m), and as such was purely a sprint race. Whether the Pythian κέλης event was also four furlongs long can only be conjectured. One would have to suppose not only that the hip-



podrome at Delphi was the same length as that at Olympia, but also that the κέλης event at Delphi likewise comprised only one circuit of the track. Such a viewpoint assumes a certain amount of cooperation between the organizers of these festivals and standardization on the part of the ancient Greeks. We know from excavations that the στάδιον races at all four main Panhellenic festivals were roughly the same length, i.e. 180-200m. But this, rather than directly suggesting liaison between authorities responsible for organizing the games, was more due to the fact that a στάδιον was a standard measurement of 600 feet in ancient Greece. Consequently, στάδιον races, as for example mile races today, had to be the same length⁵⁶. Whether the four main Panhellenic hippodromes also had a standard length of perhaps two stades between the turning posts is impossible to say.

The distance of the κέλης event at Delphi and Olympia is particularly significant in the case of Pherenicus since the ability of a horse to compete successfully over certain distances can be influenced by its age. As a racehorse grows older, it gradually loses its speed and becomes more effective over longer distances where stamina is important. Thus the long and gruelling Grand National at Aintree over four and a half miles (7200m) has often been won by horses of ten years of age or more. The mighty Red Rum, who won this famous race three times and was runner-up twice in the 1970s, and who recorded his final victory at the age of

twelve, started his racing career as a two-year-old sprinter. If we assume that Pherenicus won two Pythian victories and one Olympic victory, and our calculation as to the length of the Olympic κέλης event is correct, then Pherenicus must have won a four-furlong sprint race at Olympia as at least a nine- or ten-year-old against what was probably a strong field of younger horses. It would be very difficult indeed under today's conditions for a racehorse to emulate this performance.

Conditions however were very different in ancient Greece. We have already seen from the episode with Pheidolas and his mare Aura that the weight factor, which is so important in modern horse racing, appears to have been disregarded by the ancient Greek authorities⁵⁷. Thus if Hieron employed a particularly lightweight jockey, Pherenicus would have enjoyed a considerable advantage over another horse of similar merit with a heavier rider. Pausanias (6.12.1) tells us that he saw a monument at Olympia commemorating Hieron's two victories in the κέλης event and his victory with a four-horse team. The statue in question consisted of a bronze chariot with a man (ἄνθρωπος) mounted on it, and a racehorse on either side, on which were seated boys (παῖδες). One of these two horses must have represented Pherenicus, and, as both riders were boys, it would seem that it was indeed Hieron's practice to give his horses as little weight to carry as possible.

Concerning the standard or numerical strength of

the opposition Pherenicus had to face at either Olympia or Delphi, we know nothing. Neither Pindar nor Bacchylides mentions the number of runners he competed against. From Pausanias' description of the prow-shaped starting mechanism at Olympia, which had stalls built into its sides which were each 400 feet long⁵⁸, we can conjecture that large fields were normative for equestrian events at this festival, otherwise such a large starting device would have been superfluous. We know also from Pindar's fifth *Pythian* Ode (lines 49-51) that over 40 chariots took part in the chariot race at Delphi in 462 B.C.. However, neither of these two instances speaks directly for the κέλης event, and it may have been the case that horse breeders concentrated their efforts on the more prestigious chariot race and neglected the κέλης event, although it would have been much less expensive to train a single racehorse than a four-horse team.

Both Pindar and Bacchylides mention that in winning the Olympic κέλης event in 476 B.C., Pherenicus did not need to be whipped during the race, implying that he won very easily. Bacchylides (5.43-5) goes even further and states that Pherenicus had never been defeated in his whole racing career.

οὐπὼ νιν ὑπὸ προτέρων
 ἵππων ἐν ἀγῶνι κατέχρανε κόνις
 πρὸς τέλος ὀρνύμενον

(He has never run on to the finish showered by the dust of horses in front).

It is possible that Hieron with his passionate in-

terest in horse racing and his access to great wealth may have bred in Pherenicus a freak racehorse which over a period of six years or more competed in the most prestigious events and remained unbeaten. And under the ancient Greek racing system, it is conceivable that such an outstanding racehorse never faced a serious challenge.

THE CLASSICAL PERIOD

The Classical period was an epoch in which not only architecture, literature and culture flourished in the main Greek cities, but also in which sports festivals and the Panhellenic games reached new heights in popularity and splendour. The defeat of the Persians at the beginning of the fifth century B.C. inspired in the Greeks a feeling of self-confidence and pride, especially in their military prowess. Sparta, whose soldier-athletes were used to training in the city's *gymnasia* and *palaestrae*, had been the leading land force against the less heavily-armed Persians, and consequently considered herself the most powerful state in Greece. The Athenians, by virtue of their invincible navy and their decisive success against the Persians at Salamis, were likewise in triumphant mood.

The sports contests at the Panhellenic festivals provided the citizens of these states with a fitting outlet for their feeling of athletic and military superiority over the barbarians. The victory list for the first Olympic festival after the Persian wars, 476 B.C., contains names of sportsmen from all over the Greek-speaking world, whose number includes such celebrated figures as Hieron of Syracuse and Theron of Acragas in the equestrian events, and Euthymus of Locris and Theagenes of Thasos in the boxing and *pancratation* events respectively. New festivals were instituted, such as the four-yearly Eleutheria at

Plataea to commemorate the victory of the Greeks over Mardonius in 479 B.C., and it is likely that many local festivals sprang up due to this upsurge in interest in sport during the Classical period.

Horse racing continued to be regarded as the most prestigious sport at the games and received patronage from some of the richest citizens in the Greek world.



Sicilian tyrants, such as Hieron and later Dionysius⁵⁹, paraded their vast wealth before the crowds at Olympia and Delphi. Alcibiades, the flamboyant Athenian general, in order to show the Spartans during the Peloponnesian war that Athens was still a force to be reckoned with, sent a record seven four-horse chariots

to the Olympic games of 416 B.C. and came back with first, second and fourth places⁶⁰. And Philip the king of Macedonia won the κέλης event at Olympia in 356 B.C., the four-horse chariot race in 352 B.C. and the two-horse chariot race in 348 B.C.⁶¹.

During the Classical period, the ἀγών ἵππικός of the Olympic games and other Greek festivals began to expand. In 408 B.C. the συνορίς (two-horse chariot race) was officially included in the Olympic games for the first time⁶², and ten years later the same event was added to the equestrian programme at Delphi⁶³. Some twenty years later, the ἄρρα πωλικόν (four-horse chariot race for young horses) was instituted at both the Olympic and Pythian games, enlarging the number of events in the ἀγών ἵππικός of these festivals to four. An inscription⁶⁴ dating to the first half of the fourth century B.C., listing various athletic, equestrian and musical competitions and their prizes at the Panathenaic games, shows that the ἀγών ἵππικός at this festival was also flourishing and that its programme was much more comprehensive than those of the four main Panhellenic games.

The inscription, although incomplete, is clear evidence of the importance of horse racing at the Panathenaic games in particular, and to the Athenians in general. It has been suggested earlier that the forerunner of the Panathenaic festival, the yearly Athenaia, may initially have contained only equestrian

events in its programme. Its foundation myth centred on Erichthonius who invented the chariot, and his institution of horse racing at the festival. Thus when the Great Panathenaic festival was instituted early in the sixth century B.C., equestrian events, as can be presumed from this inscription, played a major role in the overall games programme. And the Athenians did not confine their love of horse racing to festivals in their home city. A glance through the lists of equestrian victors at Olympia reveals many Athenian triumphs achieved by such household names as Alcmaeon, Miltiades, Cimon, Callias and Alcibiades.

The popularity of horse racing was greatly influenced by the existence in Athens of a class of wealthy citizens known as ἵππεῖς (cavalrymen)⁶⁵. This was the second census class introduced by Solon in 594 B.C., comprising Athenians whose income was between 300 and 500 *medimnoi* of corn and who therefore had sufficient means to keep a horse and equip themselves for cavalry service. An examination of the following inscription from the Panathenaic games will show the degree of power exercised by the ἵππεῖς over the organization of the ἀγῶν ἵππικός at this festival.

	[παιδὶ στά]διον νικῶντι		ἵππων πωλικῶι ζεύγει
[Α]	<u>ἐλαί</u> ο ἀμφορῆς	ΔΔΔΔ	<u>ἀμο</u> [ρ]ῆς ἐλαίο
Δ	δευτέρωι	ΠΙΙΙ	δευτέρωι
	παιδὶ πένταθλον νικῶντι		ἵππων ζεύγει ἀδηφάγωι
ΔΔΔ	<u>ἀμο</u> ρῆς ἐλαίο	ΗΔΔΔΔ	<u>ἀμο</u> ρῆς ἐλαίο
ΠΙ	δευτέρωι	ΔΔΔΔ	δευτέρωι
	παιδὶ παλαιστεῖ νικῶντι		πολεμιστηρίοις
ΔΔΔ	<u>ἀμο</u> ρῆς ἐλαίο		ἵππωι κέλητι νικῶντι
ΠΙ	δευτέρωι	ΔΠΙ	<u>ἀμο</u> ρῆς ἐλαίο
	παῖδας πύκτει νικῶντι	ΙΙΙΙ	δευτέρωι
ΔΔΔ	<u>ἀμο</u> ρῆς ἐλαίο		ἵππων ζεύγει νικῶντι
ΠΙ	δευτέρωι	ΔΔΔ	<u>ἀμο</u> ρῆς ἐλαίο
	παιδὶ παγκράτιον νικῶντι	ΠΙ	δευτέρωι
ΔΔΔ	<u>ἀμο</u> ρῆς ἐλαίο		ζεύγει πομπικῶι νικῶντι
ΠΙΙΙ	δευτέρωι	ΙΙΙΙ	<u>ἀμο</u> ρῆς ἐλαίο
	ἀγενεῖωι στάδιον νικῶντι	Ι	δευτέρωι
ΑΔ	<u>ἀμο</u> ρῆς ἐλαίο		ἀφ' ἵππο ἀκοντίζοντι
ΔΙΙ	δευτέρωι	Π	<u>ἀμο</u> ρῆς ἐλαίο
	ἀγενεῖωι πεντάθλωι νικῶντι	Ι	δευτέρωι
ΔΔΔΔ	<u>ἀμο</u> ρῆς ἐλαίο		νικητήρι[α]
ΠΙΙΙ	δευτέρωι	Η	<u>παι</u> σῖμ πυ[ρρι]χισταῖ(ς) βοῦς
	ἀγενεῖωι παλαιστεῖ νικῶντι	Η	<u>ἀγε</u> νείοις πυ[ρ]ριχισταῖς βοῦς
[ΔΔ]ΔΔ	<u>ἀμο</u> ρῆς ἐλαίο	Η	<u>ἀνδ</u> ράσι πυρριχισταῖς βοῦς
[ΠΙΙΙ]	[δ]ευτέρωι	Η	<u>εὐ</u> ανδρίαί φυλῆι νικῶσει βοῦς
	[ἀγενεῖ]ωι πύκτηι νικῶντι	Η	<u>φυ</u> λῆι νικῶσθι βοῦς
[ΔΔΔΔ]	[ἀμο]ρῆς ἐλ[αί]ο	ΔΔΔ	<u>λα</u> μπαδηφόρωι νικῶντι ὑδ[ρία]
	[ἀγενεῖωι παγκράτιον νι]κῶντι		<u>νικ</u> ητήρια νεῶν ἀμ[ίλλης]
		ΗΗΗ	τῆι φυλῆι τῆι νικῶσε[ι]

This inscription lists six equestrian events. The first two are chariot races - one for young horses (ἵππων πωλικὸν ζεύγος) and one for fully-grown horses (ἵππων ζεύγος ἀδηφάγον). Whether these contests were for two- or four-horse teams is difficult to say. The term used here for chariot, ζεύγος, had the basic meaning of "yoke" in antiquity, and, since most animals were yoked in pairs, it often came to denote a two-horse team. However, it had also the meaning of four-horse chariot, as in the phrase ζεύγος

τέθριππον⁶⁶, or when being contrasted with a two-horse team - ἢ συνωρίδι ἢ ζεύγῃ νενίκηκεν⁶⁷. One is tempted to translate ζεύγος here as four-horse chariot since both these events would therefore correspond to the ἄρμα τέλειον and the ἄρμα πωλικόν of the contemporary Olympic and Pythian games. The race for the συνωρίς (two-horse chariot) had just been introduced at Olympia and Delphi, but the equivalent event for young horses was not included at either festival until a much later date. It is possible however that the Panathenaic festival contained equestrian events which were later adopted into the Olympic ἀγών ἵππικός rather than vice versa.

The next four events in this inscription are all connected with the cavalry. The first two - a ἵππος κέλης and a ἵππων ζεύγος event - come under the rubric πολεμιστηρίοις (for war[horses]). These two contests were meant obviously to reflect the traditional roles of the ἵππεῖς in battle, i.e. riding a cavalry horse and driving a war chariot. The term ζεύγος must here be translated as "two-horse team" since the four-horse chariot was rarely used in war. The third discipline was for the ζεύγος πομπικόν (parade chariot) and could perhaps be compared to a modern dressage event. Xenophon (*Cavalry Commander* 1.26) mentions that the ἵππεῖς at Athens took part in processions at festivals and put on public displays, and he suggests that a good cavalry commander should offer prizes to those regiments which performed

best at these spectacles. The final equestrian event in this Panathenaic inscription was the ἀφ' ἵππου ἀκοντίσων (throwing the spear from horseback). This was one of the most important skills an Athenian knight had to learn⁶⁸, and was included in the games programme of the Panathenaic festival probably to give cavalrymen the opportunity of exhibiting in public competition what they had learned in training and also to encourage others to master this art.



Horse racing at Athens had always had close connections with the military. According to Athenian mythology⁶⁹, it was not the simple chariot race which Erichthonius instituted for the first celebration of the Athenaia, but rather a so-called ἀποβάτης

event. In such a contest the charioteer drove the team while his companion, the ἀποβάτης, dismounted and ran alongside the chariot for a distance before remounting. This discipline was intended to reflect the traditional method of warfare in the pre-Geometric period of Greek history. There are excellent descriptions of this in Homer's *Iliad*, whereby the hero or leader was driven in his chariot to the battlefield where he dismounted to fight on foot and remounted to return to camp.

This contest, whether or not it was the original sporting event at the Athenaia festival, was certainly popular in Athens in the Classical period. In a work attributed to Demosthenes (61. 23-25), the author praises an acquaintance for devoting himself to training for the ἀποβάτης event, which he calls the most noble and grand of competitive exercises (το σεμνότατον καὶ κάλλιστον τῶν ἀγωνισμάτων) and the one which provides the most enjoyable spectacle (ἡδίστην μὲν θεῶν ἔχον). And according to Plutarch (*Phocion* 20) this event was actually part of the Panathenaic festival in the fourth century B.C.. We know from a group of second century B.C. inscriptions from the Panathenaic games⁷⁰ that the ἀποβάτης event, or an equivalent, was always mentioned first in the programme of the ἀγῶν ἵππικός. This would explain its omission from our fourth century B.C. inscription, the first part of which has been lost. A further indication of the

popularity of this equestrian event at Athens is the fact that it is represented several times in the cavalry procession on the famous Parthenon frieze.

These equestrian events at the Panathenaic games which seem to have been framed especially (or perhaps even exclusively) for the cavalry never became part of the ἀγῶνες ἵππικοί of the four main Panhellenic festivals. They featured in the Panathenaic games since this festival was organized to suit the requirements of the people of Athens, who had a strong interest in their cavalry⁷¹. The equestrian events at Olympia, Delphi, the Isthmus and Nemea, although they had their origins in the use of the chariot team and the horse in war, were never so directly influenced by the cavalry as those of more local festivals.

Instead, the main Panhellenic festivals developed over a period of about 400 years a common ἀγών ἵππικός comprising six standard events (two four-horse chariot races, two two-horse chariot races, and two horse races). Apart from the brief inclusion of the κάλπη and the mule-chariot race at Olympia for the first half of the fifth century B.C., all our evidence suggests that the ἀγῶνες ἵππικοί of the four major Greek sports festivals adhered rigidly to this six-event programme.

The picture however was different at many smaller or less prestigious events. It seems that, at such festivals, the organizers would adopt the current ἀγών ἵππικός from one of the four main Panhellenic games

and then add further contests to the programme either by popular demand or perhaps to suit training requirements for their cavalry. The ἀποβάτης event for example was one of the equestrian contests at the festival in honour of Amphiaraus at Oropus in the fourth century B.C.⁷², and at Aphrodisias in Caria⁷³. And at Larisa in Thessaly, which was famous throughout Greece for its cavalry, a set of agonistic inscriptions⁷⁴ from the second century A.D. includes victors in three different dismounting contests - ἀποβατικός, ἡ συνωρίς τοῦ ἀποβάτου, ἀφιπποδρομά (from the four-horse chariot, the two-horse chariot, and the horse), ἀφιππολαμπάς (a torch race on horseback), σκοπὸς ἰπέων (shooting an arrow at a target from horseback), and what seem to have been mock cavalry charges, both on horseback and with the two-horse chariot (προσδρομὴ ἰπέων, προσδρομὴ συνωρίδι) which were perhaps akin to the ἀνθιππασία performed by the Athenian cavalry⁷⁵. One of these inscriptions contains also all six standard events of the Panhellenic ἀγῶν ἰππικός.

Epigraphical evidence from the Classical period reveals not only that the ἀγῶνες ἰππικοί of many Greek festivals were expanding, but also that the number of festivals themselves where horse racing was held was very substantial. A Laconian inscription⁷⁶ from the middle of the fifth century B.C., listing the victories of a certain Damonon and his son Enymacratidas in various equestrian and athletics

events, shows that many local sports festivals were being held in close geographical proximity to each other.

Δαμόνων | ἀνέθεκε Ἀθαναία[ι] | Πολιάχοι
 5 νικάσας | ταυτᾶ ἡᾶτ' οὐδὲς || πέποκα τῶν νῦν. |
 Τάδε ἐνίκαθε Δαμ[όνων] | τῶι αὐτῷ τεθρίππῳ[ι] | αὐτὸς ἀνιοχί-
 10 ὄν· | ἐν Γαιαφόχῳ τετράκι[ν] || καὶ Ἀθάναια τετ[ράκιν] | κέλευθύ-
 νια τετ[ράκιν.] | καὶ Ποιοίδαία Δαμόνῳ[ν] | ἐνίκε Ἡέλι, καὶ ἡο
 15 κέλ[εξ | χαμ]ᾶ, αὐτὸς ἀνιοχίδων || ἐνἠεβόχαις ἡίπποις | ἠεπτάκιν ἐκ
 τᾶν αὐτῷ | ἡίππων κέκ τῷ αὐ[τ]ῷ [ἡίππῳ.] | καὶ Ποιοίδαία Δαμό-
 20 νῶν | [ἐ]νίκε Θευρίαὶ ὀκτά[κ]ι[ν] || αὐτὸς ἀνιοχίδων ἐνἠεβόχαις
 ἡίπποις | ἐκ τᾶν αὐτῷ ἡίππων | κέκ τῷ αὐτῷ ἡίππῳ. | κέν Ἀριοντίας
 25 ἐνίκε || Δαμόνων ὀκτάκιν | αὐτὸς ἀνιοχίδων | ἐνἠεβόχαις ἡίπποις |
 30 ἐκ τᾶν αὐτῷ ἡίππων | κέκ τῷ αὐτῷ ἡίππῳ, καὶ || ἡο κέλεξ ἐνίκε
 ἡ[χαμᾶ]. | καὶ Ἐλευθύνια Δαμ[όνων] | ἐνίκε αὐτὸς ἀνιοχίδων | ἐνἠε-
 35 βόχαις ἡίπποις | τετράκιν. || τάδε ἐνίκαθε Ἐνυμα[κρατίδ]ας
 πρᾶτ[ος π]αίδων δόλιχον | Λιθέ[η]ια καὶ κέλεξ μι[ᾶς | ἀμέρ]ας
 40 ἡα[μα] ἐν[ίχων. | - - - || - - - - | - - - -] | δόλιχον καὶ ἡο κέλεξ
 45 μιᾶς] | ἀμέρας ἡαμᾶ ἐνίχων. | καὶ Παρπαρόνια ἐνίκε || Ἐνυμακρατί-
 δας παῖδας | στάδιον καὶ δίαυλον | καὶ δόλιχον καὶ ἡο κέλ[εξ] | μιᾶς
 50 ἀμέρας ἡαμᾶ | ἐνίκε. καὶ Δαμόνων || ἐνίκε παῖς ἰὼν ἐν | Γαιαφόχῳ
 στάδιον καὶ | [δί]αυλον. | [κ]αὶ Δαμόνων ἐνίκε | παῖς ἰὼν Λιθέ[η]ια ||
 55 στάδιον καὶ δίαυλον. | καὶ Δαμόνων ἐνίκε | παῖς ἰὼν Μαλεάτεια |
 60 στάδιον καὶ δίαυλον. | καὶ Δαμόνων ἐνίκε | παῖς ἰὼν Λιθέ[η]ια | στά-
 διον καὶ δίαυλον. | καὶ Δαμόνων ἐνίκε | παῖς ἰὼν Παρπαρόνια |
 65 στάδιον καὶ δίαυλον, || καὶ Ἀθάναια στάδιον. | ἡυπὸ δὲ Ἐχεμένε
 ἔφορο[ν] | τάδε ἐνίκε Δαμόνων, | Ἀθάναια ἐνἠεβόχαις | ἡίπποις
 70 αὐτὸς ἀνιοχίδων || καὶ ἡο κέλεξ μιᾶς | ἀμέρας ἡαμᾶ ἐνίκε, καὶ | ἡο
 ἡυιὸς στάδιον ἡαμᾶ | ἐνίκε. ἡυπὸ δὲ | Εὐίππον ἔφορον τάδε ||
 75 ἐνίκε Δαμόνων, Ἀθάναια | ἐνἠεβόχαις ἡίπποις | αὐτὸς ἀνιοχίδων
 80 καὶ | ἡο κέλεξ μιᾶς ἀμέρας | ἡαμᾶ ἐνίκε, καὶ ἡο ἡυιὸς || στάδιον
 ἡαμᾶ ἐνίκε. | ἡυπὸ δὲ Ἀριστε[ῆ] ἔφορον | τάδε ἐνίκε Δαμόνων, | ἐν
 85 Γαιαφόχῳ ἐνἠεβόχαις | [ἡ]ίπποις αὐτὸς ἀνιοχίδων || [κ]αὶ ἡο κέλεξ
 μιᾶς ἀμέρας | [ἡ]αμᾶ ἐνίκε, καὶ ἡο ἡυιὸς | στάδιον καὶ δίαυλον καὶ |
 90 δόλιχον μιᾶς ἀμέρας | ἐνίχων πάντες ἡαμᾶ. || ἡυπὸ δὲ Ἐχεμένε
 ἔφορον | τάδε ἐνίκε Δαμόνων, | ἐν Γαιαφόχῳ ἐνἠεβόχαις | ἡίπποις
 αὐτὸς ἀνιοχίδων, | [κ]αὶ ἡο ἡυιὸς στάδιον καὶ - - -

In the above inscription, nine different festivals are mentioned and, where they can be identified, they are all situated in the southern Peloponnese near

Sparta. At eight of these nine festivals, Damonon or his son won equestrian events and at six of these they won with the racehorse.

Pausanias (6.2.1) states that after the Persian invasions the Spartans became the most enthusiastic breeders of horses in Greece, and this distribution of festivals throughout the Peloponnese seems to confirm the popularity which horse racing enjoyed in this area. The emphasis which the Spartans placed on horse breeding and the concentration of local festivals in the southern Peloponnese at which ἀγῶνες ἵππικοί were held were two major factors which contributed to the great success the Spartans achieved in the equestrian events at Olympia. Although there is no record of a Spartan having won the κέλης event at this festival, in the 100 years after the Persian wars no less than ten four-horse chariot race victories were won by horse breeders from this city.

THE HELLENISTIC PERIOD

The Hellenistic period was one of development and enlargement for many aspects of horse racing in ancient Greece. The ἀγῶν ἵππικός of the four main Panhellenic festivals was increased to six standard events; horse racing at the Panathenaic games likewise flourished, with racecards of up to 25 different contests recorded in the second century B.C.. Hippodromes, as was the case with stadia and gymnasia, were upgraded with the construction of complex starting devices and grandstands for spectators; and the expansion of the Greek-speaking world as a result of the conquests of Alexander the Great brought in from the great eastern dynasties royal competitors such as the Ptolemies of Egypt and the Attalids of Pergamum to contest the prestigious equestrian events.

The enlargement of the Olympic ἀγῶν ἵππικός in the Hellenistic period to six events was a logical consequence of its previous development. By the time of Alexander's death in 323 B.C., the racecard at the Olympic games consisted of four events - the four-horse chariot race, the two-horse chariot race, the single horse race, all for fully-grown horses, and the four-horse chariot race for young horses. The organizers of the Pythian games had already progressed one stage further, having introduced the two-horse chariot race for young horses in 338 B.C.. It was therefore simply a matter of time before the four Panhellenic festivals of

the περίοδος held an ἄγών ἵππικός comprising a four-horse chariot race, a two-horse chariot race and a single horse race for fully-grown horses and the same three events for young horses. The Pythian festival seems to have been the first to stage all six equestrian events with the inclusion in 314 B.C. of the κέλης πωλικός in its ἄγών ἵππικός. Over 50 years later, the Olympic games followed suit with the introduction of the remaining two disciplines, the συνωρίς πωλική in 264 B.C. and the κέλης πωλικός in 256 B.C.. Of the other two Panhellenic festivals, the Isthmian and the Nemean, exact details are not known as regards the introduction of equestrian events. A third-century B.C. inscription cataloguing the equestrian victories of a certain Nicagoras of Lindos⁷⁷ records that he had won at the Isthmus with the ἄρμα τελείον, the κέλης τέλειος and the συνωρίς πωλική. This suggests that the Panhellenic festivals were concurrently developing a standard ἄγών ἵππικός and that the Isthmian Games were being modelled on the Pythian (or possibly vice-versa), since the συνωρίς πωλική by that time had not been introduced at Olympia.

It is interesting to note that catalogues of victors in the equestrian events at the Lycaeon games covering a period from 320 - 303 B.C. have been found, in which all four of the equestrian events listed are those of the contemporary Olympic ἄγών ἵππικός⁷⁸.

The inclusion of events for young horses in the ἀγῶνες ἵππικοί probably served a double purpose. Firstly, with races framed exclusively for young horses, owners and trainers would have had an opportunity of introducing their horses to competitive racing at an early age, thus preparing them for future contests in the τέλειος category. And secondly, holding ἄρμα, συνωρίς and κέλης races for young horses was an obvious way of expanding the Panhellenic ἀγῶν ἵππικός, making it more attractive for the spectator. It would be interesting to discover whether horses winning the κέλης πωλικός at Olympia returned four years later as six-year-olds, capable of winning the κέλης τέλειος event against younger and therefore probably faster horses. It is very possible that the Olympic κέλης πωλικός was seen by racehorse owners as a good preparation for the Pythian κέλης τέλειος event two years later, by which time a two-year-old racehorse would have reached its prime. It is equally conceivable that an owner with aspirations to the Olympic κέλης τέλειος crown would plan his breeding such that his racehorse would be foaled in an Olympic year, raced as a two-year-old in the Pythian κέλης πωλικός two years later, and trained to compete in the κέλης τέλειος at Olympia as a four-year-old when it arguably would have been at its physical peak⁷⁹.

The Hellenistic period saw the expansion of horse racing not only at the main Panhellenic games but also

at other major Greek festivals, notably the Panathenaia. In the same way as this Athenian festival boasted a more comprehensive equestrian programme in the Classical period than those of the Panhellenic games, so did it surpass the four main Greek festivals in terms of the number of horse races in the Hellenistic period. What the Panathenaia could not achieve in status compared to the great Panhellenic festivals of Olympia, Delphi, the Isthmus and Nemea, it made up for in sheer pageantry and impact with racecards of up to 25 events in the second century B.C..

Four inscriptions cataloguing the ἀγῶν ἵππικός of the Panathenaic games in the Hellenistic period have survived. Unfortunately most are mutilated to some degree and are therefore of little use. Of the four inscriptions (IG 2.2.966-9) all from the second century B.C., the most complete is IG 2.2.968. This inscription has been dated by Koehler⁸⁰ to about 165 B.C., and, from the great number of equestrian events listed, one would assume that this signifies a period of some importance for the Panathenaic festival.

The victors in the ἀγῶν ἵππικός are listed after those of the ἀγῶν γυμνικός, a practice which seems to have been standard not only as regards the Panathenaic festival, but also the victory lists of Delphi, Mt. Lycaeon, the Theseia, Boeotia and many more. The reason for this is unclear. At the Panathenaic festival, it is unlikely that the athletic events were of more importance than the equestrian

events, and it is indeed doubtful whether they were so regarded at any Greek festival, considering the universal significance attached to horse racing. It is more likely an indication that the ἀγὼν γυμνικός was held earlier in the proceedings than the ἀγὼν ἵππικός, and thus was recorded first on the list of victors. However, we know the contrary was true of Olympia, which was the model for many Greek festivals and which probably influenced the Panathenaic games from the time of Peisistratus onwards.

The ἀγὼν ἵππικός itself of this inscription was divided into two sections, each with a different location and a different sequence of events. The location of the first section is unknown as the stone has been damaged at this point. All that remains are the words ἐν τῷ [...] for which various supplements have been suggested. A. Mommsen⁸¹ proposes ἐν τῷ πεδίῳ (on the plain), though which plain he does not say. Boeckh⁸² offers ἐν τῷ στάδιῳ (in the stadium), but the Athenian stadium was surely too small for horse racing. And Koehler suggests ἐν τῷ Ἐλευσινίῳ (in the Eleusinium) on the basis of IG 2.2.969 frag. B line 1, which is perhaps the most convincing contribution since the cavalry, which features predominantly in this section of the inscription, frequently held displays there⁸³.

The events of this first section were divided into three categories, the prizes of which were all won by Athenian citizens. The first category comprised four

chariot races, a ἡνίοχος ἐγχιβάτων and an ἀποβάτης. However, unlike all the other categories in the ἀγὼν ἵππικός, this one does not indicate which competitors were eligible. A. Martin⁸⁴ suggests that, since all the victors were Athenian, this category, like the last one in the inscription, should be designated ἐκ τῶν πολιτικῶν (for Athenian citizens), and this seems the most likely solution.

The second and third categories of the first section were reserved for the cavalry. It is difficult to judge exactly what part the Athenian cavalry played in the ἀγὼν ἵππικός of the Panathenaic games from the Classical period onwards. Xenophon, in his treatises the *Cavalry Commander* and the *Art of Horsemanship* (circa 365 B.C.), alludes frequently to the cavalry and their activities. He mentions their staging of public displays and even suggests that prizes be awarded to regiments for the skill they exhibit in these spectacles⁸⁵, but he never once mentions their participation in the ἀγὼν ἵππικός of a festival. It would seem then that the type of racing programme recorded here in IG 2.2.968 of the second century B.C., with categories of contests reserved specifically for the cavalry, was unknown in Xenophon's time. This is not to say, however, that individual cavalrymen did not compete in the ἐκ τῶν πολιτικῶν or ἐκ πάντων events of that period. Indeed, this was quite likely the case, since the

cavalry in Athens, who had to provide their own horses, were largely drawn from the upper classes who regularly patronized the games.

However, IG 2.2.965 poses a slight problem in this respect. This inscription, recording a catalogue of prizes for the events in the Panathenaic games some time between 400 and 350 B.C., lists a series of events for πολεμιστηρίοις (ἵπποις). Since the ἵππος πολεμιστής was generally associated with the cavalry⁸⁶, perhaps this section of the equestrian events should be regarded as being closely connected with the cavalry, if not reserved exclusively for them. Xenophon's silence on the subject however is confusing.

Apart from the ἀνθιππασία and perhaps other collective contests, there does not seem to have been a set of events exclusively for the Athenian cavalry at the Panathenaic games until the second century B.C.. In this respect, our four inscriptions from this period prove very informative. IG 2.2.966 and 967, dating to around 190 B.C., both record the ἀγὼν ἵππικός of τὰ μεγάλα Παναθήναια, but they contain no mention of events for the cavalry. However, IG 2.2.968 and 969, dating to between 168-2 B.C., both have two categories of contests exclusively for the cavalry - ἐκ τῶν φυλάρχων and ἐκ τῶν ἵππέων. And our inscriptions from 160 B.C. onwards from the Theseia (IG 2.1.444-6) and the Pythiad (SIG 697) also have these new categories in their programme.

It would thus appear that at some time between 190

and 168 B.C. the Panathenaic games took a further step forward in development with the institution of events reserved solely for the cavalry. Indeed, it is quite possible that IG 2.2.968 (circa 168 B.C.) records the first instance of this.

Returning to IG 2.2.968 and the cavalry events of the first section of the ἀγῶν ἵππικός, these were divided into two categories. The first consisted of three races reserved for the cavalry officers (οἱ φύλαρχοι). As these races for the cavalry (and some of those in other categories) probably originated from some practical discipline performed on the battlefield (e.g. ἀφ' ἵππου ἀκοντίζων), it is not surprising that they were all run on the single horse, and not with the chariot, since the terrain in Greece was particularly rough and unsuitable for chariots. Two of the three events for the φύλαρχοι were run on the ἵππος πολεμιστής, which again points to the practical nature of the contests.

The third category of the first section of the ἀγῶν ἵππικός was solely for the ἵππεῖς or ordinary cavalrymen. As with the officers, the ἐκ τῶν ἵππέων section was made up of three events all for the single horse. However, unlike the ἐκ τῶν φυλάρχων section, only one of these events was to be performed on the ἵππος πολεμιστής. These events for the ἵππεῖς were the last scheduled to be held in the first location of the ἀγῶν ἵππικός.

The contests of the second section of the ἀγῶν ἵππικός took place in the hippodrome (line 41) just outside the city of Athens. These events may have been held on the day following those of the first section, but there is no conclusive evidence of this. The contests of this section were split into two categories, one open to everyone (ἐκ πάντων), and one reserved solely for Athenian citizens (ἐκ τῶν πολιτικῶν).

The ἐκ πάντων events, in which all nationalities were permitted to compete, dated back to Peisistratos in the sixth century B.C.. It had been his aim to place the Panathenaic festival on a par with the four main Panhellenic festivals, and this could only be achieved by opening up some events (of what had been an exclusively Athenian festival) to non-Athenians. He and the subsequent organizers of the Panathenaic games obviously regarded this ἐκ πάντων category as the one most likely to elevate the status and renown of the festival, and thus by the second century B.C. its programme of six races had become an exact replica of the contemporary ἀγῶν ἵππικός of Olympia. And it would appear that, to some extent, they succeeded in their aim, for in the list of victors in IG 2.2.968,

King Ptolemy Philometor of Egypt is recorded as having won the κέρης πωλικός, and Mastanabal, son of King Masinissa of Numidia, the συνωρίς πωλική.

The second category of events, which took place in the hippodrome, was for Athenian citizens only. This

set of contests consisted of five chariot races and a ridden horse race for the ἵππος πολύδρομος⁸⁷. There seem to be two main reasons for the existence of this ἐκ τῶν πολιτικῶν category. Firstly, since the Panathenaic festival was originally an all-Athenian event, it was important for the sake of tradition and Athenian pride to retain an element of its former exclusiveness. Secondly, and perhaps more importantly, this closed category offered the average Athenian racehorse owner a much better opportunity of participating and winning at the games, by avoiding competing against the powerful stables of Egypt and Sicily.

The popularity of horse racing among the Athenians, and particularly among their cavalry, can be gauged from further epigraphical evidence from the Hellenistic period. Three inscriptions (IG 2.1.444-6) listing the victors and events in the ἀγῶν ἵππικός of the festival of the Theseia in the second century B.C. show the predominance of the κέλης event as a sporting contest in this city.

These games, which were probably part of a much larger Athenian festival in honour of Theseus, were in many ways similar to the Panathenaia as regards their ἀγῶν ἵππικός. Like the Panathenaia, much of the equestrian programme was reserved for the cavalry. In the two most complete inscriptions (444, 445), both of which date to about the same period as the main inscription from the Panathenaic games - IG 2.2.968 (168

B.C.), - a category of contests was set aside both for the φύλαρχοι and for the ἵππεις, and a third was open to everyone (ἐκ πάντων). This format closely resembles the first half of the contemporary Panathenaic ἀγὼν ἵππικός, which had three categories - ἐκ τῶν πολιτῶν, ἐκ τῶν φυλάρχων and ἐκ τῶν ἵππέων. The events in the cavalry categories of both festivals are almost identical, with one ἀκάμπιος and two δίαυλος races forming the basis of each. At the Theseian festival celebrated during the archonship of Anthesterios (IG 2.1.445), (ca. 160 B.C.), there were two of each of these events for the cavalry and additional events in the ἐκ πάντων category. This double racecard was probably intended by the organisers to achieve extra impact.

In addition to the contests of the ἐκ τῶν φυλάρχων, ἐκ τῶν ἵππέων and ἐκ πάντων categories, the ἀγὼν ἵππικός of the Theseian games included two further events (for the ἵππος λαμπρός and ἀφ' ἵππου ἀκοντίζων) both of which were probably directly connected with the cavalry⁸⁸. Neither of these two events seems to have been part of the second century B.C. Panathenaic games.

One of the most significant aspects of this epigraphical evidence from the Theseian festival is the predominance of events for the κέλης, as opposed to the chariot. Of the 30 events identifiable from the three inscriptions, only two are definitely chariot races. The other 28, and probably a large proportion of

those which have been partially obliterated from the stone, are a variety of disciplines for horse and jockey. Such a disparity indicates clearly the distinctive nature of the ἀγὼν ἵππικός at the Theseian games.

The equestrian events of this festival were designed solely with the horse-owning Athenian citizen in mind, and were closed to non-Athenians. The ἐκ πάντων categories were the equivalent of the ἐκ τῶν πολιτικῶν categories of the Panathenaic games. The ἀγὼν ἵππικός of the Theseia reflected the fact that the majority of horse-owning Athenians were cavalrymen who rode their horse both into battle and at the games. Thus, over two thirds of the events were reserved for officers and ordinary cavalrymen and were framed to test particular skills, such as dressage (ἵππος λαμπρός), spear-throwing from horseback (ἀφ' ἵππου ἀκοντίξων) and riding in armour (ἐν ὄπλοις). The Athenian cavalry did not use the chariot in the Hellenistic period, and for this reason chariot races did not figure predominantly at the games of the Theseia. In the festival during the archonship of Aristolas (IG 2.1.444) (ca. 167 B.C.), all ten events of the ἀγὼν ἵππικός were races for horse and jockey.

The third major source of epigraphical evidence for horse racing among the Athenians in the Hellenistic period can be found on stone fragments from the Athenian treasury at Delphi. On these have been

preserved names of the victors in the equestrian events of the so-called Pythaid. This festival was celebrated by the Athenians as a part of a magnificently-equipped religious procession to Delphi to bring back sacred fire to purify their city. As was the custom with most religious ceremonies in ancient Greece, the Pythaid included sporting events in its programme, and since it was an Athenian festival it boasted a very comprehensive ἀγών ἵππικός.

The inscriptional evidence from the Athenian treasury concerning the equestrian events of the Pythaid appears to relate to three separate celebrations of this festival towards the end of the second century B.C. and at the beginning of the first. Dating has been facilitated by the survival of the names of the Athenian archons in office at the time of each festival. However, the structure of the ἀγών ἵππικός and the events it comprised, as far as these can be ascertained from our fragmentary evidence, are so similar to those of both the Panathenaic and Theseian games of the second century B.C. that it would have been possible to date the festivals of the Pythaid with some confidence on the strength of this similarity alone.

As in both the Panathenaic and Theseian games, a large part of the ἀγών ἵππικός of the Pythaid was set aside for the cavalry. However, instead of having simply a category for officers (φύλαρχοι) and a category for ordinary cavalrymen (ἵππεῖς),

this festival had a further section reserved for spear-carrying cavalry (ταραντῖνοι). A fourth category was open to everyone (ἐκ πάντων), but since all the victors from this category whose names have survived were Athenian, it is possible that the games were solely for Athenians.

The events which made up the ἀγών ἵππικός of the Pythaid were the standard equestrian disciplines of the Panathenaic and Theseian games. From our epigraphical evidence seven different contests can be distinguished - ἀκάμπιος, δίαυλος, ἵππῳ πολεμιστῆ, ἵππῳ πολεμιστῆ δίαυλος, ἵππῳ πολεμιστῆ δίαυλος ἐν ὄπλοις, ἀκοντίζων, ἄρματι ἐγχιβάτων. As was the case with the Panathenaic and Theseian games, it is clear that not only the structure of the ἀγών ἵππικός of the Pythaid but also the events themselves were greatly influenced by the cavalry. All of the disciplines listed above, with the exception of the simple ἀκάμπιος and δίαυλος races, are directly connected with the cavalry. And it is again interesting to note the almost total lack of chariot races in this ἀγών ἵππικός. Of the 26 contests which are recorded in our inscription from the Athenian treasury, the only chariot race was the traditional Athenian dismounting event of ἄρματι ἐγχιβάτων, dating back to the founding of the Panathenaic games in the pre-Classical period. The other 25 were all variations of the κέλῃς event. This disparity, as we have already seen, was also true

of the Panathenaic and Theseian games, and it is an indication of the utilitarian nature of the Athenian ἀγών ἵππικός of the Hellenistic period.

Such was the development of the κέλης event in ancient Greece over a period of some 700 years. Having originated almost certainly as a form of training or leisure for mounted soldiers of the Geometric period, by the Hellenistic period the κέλης event had become a standard contest at practically all major Greek sports festivals. In this short history, we have identified the two main facets of the κέλης event: its appeal for the nobility and its close connection with the cavalry. From the outset, equestrian contests were the domain of the rich, due to the great expense involved in keeping racehorses. They attracted the patronage of aristocracy and royalty, who saw a victory in the ἀγών ἵππικός of the Panhellenic games as a means of displaying their wealth and winning renown throughout the Greek-speaking world. And the κέλης event itself, as we have seen, was no exception, with such illustrious figures as Hieron of Syracuse and Philip of Macedon winning at Olympia. However, throughout the Classical and Hellenistic periods, the κέλης event never lost the close relationship with the cavalry which it had had from the beginning. Thus we find at Athens, a city in which the cavalry enjoyed considerable influence, sports festivals whose ἀγών ἵππικός is dominated by the κέλης event and other related contests for horse and jockey. An in-

scription from the Panathenaic games (IG 2.2.968) aptly highlights these two facets of the κέλης event: those sections of the programme set aside for the cavalry are made up exclusively of events for horse and jockey, while in the "open" category of the ἀγών ἵππικός the κέλης πωλικός event was won by King Ptolemy Philometor.

FOOTNOTES

1. cf. J.K. Anderson, *Ancient Greek Horsemanship*, Berkeley 1961, pages 1-14. J. Wiesener, *Fahren und Reiten*, *Archaeologica Homerica*, Göttingen 1968, volume 1 chapter 7. P. Vigneron, *Le cheval dans l'antiquité Gréco-Romaine*, Nancy 1968. P.A.L. Greenhalgh, *Early Greek Warfare*, Cambridge 1973. P. Ducrey, *Guerre et guerriers dans la Grèce antique*, Paris 1985, pages 15-45.
2. op. cit. pages 8-11.
3. op. cit. pages 7-62.
4. ABSA XLVIII (1953), pages 15-45.
5. cf. E.N. Gardiner, *Athletics of the Ancient World*, Oxford 1930, page 20. J. Ebert, *Olympia*, Vienna 1980, pages 9-13. J. Sakellarakis, in *Athletics in Ancient Greece*, Athens 1977, pages 22-23. I. Weiler, *Der Sport bei den Völkern der alten Welt*, Darmstadt 1981, page 81. L.E. Roller, *Funeral Games in Greek Literature, Art and Life*. Thesis: University of Pennsylvania, 1977, and *Funeral Games for Historical Persons*, *Stadion* 7 (1981) pages 1-18. For a contrary view, cf. J. Jüthner, *Die athletischen Leibesübungen der Griechen*, Vienna 1965, volume 1 page 77.
6. op. cit. page 9.
7. There are many allusions in the *Odyssey* to Odysseus' sporting prowess - his wrestling (4 .343), his boxing (18. 89-99), with the discus (8. 186) and with the javelin (8. 229).
8. During Achilles' absence from the hostilities in the Trojan War, his soldiers, the Myrmidons, kept themselves active by throwing the discus and the javelin, and practising archery (Homer *Iliad* Book 2 lines 773-775). See also *Iliad* Book 23 lines 629-645 where Nestor reminisces about his successes at boxing, wrestling, running, javelin-throwing, and chariot-racing, at an ἀγών in his younger days.
9. For ancient Greek authors on the relationship between sport and war, cf. Plato, *Laws* 832E, Ps. Demosthenes 61. 24-25, Plutarch, *Moralia* 639D-E. For a brief modern discussion, cf. M. Lämmer, *Zum Verhältnis von Krieg und Sport in der griechischen Antike*, pages 17-30 (see bibliography for reference).

10. Aristotle *Politics* 1289b, Thucydides 1. 111.
11. Pausanias 5.8.7.
12. Satyrus 1., *Anthologia Palatina* 9.21.
13. Herodotus 7.196.
14. cf. Introduction.
15. Herodotus 6.121-2, scholia Aristophanes, *Birds* 284.
16. Pausanias 1.28.1.
17. *ibid.* 10.7.7.
18. Herodotus 6.126.
19. Bacchylides 6.16, Isocrates 16.32. In the Classical period, city-states owned horses and ran them in the Olympic games (see page 90).
20. Pausanias 10.7.2-8.
21. *Pindar, Nemean Odes* ed. J.B. Bury, London 1890, Appendix D, pages 248-263.
22. Pindar *Isthmian* 1.53.
23. *op. cit.* page 134.
24. Moretti, IAG no. 35.
25. Scholia Aelius Aristides, *Panathenaicus* 189. 3-5.
26. Marcellinus *Life of Thucydides* 2-4.
27. IG 12.5.444, line 18.
28. Pausanias 8.2.1., Harpocration s.v. Παναθήναια.
29. Aristotle, *Fragmenta*, ed. Rose, Leipzig 1886, no. 637.
30. Photius, *Bibliotheca* 533b Bekker.
31. E. Cahen in *Dictionnaire des Antiquités Grecques et Romaines*, ed. by Daremberg and Saglio, Paris 1907, volume IV/I page 310. cf. also A. Mommsen, *Heortologie*, Leipzig 1864 (reprint Amsterdam 1968), page 199. A. Martin, *Les Cavaliers Athéniens*, Paris 1887, page 226. H. Thompson, AA 76(1961), 231.
32. *op. cit.* page 226.

33. Thompson, op. cit. 231.
34. Mommsen, op. cit. page 127, Cahen, op. cit. 304.
35. *Olympionikai* page 77 no. 147.
36. see pages 112-115.
37. *Olympionikai* page 78 no. 152.
38. *ibid.* page 104 no. 315.
39. *ibid.* page 116 no. 386.
40. *Anthologia Palatina* 9. 19-21.
41. Winning with the same racehorses over a considerable period of time was not unknown in antiquity. Both Cimon and Euagoras were reputed to have won three Olympic four-horse chariot races at consecutive festivals with the same team of horses (Herodotus 6.103). This would have involved for the horses in question a racing career of at least nine years. See also the racing career of Hieron of Syracuse's Pherenicus (pages 50-55)
42. op. cit. page 201.
43. op. cit. page 64.
44. *Greek Athletic Sports*, page 52.
45. Pausanias 6.20.19.
46. *ibid.* 5.13.2.
47. As a rule, ancient Greek war chariots were pulled by two horses and not four. However, there are references to four-horse chariots being employed in battle, although perhaps more as a means of swift intervention and disengagement for a general or a hero, than indicating widespread use by ordinary soldiers. See Homer *Iliad* Book 8 lines 184-185, and the Alexander Mosaic from Pompeii depicting Darius and his four-horse team at the battle of Issus (Naples National Museum).
48. see pages 107-109.
49. Diogenes Laertius 8.51.
50. Pindar *Pythian* 2 line 2.
51. Arrian *Cynegeticus* 23.2.
52. I follow H. Maehler's interpretation of the difficult ἵπποδότητος as "Rosselenker", horse-driving.

53. For a further reason why the Sicilian tyrants may have competed in the equestrian events at the Panhellenic games, see pages 92-93.
54. The modern equivalent of Hieron employing poets to celebrate his victories is the commissioning of artists by wealthy racehorse owners to paint their successful horses.
55. *Die Lieder des Bakchylides*, Leiden 1982, pages 78-79.
56. The slight discrepancy in distances noted above between στάδιον races at the various Panhellenic festivals was due to the fact that there was no standard measurement for a foot in ancient Greece.
57. see pages 112-115.
58. 6.20.10-14.
59. Diodorus Siculus 14. 109.
60. Thucydides 6.16.2.
61. Plutarch *Alexander* 3.8, 4.9.
62. Pausanias 5.8.10.
63. *ibid.* 10.7.7.
64. IG 2.2.965.
65. "Hippos"-compound names such as Hipponicus and Xanthippus were much associated in Athens with the elite, long-haired καλοκ'άγαθοί and their possession of horses - hence Aristophanes' irony (*Clouds* lines 63-68) about the naming of Strepsiades' son as demanded by his high-class wife with her Alcmeonid background. Aristophanes parodies the horse-loving Athenians throughout this comedy and also in the *Knights*. He portrays them as constantly talking of horses and spending all their money on them.
66. Aeschylus *Fragment* 346
67. Plato *Apology* 36d.
68. Xenophon *Cavalry Commander* 1.6.
69. Ps. Eratosthenes *Καταστερισμοί* 13.
70. IG 2.2.966-969.
71. On additional equestrian events in Athens, see Plato *Republic* 328 for a torch-race on horseback in honour of Bendis, where this is said to be καινόν (a novelty).

72. IG 7. 4254.
73. CIG 2758.
74. IG 9.2.526-534.
75. Xenophon *Cavalry Commander* 3.11.
76. IG 5.1.213.
77. Moretti, IAG 35
78. SIG 314.
79. For a colt winning at one festival and again as a fully-grown horse at another, cf. *Anthologia Palatina* 9.20.
80. Editor IG 2.2.968.
81. *Heortologie* page 152, diagram.
82. *Kleine Schriften* volume 6, page 395.
83. Xenophon *Cavalry Commander* 3.2.
84. op. cit. page 236.
85. *Cavalry Commander* 1.26.
86. See for example IG 2.1.445., and Aristophanes *Clouds* line 28.
87. see page 107.
88. see pages 106-107.

THE STRUCTURE OF HORSE RACING IN ANCIENT GREECE

OWNERS AND JOCKEYS

To be a racehorse owner in ancient Greece, one had to be rich. This, of course, is true of any period in history. Horses are expensive to own, especially in winter when they have to be kept and fed indoors. And if the owner is serious about racing, he will not put his horse to any other use. Between competitions, the horse will not contribute to its upkeep by pulling a plough. Instead, since it was probably bred for the purpose, it will be trained to win races, perhaps under the supervision of a professional trainer. Success in horse racing, however, can bring substantial financial rewards, with a fortunate few owners collecting considerable prize money, and later, income from a successful stallion or mare retired to stud. But in ancient Greece, as in Britain today, horse racing was considered primarily as a pastime, and not as a viable business proposition¹.

So what type of wealthy people owned racehorses in ancient Greece and what was their motivation for this leisure pursuit?

Those individuals most conspicuous by their patronage of horse racing in the various periods of Greek history were the kings, princes and rulers of the

many Greek-speaking kingdoms in the Mediterranean area. Hieron of Syracuse, Philip of Macedon, Attalus of Pergamum and Ptolemy Soter of Egypt² all won victories with the chariot or racehorse at festivals on the Greek mainland. Aristocrats from the most famous houses, such as Callias son of Hipponicus of Athens, and Empedocles of Acragas³, owned and raced horses at the games. And politicians, such as Cimon and Alcibiades of Athens⁴, indulged in this expensive sport. Such was the allure-ment of owning a horse that the city of Argos itself bought and raced one at the Olympic games, recording a victory in 480 B.C.⁵.

It seems that the horses which competed in the Olympic games were often bred by their owners. It was fashionable not only to own a racehorse, but also to keep a stud of mares and stallions, and the epithet ἵπποτρόφος became synonymous with wealth and fortune⁶. Alcmaeon and Miltiades, winners of the prestigious four-horse chariot race at Olympia, both bred their own horses⁷, and Dionysius, tyrant of Sicily, built up a stud of racehorses from the Heneti, who were famous for their breeds⁸.

The greatest motivating factor behind the patronage of horse racing in ancient Greece by the upper classes was the pursuit of glory, which accompanied victory in equestrian events. Achieving success in any of the contests at the Panhellenic festivals brought the victor undying fame⁹, but none more so than in horse racing, which was considered by the Greeks to be

the noblest of leisure activities¹⁰.

Horse racing had achieved this position through its exclusiveness. Aristocrats saw equestrian events as an ideal medium for displaying their wealth, and being able to afford to compete in the ἀγῶν ἵππικός at the Panhellenic games became an aspiration of "social climbers" in ancient Greece¹¹. At a time when communication between cities was at a very primitive stage, and when there was no equivalent of our contemporary mass media capable of elevating a personality into a "household name" in a matter of days, festivals such as the Olympic games with their vast crowds provided perhaps the best opportunity for royalty, aristocrats and politicians to parade before the public. An extract from Diodorus Siculus (14.109.1) shows that Dionysius I of Syracuse certainly recognized the potential of winning renown offered by the Olympic games.

τῶν δ' Ὀλυμπίων ἐγγύς ὄντων, ἀπέστειλεν εἰς τὸν ἀγῶνα τέθριππα πλείω, διαφέροντα πολὺ τῶν ἄλλων τοῖς τάχεσι, καὶ σκηνας εἰς τὴν πανηγυριν διακρύσους καὶ πολυτελέσι ποικίλοις ἱματίοις κεκοσμημένας. ἔπεμψε δὲ καὶ ῥαψῳδοὺς τοὺς κρατίστους, ὅπως ἐν τῇ πανηγύρει, τὰ ποιήματα αὐτοῦ προφερόμενοι ποιήσωσιν ἐνδοξόν τὸν Διονύσιον.

(The Olympic festival was approaching and Dionysius sent to the games many four-horse teams, which were far superior to the others in terms of speed, and tents for the celebrations, interwoven with gold and adorned with expensive and multi-coloured cloth. He sent also the finest poets to recite his poetry to those assembled there and to bring glory to the name of Dionysius.)

Alcibiades, the famous Athenian general and statesman, exploited the medium of horse racing for his

own political advantage. Renowned for his extravagance and ambition, he delighted in surpassing the feats of others, especially on the racecourse.

Αἱ δ' ἵπποτροφίαι περιβόητοι μὲν ἐγένοντο
 και τῷ πλήθει τῶν ἀρμάτων. ἑπτὰ γὰρ ἄλλος
 οὐδεὶς, καθῆκεν Ὀλυμπίαισιν ἰδιώτης οὐδὲ
 βασιλεὺς, μόνος δὲ ἐκείνος. και τὸ νικῆσαι δὲ
 και δευτερον γενέσθαι και τέταρτον, ὡς
 Θουκυδίδης φησιν, ὁ δ' Εὐριπίδης τρίτον,
 ὑπερβάλλει λαμπρότητι και δόξῃ πᾶσαν τὴν ἐν
 τούτοις φιλοτιμίαν.

(Alcibiades' horse breeding and the number of chariots he owned became legendary. No one else, either private citizen or king, ever entered seven teams in the Olympic games, except for him. And gaining first, second and fourth places, according to Thucydides, (Euripides says third¹²) surpassed in brilliance and glory all ambition in this field.¹³)

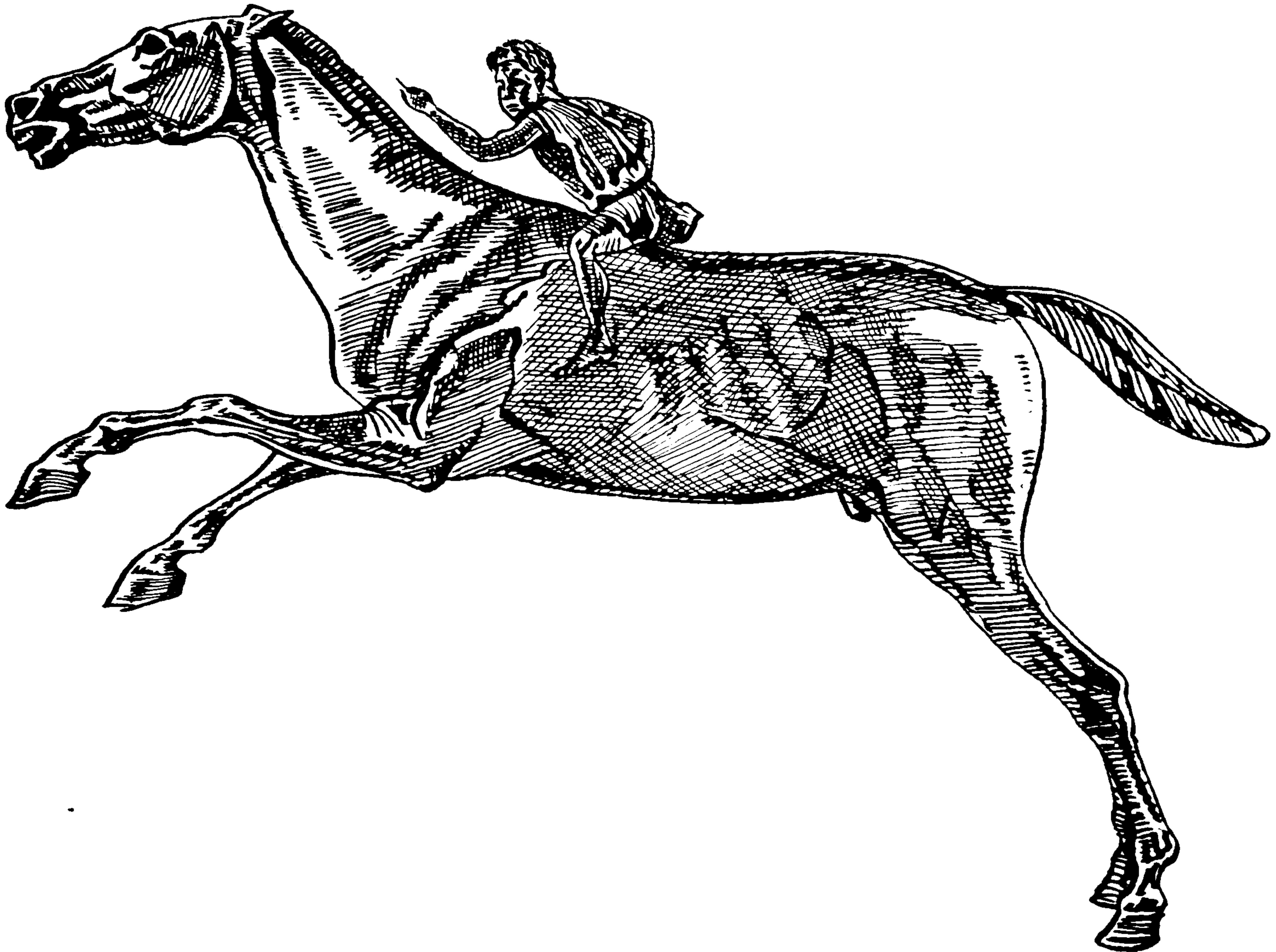
Equestrian events were even more attractive to royalty and the nobility as a means of gaining an Olympic crown since it was the owner of the winning horse and not the jockey who was proclaimed the victor. Thus, while athletes had to prepare themselves physically months in advance to win in the ἀγῶν γυμνικός at the Panhellenic games, individuals, not necessarily themselves physically fit, could carry off the highest honours in horse racing, the only prerequisite being that they had sufficient wealth to own a racehorse of quality¹⁴. In fact, an owner did not even have to be present at the games to win the crown. Philip, King of Macedon, was conquering Potidaea when his racehorse won the κέλης event at Olympia in 356 B.C.¹⁵, and Hieron of Syracuse was almost certainly not present at his Olympic victory in 468 B.C. with the four-horse

chariot, as he was suffering from a mortal illness from which he died a year later.

In cities such as Athens where the cavalry was a traditional military force, events or whole sections of the ἀγών ἵππικός of local festivals were reserved solely for the cavalry. Since individual cavalymen had to provide their own horses for military service, it is most likely that they competed with these same mounts in the games. However it is doubtful whether a rank-and-file cavalryman who owned a single horse could compete successfully against the specially-bred racehorses from the great royal stables which were frequently represented at the Panhellenic games¹⁶.

The infrequent mention of jockeys in ancient Greek literature might suggest that their profession was not regarded very highly in society. They are never named in victory epigrams and songs celebrating success at a major festival, nor in victory catalogues. Where they are mentioned, it would seem that jockeys were generally boys or slaves. Pausanias (6.12.1) records that, in the statue group of a chariot team and two racehorses dedicated by Hieron of Syracuse to celebrate his Olympic victories, the chariot driver was a man, but the jockeys were boys¹⁷. This was probably typical of the sport. The most logical reasons for this difference are firstly that a racehorse stands a better chance of winning the lighter the jockey on its back. And secondly, the fact that a chariot was pulled by either two or four horses suggests that a grown man

would be needed to restrain such a team, whereas it is conceivable that a boy could control a single racehorse¹⁸.



Charioteers, on the other hand, may have enjoyed a more elevated image. Arcesilaos' driver Carrhotus was in fact his brother-in-law and is mentioned by name in Pindar (*Pythian* 5.26). Here the king is exhorted to love Carrhotus above all his ἑταῖροι (comrades). And Nicomachus, the charioteer of Xenocrates, is praised for his skill in winning a chariot race at the

Isthmus, Olympia and Athens¹⁹.

There were also instances, other than in the case of the cavalry, when racehorses were ridden or driven in competition by their aristocratic owners. Herodotus of Thebes, winner of the four-horse chariot race at the Isthmian games of 458 B.C., is praised by Pindar (*Isthmian* 1.15) for having driven his team himself. And it would appear, again from a reference in Pindar (*Pythian* 2.8), that Hieron of Syracuse, who had been a cavalry leader, drove his team to victory in the four-horse chariot race in the Theban Iolaia in 475 B.C..

TYPES OF ΚΕΛΗΣ EVENT

In much the same way as there were several variations of the foot race in ancient Greece, such as the στάδιον (200 metres), the δόλιχος (long race), and όπλίτης (race in armour), so there was more than just one type of κέλης event. Similarly, many factors such as different types of festival, local customs, and the size of the racecourse, were responsible for this diversity.

Perhaps the simplest form of κέλης event was an άκάμπιος. This was literally a race "without a turn", comprising one length of the track. Such an event seems never to have been included in the άγών ίππικός of the Panhellenic games, but was particularly popular at festivals organized by the Athenians. In the victory lists from the festivals of the Panathenaea, the Theseia and the Pythaid of the second and first centuries B.C., άκάμπιος races constituted, on average, one third of the events on the racecards²⁰.

Apart from the fact that the equestrian programme at the Olympic games followed a relatively inflexible format which rarely permitted the inclusion of completely new events, an άκάμπιος would have been an inappropriate contest to stage at Olympia due to the limited size of the hippodrome. The racecourse at Athens by contrast appears to have been eight stades long (possibly four times the length of the Olympic

hippodrome) and therefore ideal for holding straight races²¹. And the same appears to have been true of the hippodrome at Delphi, which was situated on a plain outside the city²².

It is usually taken for granted that ἀκάμπτος horse races, like στάδιον foot races, finished at the same end of the racecourse as all other events. Excavations at the stadia of Delphi, Olympia, Epidauros and Delos show that there was a second starting line at the end of the track, where the far turning post was situated, to accommodate this type of race. Thus, if a starting mechanism was used in a particular stadium, straight races would have required either its removal to the far end of the track, or the construction of a second permanent one.

Such a situation, however, would have been more problematic in the hippodrome. A starting mechanism designed to restrain excited racehorses would have been, by virtue of its purpose, a much sturdier and more complicated device than that for athletes. The starting apparatus on the hippodrome at Olympia described by Pausanias (6.20.10-14) is a perfect example of this. Constructed in the shape of a ship's prow with sides over 400 feet in length, in which were built starting stalls for the horses, it would have been impossible to move such a device to the far end of the track for an ἀκάμπτος race and impractical to build a replica. We know of course that the Olympic authorities did not face such a problem, since

ἀκάμπιος races were not part of the Olympic ἀγών ἵππικός. However, there were surely other hippodromes with starting devices on which ἀκάμπιος races were run. In such cases we have to assume either that these straight races, like στάδιον foot races, started at the far end of the track, but without a starting mechanism, or that the starting mechanism was used and that the race finished at the far turning post²³. From the point of view of accommodating spectators and judges²⁴, the latter alternative may not have posed a problem, since a large proportion of the crowd probably tended to assemble near the far turning post in any case to view accidents in the longer races²⁵.

The most common type of κέλης event, however, was a δίαυλος. A description in *Etymologicum Magnum*²⁶ explains the origin of the term,

Στάδιον, κατὰ τὸ ἀρχαῖον ἔκαλεῖτο αὐλός.
ὅθεν δίαυλος τὰ δύο στάδια.

(Stade. In ancient times it was called an aulos [pipe] and from this two stades are called a diaulos [double pipe].)

and a reference in the scholia to Aristophanes' *Birds* (line 293) describes the format of the race.

Δίαυλος λέγεται ὁ διπλὸν ἔχων τὸν δρόμον
ἐν τῇ πορείᾳ, τὸ πληρῶσαι τὸ στάδιον καὶ
ὑποστρέψαι

(The race which comprises a double straight - completing a length of the stadium and then returning - is called a diaulos.)

The term δίαυλος, it seems, originally signified a race once up and down the stadium, and there-

fore would have measured two stades. It later came however to denote simply a complete circuit of the racecourse, irrespective of distance. This was the format chosen by Achilles for the chariot race at the funeral games of Patroclus in Homer *Iliad* Book 23.

A δίαυλος enjoyed a major advantage over an ἀκάμπιος not only because it lasted longer but also, more importantly, because it required the horses to perform the exciting and dangerous manoeuvre of rounding a turning post²⁷. As evidence of this popularity, the δίαυλος appears very frequently on the racecards of the Panathenaic, Theseian and Pythaid festivals of the second and first centuries B.C..

As regards the Panhellenic games, it is more difficult to tell the exact type of κέλης event held there, because epigrams recording a Panhellenic victory in this contest merely state the age class of the horse and give no indication of the format of event. Fortunately, Pausanias (6.13.9) has provided us with a description of what was probably one of the more spectacular κέλης events in the history of the Olympic games, and from this evidence we may be able to discover the format of the κέλης event at Olympia and therefore also at the other three Panhellenic festivals of the περίοδος.

Ἡ δὲ ἵππος ἢ τοῦ Κορινθίου φειδῶλα ὄνομα
 μέν, ὡς οἱ Κορίνθιοι μνημονεύουσιν, ἔχει
 Αὔρα, τὸν δὲ ἀναβάτην ἔτι ἀρχομένου τοῦ
 δρόμου συνέπεσεν ἀποβαλεῖν αὐτήν. καὶ οὐδὲν
 τι ἦσσαν θέουσα ἐν κόσμῳ περὶ τὴν νύσσαν
 ἐπέστρεψε, καὶ ἐπεὶ τῆς σάλπιγγος ἤκουσεν,
 ἐπετάχυνεν ἔς πλεον τὸν δρόμον, φθάνει τε δὴ
 ἐπὶ τοὺς Ἑλληνοδίκας ἀφικομένη καὶ νικῶσα

ἔγνω, καὶ παύεται τοῦ δρόμου. Ἡλείοι δὲ
ἀνηγόρευσαν ἐπὶ τῇ νικῇ τὸν Φειδῶλαν καὶ
ἀναθεῖναι οἱ τὴν ἵππον ταύτην ἐφιάσιν.

(The mare of Pheidolas the Corinthian was called Aura according to the Corinthians, and at the beginning of the race she managed to up-seat her jockey. Nevertheless she ran on properly and rounded the turning post. And when she heard the trumpet, she quickened her pace, reached the judges first and, realizing that she had won, she stopped running. The Eleans proclaimed Pheidolas the victor and allowed him to dedicate a statue of his mare).

At first sight it would appear that this race comprised a single circuit of the hippodrome. Pausanias states that Aura, having thrown her rider, continued running in an orderly way, rounded the turning post and on hearing the trumpet, quickened and won the race. He does not allude to any additional laps, and he mentions the horse rounding only one turning post. Such an interpretation of this passage has received support from L. Drees²⁸ and H. Wiegartz²⁹. Both back up their case by referring to the so-called ἵππιος δρόμος, a foot race at Nemea of four stades mentioned by Pausanias (6.16.4). They conclude that this race got its name of "horse race" from the κέλῃς event, since it would have been exactly the same distance as the κέλῃς event at Olympia, if one assumes, as they do, that the Olympic hippodrome was two stades in length, and that the κέλῃς event consisted of one circuit of the track.

A textually corrupt manuscript³⁰ from the eleventh century A.D., containing details of the dimensions of the Olympic hippodrome and the distances of certain

equestrian events, seems to support the hypothesis that the κέλης event was a short race.

τρέχουσιν οἱ μὲν ἡλικιώται (κέλητες) πάντες
σταδίους ἕξ, αἱ [τέλειαι] συνωρίδες αἱ μὲν
ἡλικιώται πωλικὰ κύκλους τρεῖς, αἱ δὲ τέλειαι
ὀκτώ, ἄρματα (τά) μὲν πωλικὰ κύκλους ὀκτώ,
τὰ δὲ τέλεια κύκλους δώδεκα.

(Racehorses of all ages run six stades, in the two-horse chariot event young horses run three circuits and fully-grown horses eight circuits, in the four-horse chariot event young horses run eight circuits and fully-grown horses twelve).

The figure of six stades for the κέλης event does not agree exactly with the calculations of Drees and Wiegartz who conjecture four stades for this race, but it does support their theory that the κέλης event comprised a single circuit of the track. A further point in favour of such an interpretation can be inferred from the statement in this manuscript that horses of *all ages* ran six stades. In the other two disciplines - the two- and four-horse chariot races - the young horses had to run a distance shorter than that of their older counterparts. Since the events for young horses had always been instituted at a later date than those for the fully-grown horses, it seems sensible to assume that the authorities took the original number of circuits to be completed by the older horses in both events and reduced it accordingly in order to frame a less exacting race for the younger horses. Thus the four-horse chariot race was reduced from twelve circuits to eight, and the two-horse chariot race from eight to three. However, if we assume that the

κέλης event consisted from the outset of only one circuit of the hippodrome, then it would have been impractical to shorten its distance to accommodate the younger horses. The two possible solutions open to the authorities would have been either to lengthen the κέλης event for fully-grown horses, or simply to run the race for young horses over one circuit as well. The evidence of our manuscript seems to suggest that the latter course was adopted.

An obvious question now arises, namely why the κέλης event was only one twelfth of the distance of the four-horse chariot race for fully-grown horses. If we translate their respective distances into measurements used in horse racing today, taking a circuit of the Olympic hippodrome as four stades, we arrive at a distance of three and a half furlongs (770 metres) for the κέλης event, and over five miles (nine kilometres +) for the four-horse chariot race. A race of three and a half furlongs is shorter than any horse race in Britain today and would have taken less than one minute to complete. It may be that the authorities at Olympia wanted a short explosive sprint race in the equestrian programme in contrast to the long-drawn-out four-horse chariot race, and thus decreed that the κέλης event from its institution in 648 B.C. was to be run over a single circuit of the track.

Several notable scholars³¹ have considered this distance too short, and instead of the six stades mentioned in the Old Seraglio manuscript, they propose six

circuits. Schöne³² suggests that the manuscript be emended at this point.

"Der Fehler steckt vermutlich in στάδιους; schreibt man, wie Otto Schroeder vorschlägt: τρέχουσιν οἱ μὲν ἡλικιώται (κέλητες) πάντες κύκλους ἕξ, so werden alle Bedenken gehoben."

Can any indication be found then in Pausanias' description of Aura's victory to support the hypothesis that the κέλης event consisted of six laps? First of all, the use of the imperfect ἐπέστρεφε may suggest repeated rounding of the turning post, and therefore point to a race of more than one lap. Secondly there may be an clue in Pausanias' mention of a trumpet being blown as Aura rounded the turning post. This blast must have served as a signal to inform the jockeys that they were entering the final straight, so as to avoid any confusion arising from the possibility of miscounting the number of circuits already completed. It is common practice today at athletic meetings to ring a bell at the beginning of the final circuit of a race for this very reason³³. However, if the κέλης event comprised only one lap, there would have been no need for such a signal. We are thus required to read into θέουσα ἐν κόσμῳ that Aura completed the appropriate number of laps safely and that the νύσσα mentioned by Pausanias was the final turning post. This results in a picture of a riderless mare racing round the hippodrome, and on hearing the trumpet, which she knows from past experience signifies the beginning of the final straight, she quickens her

pace and wins the race.

This theory has two main drawbacks. First of all, it is possible that the blowing of a trumpet to indicate the beginning of the final straight was borrowed by the κέλης event from the older four-horse chariot race merely for the sake of tradition, and not to serve any practical purpose, other than perhaps to heighten the tension. This happens in modern athletics competitions, where a bell is rung to signify the beginning of the second circuit of the two-lap 800 metres race.

The second and more serious shortcoming of this hypothesis concerns the evidence of the Old Seraglio manuscript. This source shows that races for young horses at Olympia were framed by taking the number of laps run by the fully-grown horses in the same discipline and reducing it accordingly. We are led to believe also that the κέλης event for both age classes was only six stades long, i.e. one circuit of the track. It would have been pointless to make such a reduction for young horses in this event, since any such reduction would have resulted in a race consisting of less than one circuit of the track. However, if one proposes that the manuscript should be emended to read that the κέλης event comprised six circuits instead of six stades, the question immediately arises as to why the younger horses as well as the fully-grown horses had to compete over this distance. It would have been simple in this case to have made an appropriate

reduction for the younger horses to three or four circuits, in line with the practice in chariot racing.

Schöne, who favours this supplement, avoids this problem by translating τρέχουσιν οἱ μὲν ἡλικιώται <κέλητες> πάντες σταδίους ἕς as "die gleichalterigen Reitpferde laufen sämtlich 6 Stadien". However, regarding πάντες as adverbial rather than as an adjective agreeing with <κέλητες> is stretching the Greek a little too far here³⁴. For this reason, ἡλικιώται cannot be rendered sensibly as "of the same age", since that would result in the superfluous "all horses of the same age". A more likely translation of this line is provided by L. Drees - "Es laufen alle Altersklassen [von Reitpferden] 6 Stadien".

In addition to the straightforward ἀκάμπιος and δίαυλος κέλης events, there were other equestrian contests in ancient Greece closely related to the κέλης event but involving some added dimension, such as racing in armour or throwing a javelin from horseback. These disciplines, with the exception of the κάπη, never featured on the racecards of the Panhellenic games, but rather were often a hallmark of festivals in which the cavalry played a significant part, such as the Panathenaic games.

Of these contests, some of the most common were those for the ἵππος πολεμιστής (war horse). Photius (2.96), the ninth century A.D. Byzantine lexicographer, provides the following definition.

πολεμιστῆς ἵππος, οὐκ ὡς ἂν τις οἰκῆται,
 ὁ εἰς τοὺς πολέμους ἐπιτήδειος, ἀλλ' ὁ
 ἐν τοῖς ἀγῶσι σκῆμα φέρων ὡς εἰς πόλεμον
 εὐτραπέμενος. ἦν γὰρ τοιοῦτον ἀγώνισμα.

(War horse. This is not, as you might think, a horse used for war, but rather one which carries equipment in the games as if it were prepared for battle, for there was such a contest.)

In the festivals of the Panathenaia, Theseia and Pythaid of the second and first centuries B.C., races for the ἵππος πολεμιστῆς were held frequently with two variations - either a simple δίαυλος on the war horse, or a δίαυλος on the war horse with the rider wearing armour (ἐν ὅπλοις). At the Panathenaic and Theseian games, these events were open only to the cavalry and their officers, but at the Pythaid they could be entered by any Athenian citizen.

A further variation on the κέλῃς event closely connected with the cavalry and common to the three Athenian festivals mentioned above was the ἀφ' ἵππου ἀκοντίων (throwing the javelin from horseback). Whether this discipline was set out in such a way that each horse and jockey in turn rode round a prescribed course and threw a spear at a target or that several horses raced simultaneously is not certain. However, it would seem from a Panathenaic amphora depicting this event dating to the fifth century B.C., at which time we know that this event was part of the ἀγῶν ἵππικός of the Panathenaic games³⁵, that the latter was the case³⁶. A similar event, σκοπὸς ἵππέων, appears on the victory lists of a Thes-salian festival at Larissa in the second century A.D.³⁷

Two further events at Athenian festivals, which appear to be variations of the κέλης event, are the ἵππος λαμπρός and the ἵππος πολύδρομος³⁸. Xenophon (*Art of Horsemanship* 11.1) lists the ἵππος λαμπρός in a group along with the ἵππος πομπικός (procession horse) and the ἵππος μετέωρος (high-stepping horse), and Lysias (19.63) makes a clear distinction between a ἵππος λαμπρός and a ἵππος ἀθλητής (racehorse). This evidence suggests that the ἵππος λαμπρός contest had more in common with a modern-day dressage event than with an actual horse race³⁹. There is no evidence however to help us understand what type of race the ἵππος πολύδρομος contest may have been. The term πολύδρομος suggests a race of considerable distance, perhaps comprising many laps. This then would have been an interesting variation on the typical κέλης event, which appeared only to consist either of one circuit or of one length of the track⁴⁰.

As regards the Panhellenic games, no records have survived to show that, except for a fifty-year period at Olympia in the fifth century B.C., there were ever more than two types of ridden horse race at these festivals, the κέλης τέλειος and the κέλης πωλικός. The additional event for horse and jockey introduced at Olympia in 496 B.C. and withdrawn in 444 B.C. was the κάλπη. Pausanias (5.9.2) has provided us with the following details of this event.

ἦν δὲ ἡ μὲν θήλεια ἵππος, καὶ ἀπ' αὐτῶν ἀποπηδῶντες ἐπὶ τῷ ἐσχατῷ δρόμῳ συνέθεον ταῖς ἵπποις εἰλημμένοι τῶν καλινῶν, καθὰ καὶ ἐς ἡμεῖς ἔτι οἱ ἀναβάται καλούμενοι. διάφορα δὲ τοῖς ἀναβάταις ἐς τῆς κάλπης, τὸν δρόμον τὰ τε σημεῖα ἔστι καὶ ἄρσενες σφισιν ὄντες οἱ ἵπποι.

(The kalpe was for mares, and in the final straight the jockeys dismounted and ran alongside their mounts holding the reins, like the so-called "mounters" still do today. The difference between the mounters and those in the kalpe are the insignia⁴¹ and the fact that the mounters ride stallions.)

Pausanias has typically omitted to tell us the distance of the race, but it is possible that this contest, like the κέλῃς event, was in the form of a δίαυλος with the jockeys dismounting when they had rounded the far turning post. The fact that the race was confined solely to mares is difficult to understand. In modern horse racing, many races are set aside purely for one sex, the main reason being that male horses tend to be slightly stronger physically than their female counterparts. Thus, a series of races open only to mares or fillies avoids any unfair advantage. In races which are open to both sexes, stallions are often made to carry three to five pounds of extra lead in their saddle to compensate for their physical superiority. However, the ancient Greeks did not recognize this imbalance. In fact, the converse appears to have been true, with female horses even considered superior. Pindar (*Pythian* 2.8) celebrates Hieron of Syracuse's victory with his mares in the four-horse chariot race at the Theban Iolais, Orestes in Sophocles *Electra* (lines 703-704) is said to have driven a

team of Thessalian mares at the Pythian games, and Cimon won three Olympic festivals in succession with the same team of mares⁴².

The dismounting element of the κάλπη was obviously meant to mirror the dismounting of an armed infantryman riding to battle⁴³. Such dismounting events, however, seem to have been performed more frequently from chariots, and, according to Theophrastus, particularly at Athens and Boeotia⁴⁴.

AGE CLASSES AND THE WEIGHT FACTOR

In Britain today, horses for flat-racing are divided into three age groups - two-year-olds, three-year-olds, and four-year-olds and upwards. Such distinctions are necessary since a horse is not fully mature until it has reached the age of four. To ensure competitive racing in the foremost events, a horse will compete generally against others of the same age class, and, when horses from different age groups do meet in these races, the older horses are penalized for their physical maturity by having to carry an extra amount of lead in their saddle.

In ancient Greece during the pre-Classical and Classical periods, there were no age categories specified for the κέλῃς event at the major festivals. Epigrams or victory lists simply record successes as having been achieved with the ἵππος κέλῃς and give no further qualification. By the Hellenistic period, however, the κέλῃς event had been split into two age groups - πωλικός (young) and τέλειος (fully-grown)⁴⁵.

Aristotle (*Historia Animalium* 576b 13, & 576a 11) shows us that, much the same as today, a horse was considered mature at the age of four and a half, and it is likely that this was the age adopted for sports festivals.

Ἀκμάζει δὲ καὶ ἵππος καὶ ἡμίονος μετὰ τοὺς
βόλους. [...] τεττάρων δ' ἐτῶν παρελθόντων καὶ
ἕξ μηνῶν οὐκέτι βάλλει οὐδένα.

(Horses and mules have reached maturity when they have shed their teeth. [...] A horse no longer sheds teeth after the age of four and a half years.)

Age classes had been introduced to sports festivals in ancient Greece as far back as 632 B.C., when the στάδιον race for boys was instituted at the Olympic games⁴⁶. Chariot races for young horses were included in the ἀγών ἵππικός of the Panhellenic games from the fourth century B.C. onwards. There are several possible reasons why these age distinctions were made in athletics and equestrian events.

Firstly, contests set aside for a younger age group would serve as an ideal form of preparation for future service to the state. Athletic training was an integral part of the education of the ancient Greek youth, and competing against one's peers at the games provided a useful outlet for putting this training into practice. To a lesser degree, this was true of horses. A κέλης event for young horses was not introduced to the ἀγών ἵππικός of the Panhellenic games before the Hellenistic period since there was not so great a demand by city-states for a cavalry as there was for a well-trained infantry. The only advantage accruing to horses from early competitive experience would be as preparation for future τέλειος events.

A more likely explanation as to why πωλικός events were introduced to the Panhellenic games is that they increased the size of the ἀγών ἵππικός and therefore made it more attractive both to spectators,

who saw more contests, and to owners, who had a greater chance of winning a victory crown. Before the addition of the κέλης πωλικός to the Panhellenic ἀγών ἵππικός, an owner would have had to wait until his racehorse was four years old and mature before he could enter it in the κέλης event with a realistic chance of winning⁴⁷.

If the introduction of πωλικός events to the Panhellenic games is an indication that the Greek authorities realised the importance of age in horse racing, there is, by contrast, no evidence that they understood, or at least paid any attention to, the similar effect on a horse's performance of how much weight it is carrying. By examining the relatively complicated handicapping and weight-for-age regulations enforced by the Jockey Club in Britain today, one can see just what an influence weight can exert on horse racing, and therefore how the method of organization in ancient Greece, which did not take this factor into consideration, could not have consistently produced competitive racing.

To begin with, let us look at the so-called Classic races, the 1000 and 2000 Guineas, the Derby, the Oaks and the St. Leger. These are among the most sought-after and valuable races in the racing calendar. In such events, which are open only to three-year-old entire colts or fillies, each horse must carry, including the weight of its jockey and saddle, no less than nine stones (ca. 57 kilos) during the race. This en-

sures that no horse has an unfair weight advantage (i.e. is carrying a lighter burden than its rivals) and that it is purely the merit of horse and jockey which will decide the outcome of the race. Since most flat-race jockeys weigh between eight and eight and a half stones (ca. 51 and 54 kilos), the remaining weight needed to make up the nine stones is deposited in the form of bars of lead in the jockey's saddle cloth⁴⁸.

During the early part of the season, horses of the "classic" generation, i.e. three-year-olds, compete mainly among themselves for such races as the Derby and the Oaks. However, as the season progresses, they race more often against older horses in so-called Group races. In such events, three-year-olds always carry less weight than their older rivals. This weight advantage in favour of the younger generation diminishes gradually throughout the season as the three-year-olds reach maturity.

Classic and Group events, however, are contested by only the very best horses and as such account for merely a fraction of the total number of races in Britain in any year. The vast majority of other races are so-called handicap events, the aim of which is to give every horse in the race an equal chance of winning irrespective of ability. This is achieved by penalizing better horses by setting them greater amounts of weight to carry and by allocating smaller amounts to the less capable horses. The handicapper calculates these weights by examining the previous record or "form" of

all the horses in the race. His task is made easier if, as is often the case, some of the horses have already raced against each other. Should, for example, horse A have beaten horse B by three lengths in a sprint race of five furlongs last time out, then horse A will be set to carry nine pounds (ca. 4 kilos) more in this race to give horse B an equal chance of winning. The longer the race, the less weight the handicapper needs to allocate to achieve a balance, since the length of time a horse has to carry a heavy burden is a vital factor. When all the various weights have been determined, it is normal in a medium-sized race for the horse at the top of the handicap to be carrying two stones (ca. 13 kilos) more than the horse at the bottom. With the help of such calculations, the handicapper aims theoretically to have every horse cross the finishing line simultaneously, but in practice, as horse racing is an inexact science, this never happens.

From this it is clear that, since the ancient Greek authorities did not take this weight factor into consideration, many horse races would have turned out quite one-sided affairs⁴⁹. If we take a hypothetical κέλως πωλικός event in the Athenian hippodrome, which was supposedly eight stades long (ca. 1500m), between a two-year-old horse with a jockey weighing nine stones, and a horse approaching the age of four with a much lighter rider, the spectators would have witnessed the older horse winning by about a furlong⁵⁰. This distance would have been much greater if the older horse

had thrown its jockey at the start of the contest and continued to race in earnest, as Pausanias (6.13.9) tells us allegedly happened once at Olympia, without the horse being disqualified.

FOOTNOTES

1. Xenophon *Hiero* 9.11.
2. cf. Pindar *Olympian* 1, Plutarch *Alexander* 3.8, Fränkel *Die Inschriften von Pergamon (I)* no. 10, SIG 314.
3. cf. Herodotus 6.122, Diogenes Laertius 8.51.
4. cf. Herodotus 6.103, Thucydides 6.16.2.
5. *Oxyrhynchus Papyrus* 222 2.(1899), Plutarch *Alcibiades* 12.2.
6. Pindar *Isthmian* 4.14, Xenophon *Hiero* 11.5, Isocrates 16.33, Demosthenes 18.320.
7. Herodotus 6.35, 6.125.
8. Alcman 1.50-51, Strabo 5.1.4.
9. Aeschines 3.180, Plato *Republic* 5.465d.
10. Xenophon *Hiero* 11.5
11. Herodotus 6.125.
12. For this extant fragment of Euripides, which Plutarch goes on to quote, see D. Page, *Poetae Melici Graeci* 755.
13. Plutarch *Alcibiades* 11.1.
14. Pheidippides' horse (Aristophanes *Clouds* line 22) cost twelve minae or twelve hundred drachmae. It is generally agreed that one drachma was the normal daily wage for a working man in Classical Athens.
15. Plutarch *Alexander* 3.8.
16. On the difference in cost between a cavalry horse and a racehorse, see Wyse, *Isaeus*, Cambridge 1904, pages 471-475.
17. cf. also *Anthologia Palatina* 13.18. where a rider, thrown from his horse during a race, is described as a παῖς (boy).
18. This, however, would have been no mean feat without a saddle or stirrups, especially if the horse were a mature stallion.
19. Pindar *Isthmian* 2 lines 12-24.

20. cf. IG 2.1.444-446, 2.2.968, SIG 697H.
21. cf. *Etymologicum Magnum* 340. On a racecourse of eight stades, ἀκάμπιος races of about seven and a half furlongs (ca. 1500 metres) could be run (not six furlongs as H.A. Harris suggests in *Sport in Greece and Rome* page 163).
22. Pausanias 10.37.4.
23. cf. Aristotle *Nicomachean Ethics* 1095b, where there is a reference to starting a race at either end of the stadium.
24. Whether umpires were placed at the far turning post on hippodromes to ensure fair play is difficult to say. Cf. Homer *Iliad* Book 23 lines 359-361.
25. On crashes in horse races providing an exciting spectacle, cf. Ps. Demosthenes 61.29. Crowds at National Hunt meetings today often position themselves close to those fences which most often cause horses to fall, such as Becher's Brook in the Grand National.
26. s.v. στάδιον, page 743, ed. Gaisford.
27. Horace (*Odes* 1 lines 3-5) mentions the delight experienced by those who have successfully negotiated the turning post on the Olympic hippodrome.
28. *Olympia*, Stuttgart 1967 page 97.
29. *Zur Startanlage im Hippodrom von Olympia*, Boreas, Münstersche Beiträge zur Archäologie, volume 7 (1984) page 77.
30. For the text of this manuscript see H. Schöne, *Neue Angaben über den Hippodrom zu Olympia*, JDAI volume 12 (1897) pages 152-153.
31. e.g. I. Weiler, *Der Sport bei den Völkern der alten Welt*, Darmstadt 1981, page 204. K. Palaeologus, *Athletics in Ancient Greece*, Athens 1976, page 241.
32. op. cit. page 159.
33. At Ascot today, a bell is rung in all races just as the horses sweep into the final straight.
34. One must surely view πάντες here as explaining ἡλικιώται - "horses of all ages" - as does πωλικαί in the following line - "horses of younger age".
35. cf. IG 2.2.965
36. See illustration, page 62.

37. IG 9.2.527, 531.
38. IG 2.1.444-446, 2.2.968-969. For an occurrence of the ἵππος λαμπρός event on an Egyptian racecard of the Hellenistic period, see SEG 27.1114.
39. λαμπρός in this context has been variously translated as "showy" (E.C. Marchant, *Xenophon, Scripta Minora*, Loeb, 1925, page 353), "handsome" (W.R.M. Lamb, *Lysias*, Loeb, 1930, page 451), "brilliant" (J.K. Anderson, *Ancient Greek Horsemanship*, Berkeley, 1961, page 122) and "prachtvoll" (J. Ebert, *Stadion*, volume 5.1, 1979, page 13).
40. See Chapter 5, ΔΡΌΜΟΣ section f. For the two other instances of πολύδρομος which have survived, see Aeschylus *Suppliants* line 737, and IG 12(9). 95.
41. It is difficult to say what these "insignia" were. Perhaps they were colours worn by the riders, equivalent to those worn by the different factions in the Roman Circus at the time Pausanias was writing.
42. Herodotus 6.103. For other instances of mares performing notable feats or of being held in high esteem, cf. Homer *Iliad* Book 2 lines 763-767, IG 5.213, Herodotus 7.196, *Anthologia Palatina* 13.18, Pausanias 6.13.9, Pliny *Natural History* 10.181.
43. For what was probably a similar event, the ἄφιπποδρομῶν, in Thessaly, which was famous for its cavalry, cf. IG 9.2.527, 528, 531, 534.
44. apud Harpocration s.v. ἀποβάτης. Dismounting events for chariots, called either ἀποβάτης or ἡνίοχος ἐγχιτάξων races, featured at several festivals in antiquity, cf. e.g. IG 2.2.968, 7.4254, 9.2.527, 9.2.614, CIG 2758. See also Ps. Demosthenes 61.23, Dionysius of Halicarnassus 7.73.3, Plutarch *Phocion* 20.1.
45. Other terms less commonly used to describe these age categories were ἄβολος (from ἀ-βάλλειν, referring to the fact that the horse had not yet shed its teeth i.e. young) and ἀσηφάγος (apparently from ἄσην-φαγεῖν to eat one's fill i.e. fully grown), cf. Plato *Laws* 834 B-C, SIG 1056, SEG 27.1114, 1305, Aristophanes *Fragment* 736, IG 2.2.965. See also IG 5.213 where ἐνήθωαίς may be the equivalent of πωλικός.
46. Pausanias 5.8.9.
47. See also pages 68-70.

48. In the 1974 Epsom Oaks, the saddle cloth of Willie Carson's mount, Dibidale, slipped off in the latter stages of the race. Carson rode out the finish bareback and ended up third, having looked the likely winner before this incident occurred. The stewards had no alternative but to disqualify Dibidale since she had not carried the required nine stones for the full distance of the race.

49. Apart from the fact that the idea of penalizing a horse for its superiority would have been a totally alien concept to the ancient Greeks, it is difficult to see how a system of weights, such as that in Britain today, could have been introduced, particularly since the jockeys appear to have ridden without saddles.

50. Pausanias (6.2.2) tells how a certain Lycinus tried to enter a team of horses for a πωλικός chariot race at Olympia, but was prevented from doing so by the authorities as one of his horses was judged to be too old. This would suggest that racehorse owners realized the advantage of entering horses for the πωλικός events as close to maturity as possible.

THE HIPPODROME IN ANCIENT GREECE

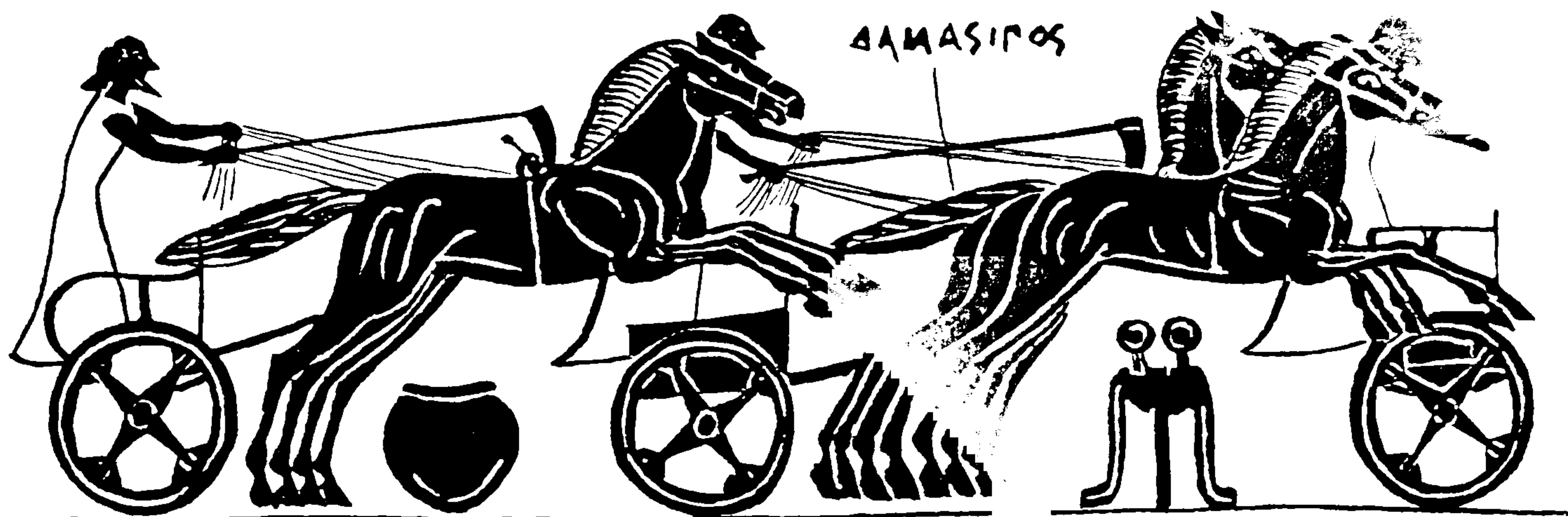
What we know of the ancient Greek hippodrome has been gleaned mainly from Greek authors, either in their accounts of horse races at particular venues, as in Homer, Sophocles and Nonnus, or in their descriptions of the venues themselves, such as those of Pausanias on Olympia and Mt. Lycaeon. Unfortunately, very little archaeological evidence on the ancient Greek hippodrome has survived, since the majority of racecourses were temporary affairs and very simple in terms of layout, while the remains of the most important permanent hippodrome, that of Olympia, appear to have been washed away when the river Alpheus changed its course in the Middle Ages. However, we have been able to construct a reasonably clear picture of the hippodrome in ancient Greece, mainly from the literary evidence which has survived.

The Homeric Hippodrome

It is with the chariot race in the funeral games of Patroclus recounted by Homer in *Iliad* Book 23 that most modern accounts of the hippodrome in ancient Greece begin. And understandably so, as in this famous passage the word ἵπποδρόμος occurs for the first time in an ancient description of a horse race¹. However, this racecourse on which Diomedes wins a

famous victory was not at all sophisticated, quite unlike the great Olympic hippodrome of the Classical and Hellenistic periods.

For these funeral games, Achilles assembled the Greek warriors on the Trojan plain, where all eight sporting disciplines took place. For the chariot race, the first event, Achilles merely pointed out an old tree stump somewhere in the distance on the plain to



serve as a turning post, and the competitors drew lots for their positions on a starting line. As the course was left-handed (line 338), it is possible that there was a slight advantage to those drawn on the left, but considering the fact that the distance between the starting line and turning post was so great that for a time during the race the spectators could not distinguish between the competitors and failed even to witness the accident of Eumelos (line 394), it is probable that any advantage was significantly reduced.

There is no mention of any form of starting mechanism, nor of any outer boundaries for the racecourse. Nor does there appear to have been a finishing line; Diomedes won simply because he was the first to race back to the assembly of his comrades.

The most important question which this passage from the *Iliad* raises is: Were all horse races in the time of Homer and before run on a racecourse similar to the one described here? A. Martin² accepts this type of racecourse as normative for the period, but this is perhaps a risky assumption on so little evidence.

First of all, it is important to remember that the Greeks were holding funeral games in another land and therefore were restricted in their choice of venue. However, if the Trojans were in the habit of holding horse races in times of peace, their racecourse would undoubtedly have been situated on this very plain (as line 332 might suggest) and therefore readily available to their besieging enemies³.

Secondly, any ancient Greek racecourse consisted basically of a flat stretch of ground with either one or two turning posts and a source of water nearby to refresh the horses. Some had additional features such as retaining walls, starting stalls and terraced seating, but none of these were absolutely necessary. Thus for Achilles it was a matter of just marking out the required course on the plain in much the same way as schoolboys today use jackets and schoolbags to mark out

their football pitch in the park. And it is therefore a distinct possibility that just as the makeshift football pitch in the local park differs greatly in some respects from a proper football stadium, and yet adequately serves its purpose, so the racetrack marked out here by Achilles may only have had a passing resemblance to the typical hippodrome of his day.

The main conclusion which Martin draws from this passage as regards the Homeric hippodrome is that it had only one turning post whereas the hippodrome at Olympia had two. This may well have been the case, but it is worth noting that Achilles held only one horse race at these games, the δίαυλος, which comprises a single lap and therefore required only one turning post⁴. Thus we cannot establish a hard and fast rule applicable to all racecourses of this period from the fact that there was only one turning post in this instance.

The Hippodrome at Delphi

Sophocles (*Electra* lines 698-760) provides us with a glimpse of what the hippodrome at Delphi was probably like in the Classical period in his description of the fictitious chariot race in which Orestes allegedly was killed⁵. An examination of lines 709-730 of this passage reveals some important clues as to the nature of this racecourse.

στάντες δ' ἴν' αὐτοῦς οἱ τεταγμένοι βραβῆς
κλήροις ἔπηλαν καὶ κατέστησαν δίφρους,
χαλκῆς ὑπαὶ σάλπιγγος ἦξαν. οἱ δ' ἅμα
ἵπποις ὁμοκλήσαντες ἠνίας κερσίν
ἔσεισαν. ἐν δὲ πᾶς ἐμεστώθη δρόμος
κτύπου κροτητῶν ἁρμάτων. κόνις δ' ἄνω
φορεῖθ'. ὁμοῦ δὲ πάντες ἀναμεμιγμένοι
φείδοντο κέντρων οὐδέεν, ὡς ὑπερβάλοι
χνόας τις αὐτῶν καὶ φρυάγμαθ' ἵππικᾶ.
ὁμοῦ γὰρ ἀμφὶ νῶτα καὶ τροχῶν βάσεις
ἤφριζον, εἰσέβαλλον ἵππικαὶ πνοαί.
κεῖνος δ' ὑπ' αὐτὴν ἐσχάτην στήλην ἔχων
ἔκριμπτ' αἰεὶ σύριγγα, δεξιὸν δ' ἀνεῖς
σειραῖον ἵππον εἶργε τὸν προσκείμενον.
καὶ πρὶν μὲν ὀρθοὶ πάντες ἕστασαν δίφροι.
ἔπειτα δ' Αἰνιάνος ἀνδρὸς ἄστομοι
πῶλοι βία φέρουσιν, ἐκ δ' ὑποστροφῆς
τελοῦντες ἕκτον ἔβδομον, τ' ἤδη δρόμον
μέτωπα συμπαίουσι Βαρκαίοις ὄχοις.
κάντεῦθεν ἄλλος ἄλλον εἰς ἑνὸς κακοῦ
ἔθραυε, κἀνέπιπτε, πᾶν δ' ἐπίμπλατο
ναυαγίων Κρισαῖον ἵππικῶν πέδον.

(They stood where the judges assigned them by lot and drew up their chariots. At the sound of the bronze trumpet they raced off. They all shook their reins, shouting to their horses, and the whole racecourse was filled with the noise of rattling chariots. Dust swirled upwards. Altogether in a confused mass, they did not spare their horses the whip, as they tried to overtake the wheels and snorting horses of their opponents. For the horses foamed and snorted at their backs and at their whirling wheels. Orestes, as he rounded either turning post, always kept his axle close to it, giving rein to his outside trace-horse while checking the horse on the inside. And until this point, all the chariots had raced free from trouble. Then the Aenian's hard-mouthed horses bolted, and on turning between the sixth and seventh lap, they ran headlong into the team from Barca. This one accident caused other teams to collide and crash, so that the whole plain of Crisa was strewn with wrecks.)

As in Homer, the competitors lined up at the start, having been assigned their positions by lot. It would appear that the hippodrome at Delphi in the Classical period had no starting mechanism. There were however, unlike in Homer, two turning posts since the race comprised several laps. The head-on collision

described in lines 724-727 suggests that there was no barrier down the centre of the track separating the two lanes, corresponding to the spina of the Roman Circus⁶. As far as our literary and archaeological evidence is concerned, this would seem to have been true of all ancient Greek hippodromes. In respect of the length of the racecourse, there is no real indication in this passage of Sophocles. The fact that it was situated on the plain of Crisa, however, may suggest that lack of space was not a problem⁷.

It is difficult to know how much to draw from the reference that the track was dusty in lines 714-715. Sophocles has modelled much of the opening of this chariot race on Homer's account in *Iliad* Book 23, in which clouds of dust whirling up into the air are mentioned. It is quite likely that if a racecourse were used often in ancient Greece, it could become quite bare and dusty especially if there was little rain⁸. In Britain today by contrast, no matter how hot the weather and how dry the ground, one never sees clouds of dust stirred up by the horses during a race held on a grass track. What is reasonably commonplace however is the tossing in the air of divots of earth cut up by the horses' hooves. Are we to assume then that this hippodrome at Delphi resembled more closely the dirt tracks of North America than the grass tracks of Britain?

Later references to the hippodrome at Delphi from the Hellenistic and post-Hellenistic periods help us to

build up a more complete picture of this racecourse. An inscription⁹ dating to around 247-6 B.C. listing public work to be carried out for the Pythia, mentions the upkeep of the hippodrome at Delphi. The specific tasks listed are "cleaning up the hippodrome" (τὰν ἐκκάθαρσιν ἵπποδρόμου), and "digging around the turning posts" (τὰν σκάψιν περὶ τοὺς καμπτήρας). There is also a reference to an "arched passageway" (ψαλίς) just before the hippodrome is mentioned, which may be an indication that this passageway led to the racecourse. An inscription¹⁰ dating to 178 B.C. which details those places where sacred cattle and horses were allowed to graze at Delphi, refers to a "road leading out of the hippodrome" (ἡ ὁδὸς ἄγει ἄ ἐξ ἵπποδρόμου). This may well have been connected with the passageway mentioned above, and must have been the road from Delphi to Cirrha, which Pausanias (10.37.4) suggests led to the hippodrome.

However, one of the most interesting references to the hippodrome at Delphi occurs in a damaged inscription¹¹ dating to about 327 B.C.. Here, in a list of the final accounts of quaestors found in the temple at Delphi, there appears to be an allusion to the builder of a starting mechanism for horses - τῷ ἀρχιτέκτονι τῆς ἵππ(α)φέσεως]. If Dittenberger's supplement is correct, this inscription provides evidence that the Delphic hippodrome had facilities commensurate with the importance of the equestrian events staged there. The record of a starting mechanism

being constructed at Delphi towards the end of the fourth century B.C. fits well with the above passage of Sophocles from the Classical period, in which the chariot race at the Pythian games was started merely by the sounding of a trumpet.

This evidence suggests that, at least by the Hellenistic period, the hippodrome at Delphi occupied a permanent defined area, rather than any flat stretch of ground on the plain¹². How this area was marked out or enclosed is difficult to say. Pausanias (10.37.4) states that the plain from Cirrha on which the racecourse was situated was bare and probably useless for growing trees. It is possible that the track was bordered, either partially or totally, by a retaining wall, a theory which would be supported by the fact that there may have been an arched entrance to the hippodrome.

The Hippodrome at Olympia

Pausanias (6.20.10-19), in his account of Olympia, gives quite a detailed description of the hippodrome there and its ingenious starting mechanism, and it is possible to picture with reasonable confidence the site and layout of the Olympic hippodrome in the time of Pausanias on this evidence.

The racecourse lay on flat ground between the stadium and the river Alpheus, to the south-east of the Altis. It ran from west to east in the same direction

as the stadium and was closed in on all sides. It was limited on the northern side by the southern bank of the stadium on which the spectators sat, and, where this embankment terminated (the stadium was considerably shorter than the hippodrome), the Hill of Demeter further east served to enclose the racecourse. The south side of the hippodrome, which Pausanias tells us was longer than the north side, was bounded by a bank of earth. This bank may well have served the additional purpose of a dam against the overflow of the Alpheus. Cut into this bank was a passage, presumably through which the horses and jockeys entered, and next to this passage, Pausanias, tells us stood the altar of the Taraxippus¹³. At the western end of the hippodrome stood the starting mechanism and the finishing line. The starting mechanism was quite a complicated affair of considerable dimensions (each side was 400 feet long) and it may have been set back off the track itself on the southern side of the hippodrome, thus explaining why one side of the hippodrome was longer than the other¹⁴. Along the rear of the starting mechanism ran the Colonnade of Agnaptus. It was through this walkway that the Hellanodices and their honoured guests entered the hippodrome, and after racing the victors left to proceed to the Altis for the crowning ceremony. Whether this colonnade enclosed the whole western end of the hippodrome or just the southern half behind the starting gate is uncertain; however, the northern half near the finishing line may have been bounded by olive

trees.

According to Pindar *Olympian* 3, Heracles brought back olive trees from the land of the Hyperboreans and planted them in the Olympic hippodrome. He did this for two reasons:

πιστὰ φρονέων Διὸς αἴτει πανδόκῳ
ἄλσει σκιαρόν τε φύτευμα ξυγόν ἀνθρώποις
στέφανόν τ' ἀρετᾶν¹⁵.

(With a faithful heart he asked for a tree for the welcoming grove of Zeus which would provide shade for men and a crown of excellence.)

In line with this twofold purpose highlighted by Pindar, the rest of the literary evidence suggests that the olive trees brought back by Heracles were planted in two different places on the site of Olympia to fulfil these two different functions.

First of all, there seems to have been a sacred olive set aside in a sacred precinct, the branches of which were to be used to make the victors' crowns. Both the scholiast to *Olympian* 3 (line 17) and Aristotle (*On Marvellous Things Heard* 51 [834a 13-14]) state that this olive was planted in the Πάνθειον, which was probably to the west of the hippodrome. And indeed it is most likely that this is the olive referred to by Pausanias (5.15.3) growing in the Altis. Both Pausanias and Aristotle call the olive καλλιστέφανος (beautiful-crowning).

Secondly, it would appear that there were olive trees planted on the Olympic hippodrome itself.

τῶν νιν γλυκὺς ἴμερος ἔσχεν δωδεκάγναμpton
περι τέρμα δρόμου
ἵππων φυτεῦσαι¹⁶.

(A sweet desire came to him to plant them [the olive trees] around the turning post which is rounded twelve times on the hippodrome).

The primary purpose of these olive trees, according to Pindar, was to provide shade, and indeed trees were a regular feature on many ancient Greek racecourses for this very reason. However, since horse racing at Olympia took place early in the morning before the sun was at its hottest¹⁷, these trees may have served the more important function of providing some form of boundary-line or barrier to delimit the course. Pindar tells us that the trees planted by Heracles were situated *περὶ τέρμα*. In normal usage, *τέρμα* could mean either the "end" or "boundary" of an area, but when used in connection with a hippodrome it had also the special meaning of "turning post"¹⁸. It is unlikely that Heracles planted the olive trees directly beside a turning post, but rather behind one as a barrier. A metaphor used by Aristophanes (*Frogs* line 995) suggests that this was the case. The chorus is giving a warning that one should keep a tight rein on one's spirit in case it carries one *ἐκτὸς τῶν ἐλαιῶν* (beyond the olives), and the scholiast suggests that this is a reference to the hippodrome.

ἐμφαίνει δέ τι ὠρισμένον λέγειν, καὶ μάλιστα
ὡς ἐπ' ἄκρου ἵπποδρόμου ἐλαῖαι ἦσαν,
καθ' ἃς ἐξεφέροντο οἱ ὑποπίπτοντες κατὰ
τὸν δρόμον. θέλει δὲ εἶπεν, ἐκτὸς τοῦ
προκειμένου. Ἄλλως, ἐν τῷ τέλει τοῦ τόπου οὐ
ἔτελείτο ὁ δρόμος, ἐλαῖαι σιχηδὸν
ἴστανται, οὔσαι κατάντημα τοῦ δρόμου, καὶ
οὔδεις ἐπέκεινα τούτων ἐχώρει. ὅστις οὖν
πέρα τοῦ δέοντος ἔπραττέ τι, ἔλεγον ὡς
ἐκτὸς τῶν ἐλαιῶν φέρεται.

(He seems to mean something marked out, especially as there were olive trees at the end of the hippodrome towards which those having an accident are carried during a race. He wishes to say outside the prescribed limits. At the end of the place where the race finishes, olive trees stand in rows, being the goal of the race, and no one goes beyond these. Therefore, whoever does something beyond what is necessary is said to have been carried beyond the olive trees).

The scholiast here is referring obviously to the Olympic hippodrome, and he provides further proof that the olive trees were planted behind the turning post and not along the sides of the racecourse as some have suggested¹⁹.

Pollux has an interesting entry in his lexicon under ἔκδρομος ἵππος which surely has a connection with this argument.

ἔστι δέ τις ἵππου δρόμος, ἔκδρομος ὅταν
 ὑπὲρ τὸ τεταγμένον τοῦ δρόμου μέτρον ὑπὸ
 ῥύμης ἐκφέρεται.

(There is a certain type of horse - the ekdromos - so called whenever it is carried beyond the prescribed limits of the racecourse by its impetus).

It is much more likely that a horse would be carried off the course by its own momentum at either of the turning posts where it has to slow down rapidly and manoeuvre round the post, rather than along the length of the racecourse where it would be more the fault of the jockey than the horse for any deviation off a straight line. The fact that a row of trees along the sides of the Olympic hippodrome would obscure the view of the spectators seated on the embankments is further reason for supposing that the trees were planted behind the turning post at the western end of the hippodrome.

Exactly how the Olympic hippodrome was bounded at its eastern extremity is uncertain, but it is likely that some form of barrier existed there also to prevent horses running off the course as they performed the difficult manoeuvre of rounding the far turning post.

The turning posts themselves seem to have been stone columns, and Pausanias tells us that on the inner of these (the one which served also as the finishing post) stood a bronze statue of Hippodameia carrying a ribbon with which she is about to crown the victorious Pelops.



The whole layout of the Olympic hippodrome was particularly favourable to the spectators and umpires. The banks of earth which enclosed it on its two longest sides provided excellent vantage points both for those whose job it was to determine the victor and to adjudicate on matters of foul-play, and also for those who came to spectate²⁰. The judges must have sat on the

northern embankment next to the finishing line, and since, as previously mentioned, this embankment sloped down to the stadium on its other side, there is a possibility that by turning round as appropriate, the umpires could judge both the stadium and hippodrome races from roughly the same position.

Having a hippodrome and a stadium situated next to each other was not unique to Olympia but was the case at several sites. The most obvious reasons for this are that firstly it is preferable from the point of view of the spectators and organizers to have the venues for both horse racing and foot racing close together at a festival, and secondly, since both require to be laid out on flat ground, it is natural to find them situated in proximity to one another. According to Pausanias (9.23.1), the stadium and hippodrome at Thebes were laid out side by side in much the same way as at Olympia with a bank of earth separating the two; and the fact that the gymnasium also was situated beside these suggests that the Greeks realised the value of grouping such venues together in the form of a sports complex²¹.

As regards the dimensions of the Olympic hippodrome, one cannot be sure due to lack of concrete evidence. However there is a reasonably strong case for suggesting that the distance between the two turning posts was two stades. Pausanias (6.16.4), while listing victors in athletics contests, mentions that the length of the so-called ἰππῖος δρόμος at Nemea, a foot race in the stadium, was twice the length of a standard

athletic δίαυλος, i.e. four stades. If it was from the distance of the equestrian δίαυλος that this foot race of four stades took its name, this would suggest that the hippodrome at Nemea was exactly twice the size of the stadium, i.e. two stades. This assumption is supported by two facts. Firstly, in the time of Solon when the Nemean games were instituted as a Panhellenic festival (573 B.C.), the term ἵππικον was being employed as an everyday measurement of four stades²². Secondly, when the Emperor Hadrian, who took considerable interest in the Nemean games²³, had a hippodrome built in Rome, it measured two stades in length, a complete circuit therefore measuring four stades.

From these measurements at Nemea, it is possible to arrive at an estimated measurement for the Olympic hippodrome since the Nemean festival was modelled in many ways on its older Olympic counterpart. Therefore if the standard Olympic measurement of two stades was being used at Nemea for a complete athletic δίαυλος, it follows that the length of four stades for a complete equestrian δίαυλος at the Nemean festival probably had its origin also at Olympia and its hippodrome.

A second set of dimensions for the Olympic hippodrome is listed in a manuscript found in the Old Seraglio at Constantinople²⁴, but there is a problem about its validity and accuracy. It reads as follows:

ὁ Ὀλυμπιακὸς (ἀγὼν) ἔχει ἵπποδρόμιον
 ἔχον σταδίουσ ὀκτώ, (πόδας τετρακισχιλίους
 ὀκτακοσίους), καὶ τούτου ἡ μία πλευρὰ ἔχει
 σταδίουσ τρεῖς καὶ πλέθρον ἓν. τὸ δὲ πλάτος πρὸς
 τὴν ἀφ᾽ ἑσιν στάδιον ἓν καὶ πλέθρα τέτ-
 ταρα. [...]

(At the Olympic games, there is a hippodrome which has eight stades. One side measures three stades and one plethron²⁵. The width of the start is one stade and four plethra [...]).

Schneider²⁶ rejects this evidence on the grounds that the text is too corrupt to be considered reliable, but Drees²⁷ makes much of it, and in a rather ingenious manner he manages to make all the figures in the manuscript not only tally credibly with each other but also agree with all the other available evidence on the dimensions of the hippodrome. However, one cannot take his conclusions too seriously, due to the excessive amount of guesswork on which his arguments depend.

The Hippodrome on Mount Lycaeon

The racecourse on Mount Lycaeon in Arcadia is the only example of an ancient Greek hippodrome which has survived until today. It lies in a small valley between two peaks 4000 feet above sea level²⁸, and race meetings were held there in honour of Zeus Lycaeus. Pausanias (8.38.5) mentions it in his description of the area.

ἔστι δὲ ἐν τῷ Λυκαίῳ Πανός τε ἱερόν καὶ
 περὶ αὐτὸ ἄλλοσ δένδρων καὶ ἵππόδρομός τε
 καὶ πρὸ αὐτοῦ στάδιον. τὸ δὲ ἀρχαῖον τῶν
 Λυκαίων ἦγον τὸν ἀγῶνα ἐνταῦθα.

(There is a sanctuary of Pan on Mount Lycaeon with a grove of trees around it with a hippodrome, in front of which is a stadium. In ancient times they

held the Lycaeon festival there.)

The site itself, which is not frequented by tourists and is now used for agricultural purposes, can best be reached from Megalopolis by road to the small hamlet of Lycosura, and from there by a steady climb up the mountain to the village of Ano Karea. A track leads from this village to the hippodrome and the ascent can be made in 15 minutes on foot. The racecourse, which is about one and a half stades long and 130 feet wide, occupies much of the available space in the valley.

This racecourse, although quite small and remote, seems to have had most of the features of a major hippodrome. Archaeological remains show that it was bounded on its longest sides by retaining walls and at one end by terraced seating; at the other a sunken cistern with a series of troughs has been found. Beside the hippodrome was a sanctuary of Pan surrounded by a grove of trees. As at Olympia, Thebes and many other sites, there was a stadium next to the hippodrome. Starting grooves for the athletes have been found in this stadium, but there is no evidence, archaeological or otherwise, for a starting gate in the hippodrome. However, all the other additional permanent features on the Mount Lycaeon hippodrome suggest that it had long-standing importance as a racecourse in the ancient world. In the sequence in which the various ancient Greek festivals were instituted, Aristotle²⁹ placed the Lycaeon games fourth, before all four Panhellenic festivals. It is therefore not surprising to find impor-

tant names such as Ptolemy 1 Soter appearing on its victory lists, and competitors from as far afield as Cassandra and Rhodes recorded as having won there³⁰.



1. The remains of the grandstand at the racecourse on Mount Lycaeon.

2. The system for watering horses at the racecourse on Mount Lycaeon.



2. The straight on the racecourse on Mount Lycaeon.



3. The cistern for watering horses at the racecourse on Mount Lycaeon.

The Hippodrome at Isthmia

A recent excavation³¹ at Isthmia has uncovered what seems to have been the site of an ancient hippodrome. The area is comparatively level and would have allowed a maximum length of about 315m. No evidence has surfaced to indicate that the hippodrome had any permanent seats or embankments for spectators, which is rather surprising given the importance of the Isthmian festival. Traces of wheel tracks have been found through the site which suggest that, while horse racing was not being held, the hippodrome was used as a thoroughfare. As mentioned above, this seems also to have been the true of the hippodrome at Delphi³². The discovery of spear points on this site at Isthmia has caused some doubt in the mind of the archaeologist, O. Broneer, as to whether this really was the Isthmian hippodrome, since he believes that spear points belong exclusively to the pentathlon. However, Broneer's fears on this point may be unnecessary since the ἀφ' ἵππου ἀκοντίων contest, which involved throwing spears, although not a Panhellenic event, featured frequently on ancient Greek racecards³³. In addition, the Greek cavalry often exercised with javelins in hippodromes³⁴.

The Hippodrome at Athens

Of the hippodrome at Athens, little is known. A reference in *Etymologicum Magnum* (340) states that horse racing at Athens was held at a place called Echelidai over an area of eight stades - ἐν Ἐχελιδῶν. τόπος Ἀθήνησι σταδίων ὀκτώ, ἐν τῷ αἰ ἵπποδρομίαι³⁵. If this is an accurate measurement of the length of the racecourse, it must have been one of the longer hippodromes in ancient Greece. An ἀκάμπιος race on this track would therefore have been about seven and a half furlongs (ca.1500m) in length, just slightly shorter than the longest straight race contested in Britain today. However, the eight stades may refer to the distance of a circuit of the track, which would agree with the dimensions quoted for the hippodrome at Olympia in the Old Seraglio manuscript³⁶.

It seems that some of the equestrian events of the Great Panathenaic games of the Hellenistic period were not held in this hippodrome. The racecard of IG 2.2.968, which catalogues victors at this festival in the second century B.C., is clearly split between two locations. The second of these (lines 41-42) is listed as being ἐν τῷ ἵπποδρόμῳ (in the hippodrome). The reference to the first (line 16) is unfortunately defective, with the important name of the location missing. Several supplements have been offered, with the most convincing being perhaps ἐν τῷ

Ἐλευσινίῳ (in the Eleusinium) suggested by Koehler, since Xenophon (*Cavalry Commander* 3.2) mentions that the Athenian cavalry held displays there. Xenophon (*Cavalry Commander* 3.11-12) mentions the hippodrome also as being a venue for such displays, and refers to the cavalry filling the racecourse (ἐμπλήσαντες ἵππων τὸν ἵππόδρομον), which forces one again to picture an enclosed area.

The Hippodrome on Delos

According to Thucydides (3.104.6), horse racing was introduced to the island of Delos in 426 B.C., and it was probably around this date that its hippodrome was laid out. Archaeologists disagree about the location of the hippodrome, mainly due to the size of the island and its topography. However, Harris³⁷ suggests that one need not look for a perfectly flat site on such a hilly island. Both Epsom and Goodwood in England are far from flat, which presents no obstacle to horse racing. The most probable site for the hippodrome seems to be to the east of the granite *palaestra*, where the remains of a grandstand 53m long have been excavated.

Alternative Uses of the Ancient Greek Hippodrome.

(a) The Hippodrome and the Cavalry

The ancient Greek hippodrome, due to its size and level surface (coupled with its obvious associations with horses), was used extensively by the Greek cavalry. Not only did the cavalry take part in horse races at major festivals, they also made considerable use of hippodromes for public displays, military training and even as battlefields.

Xenophon (*Cavalry Commander* 1.19) lays great emphasis on the need for a well-trained cavalry.

"It is useful to remind them that the state supports an expenditure of nearly 40 talents a year in order that it may not have to look about for cavalry in the event of war but may have it ready for immediate use. For with this thought in their minds, the men are likely to take more pains with their horsemanship, so that when war breaks out, they may not have to fight untrained for the state, for glory and for life."

For the cavalry to train effectively in certain disciplines, a wide expanse of level ground and a source of water, both of which most hippodromes provided, were needed. Xenophon (*Cavalry Commander* 1.6) tells us that one of the most important tasks of the cavalry commander was to train his men in throwing a javelin effectively when on horseback³⁸. The hippodrome would have afforded the necessary space for this exercise to have been performed without danger. Indeed, this was the case in Sparta in the fourth century B.C., where King Agesilaus is recorded as having trained his men in the hippodrome³⁹.

ἐκ τούτου δὲ παρῆν ὄραν τὰ μὲν γυμνάσια
 μεστὰ τῶν ἀνδρῶν γυμναζομένων, τὸν δὲ
 ἵππόδρομον ἵππέων ἵππαζομένων, τοὺς δὲ
 ἀκοντιστὰς καὶ τοὺς τοξότας ἐπὶ στόχον
 ἰέντας.

(Thus one could see the gymnasia full of men exercising, and the hippodrome crowded with cavalymen riding, and javelin throwers and archers aiming at targets.)

Not only in times of peace did the cavalry use the hippodrome. Antiochus the Great, son of Seleucus, during his siege of Sardis in 215 B.C. drew up the main body of his men in the hippodrome of that city prior to his successful attack⁴⁰. Similarly, in the war with Ptolemy in 219 B.C., he had encamped his men beside the hippodrome outside the city of Seleucia⁴¹. It would seem that Antiochus intended to use the respective hippodromes to drill his men and draw them up for last-minute instructions. This practice of drawing up or stationing soldiers in hippodromes is attested also by Constantine Porphyrogenitus (51.40) who tells us that when the Emperor Leo departed on a short expedition, he would leave behind one of his divisions in the hippodrome to guard his palace. More recently in this country, the British Army has made use of the open spaces of racecourses to station men, such as Catterick camp in the Second World War.

As well as stationing and drilling men in hippodromes, the Greeks fought cavalry battles in them. Xenophon (*Hellenica* 6.5.30) records that in 370 B.C., the cavalry from opposing forces advanced to the racecourse at Sparta and there fought a pitched

battle⁴². And the tactics which Xenophon (*On the Art of Horsemanship* 8.12) recommends should be adopted when opposing cavalry forces are drawn up against each other, involving charges, counter-charges and much tactical manoeuvring, make it clear that much open space, such as that afforded by a racecourse, was required.

Bearing this in mind, it is understandable that one of the main public displays which the cavalry was obliged to perform, the ἀνθιππασία (sham fight), was held in the hippodrome. Xenophon (*Cavalry Commander* 3.10-12) describes this spectacle as follows.

ὅταν γὰρ μὴν ἐν τῷ ἵπποδρόμῳ ἢ
ἐπίδειξις ἢ καλὸν μὲν οὕτω πρῶτον τάεσθαι,
ὡς ἂν ἐπὶ μετώπου ἐμπλήσαντες ἵππων τὸν
ἵπποδρόμον ἐξελάσειαν τοὺς ἐκ τοῦ μέσου
ἀνθρώπους. καλὸν δ' ἐπεὶ αἱ φυλαὶ ἐν τῇ
ἀνθιππασίᾳ φεύγουσιν τε ἀλλήλας καὶ διώκουσιν
ταχέως, ὅταν οἱ ἵππαρχοὶ ἡγῶνται ταῖς
πέντε φυλαῖς, ἑκατέρας διελαύνειν τὰς φυλάς δι'
ἀλλήλων, ταύτης γὰρ τῆς θέας τὸ τε
ἀντιμετώπου προσελαύνειν ἀλλήλους γοργόν, τὸ
τε διελάσαντας τὸν ἵπποδρόμον ἀντίους πάλιν
στήναι ἀλλήλους σεμνόν, καὶ τὸ ἀπὸ σάλπιγγος
αὐτὸ δεύτερον θάπτον ἐπελαύνειν καλόν.
στάντας δὲ ἤδη τὸ τρίτον αὐτὸ ἀπὸ τῆς σάλπιγγος
γὺρῶν κρή ταχίστα ἀλλήλους ἐπελαύνειν, καὶ
διελάσαντας εἰς κατάλυσιν ἤδη ἐπὶ φάλαγγος
ἀπαντᾶν καταστάντας, ὡς περ εἰώθατε, πρὸς τὴν
βουλὴν προσελαύνειν.

(When the display is held in the hippodrome, it is best first to arrange the men so that the hippodrome is filled with horses in a line and they can drive out those in the middle. It is also best that in the sham fight the regiments pursue and flee from each other quickly and ride through each other's ranks, with the commanders each leading five regiments. It is quite a spectacle when they charge excitedly at each other head-on, and when they have swept majestically across the hippodrome they stand facing each other again, until the trumpet sounds once more and they charge splendidly again at a faster pace. When the trumpet has sounded for a third time, those standing should charge at each other as quickly as possible, and

when they have ridden through, they should draw themselves up in battle array to be dismissed, and then, as is the custom, they should ride to the Council).

Thus it is clear that most Greek cavalrymen would have been very familiar with the hippodrome in their city or town. Not only would they have been able to take part in the special events for the cavalry in the ἀγών ἵππικός of the major festivals which may have been held there, but also they would have spent considerable time there participating in public displays, undergoing military training or even fighting pitched battles in times of war.

(b) The Hippodrome and Agriculture

H.A. Harris⁴³ makes the following interesting comment on the ancient Greek racecourse.

"Greece was far too poor a country for the large areas required for such races (i.e. those with 40 chariots) to be permanently sequestered for racing purposes. Our nearest modern parallel to a Greek hippodrome is the course marked out for the point-to-point races of a local hunt on land which at all other times of the year is used for ordinary agricultural purposes."

This was undoubtedly true for the majority of hippodromes, but not for all. The flaw in Harris' definition is that it does not distinguish between permanent and temporary hippodromes in ancient Greece.

Permanent racecourses were to be found in many cities or localities where major festivals were held. They were characterized generally by retaining walls, terraced seating, altars and, on some such as at Olympia and possibly Delphi, elaborate starting mechanisms.

These hippodromes were owned usually by wealthy cities which could afford the expense incurred⁴⁴. When such a racecourse was not being used for horse racing, it was still referred to as a hippodrome⁴⁵, and it still resembled a hippodrome.

The second type of hippodrome in ancient Greece, and the one which Harris' description more adequately fits, is the temporary one, used for small local festivals. An inscription⁴⁶ from the fifth century B.C., cataloguing the victories of a certain Damonon and his son, lists several such racecourses in the southern Peloponnese. It is unlikely that these hippodromes had any permanent features and, as Harris says, they consisted probably of any flat stretch of ground which at all other times of the year was used for agricultural purposes. Thus from one year to the next it is quite possible that the equestrian events of one such local festival could have been held on a different stretch of the same plain, with turning posts erected for the duration of the games and dismantled again at the end of the festival.

Once this distinction has been made, it should be said that the majority of permanent racecourses must also have been employed at some stage for agricultural purposes by virtue of their layout. The racecourse on Delos may be a good example of a permanent hippodrome being used in this way. An inscription⁴⁷ from this island recording the renting of areas of land for farming mentions the hippodrome as one of these areas.

(c) Hippodromes as Gardens and Parks

The pleasant character and layout of some ancient Greek hippodromes led to their being used for recreational activities. As we have seen, many hippodromes were in the form of an enclosure. These were bounded on their sides either by retaining walls such as those on Mount Lycaeon and at Nicomedia, earth embankments (with perhaps some terraced seating) as at Thebes, or possibly even rows of trees. Within this enclosure, other trees may have been planted for the purpose of shade, or perhaps to form a barrier at one end of the track, as at Olympia. In close proximity to the hippodrome there was often a temple or altar surrounded by a sacred grove of trees⁴⁸, and either in the hippodrome itself or in the immediate vicinity there was by necessity a spring of water for the refreshment of the horses and jockeys⁴⁹. Therefore, by virtue of its location and verdant surroundings, the Greeks used the hippodrome often as a public park or garden when racing was not taking place.

Dio Chrysostom (20.10) tells of how he encountered people frequenting the hippodrome as they would today a public park.

ἤδη, δέ ποτε εἶδον ἐγὼ διὰ τοῦ ἵπποδρόμου
βαδίζων πολλοὺς ἐν τῷ αὐτῷ ἀνθρώπους ἄλλο
τι πράττοντας, τὸν μὲν αὐλοῦντα, τὸν δὲ
ὀρχούμενον, τὸν δὲ θαῦμα ἀποδιδόμενον, τὸν δὲ
ποίημα ἀναγιγνώσκοντα, τὸν δὲ ᾄδοντα, τὸν δὲ
ἱστορίαν τινὰ ἢ μῦθον διηγούμενον.

(While walking through the hippodrome, I once saw many people there, each doing something different. One was playing the flute, another was dancing, another performing a spectacle, another reading a poem, another singing, and another relating some

story or myth.)

And on another occasion⁵⁰, he relates how he would take a relaxing drive around the racecourse in his carriage before breakfast as a pleasant way to start the day.

This connection of the racecourse with gardens and parks is attested as early as Pindar (*Olympian* 3 line 24), where the Olympic hippodrome is called a κᾶπος (garden). Gildersleeve⁵¹ reads no more into this term than "any favoured spot" of the gods, and likens its usage here to *Pythian* 9.57. where the same word is used to describe Libya, the favourite place of Zeus. However, although Olympia was considered very dear to Heracles and therefore could have been called a κᾶπος in the same sense as Libya in *Pythian* 9, Pindar's choice of vocabulary here must certainly have been influenced by the Olympia he knew personally and its scenic hippodrome.

That ancient Greek hippodromes were situated often in particularly fertile surroundings is further substantiated by mention in two inscriptions of gardens bordering racecourses. The first of these, from Aspendus in Pamphylia⁵², records how a certain Zenon donated to the public use gardens situated beside the hippodrome (ἐκαρίσατο κήπους πρὸς τῷ ἵπποδρόμῳ), and the second, a fragment from the island of Delos⁵³ from the second century B.C., tells us simply that there used to be a garden beside the hippodrome (κῆπον τὸν πρότερον προσόντα τῷ ἵπποδρόμῳ).

This association of the hippodrome with gardens

was strong in antiquity⁵⁴ and was not exclusive to the Greeks. Pliny (*Letters* 5.6.32ff.), in a letter to his friend Domitius in which he describes his villa in Tuscany, mentions that there was a hippodrome in the grounds. Whether it was actually used for racing or not is uncertain, but his description of this hippodrome would certainly benefit an ornamental garden.

"In front of these agreeable buildings lies a very spacious hippodrome (hippodromus). [...] It is encompassed on every side with plane trees covered with ivy; and the ivy twining round the trunk and branches spreads from tree to tree and connects them together. Between each plane tree are planted box trees and behind these bay trees which blend their shade with that of the planes. [...] The raised path around the hippodrome which runs straight bends at the farther end into a semi-circle and takes on a new aspect, being embowered in cypress trees and obscured by their denser and more gloomy shade; while the inward circular alleys enjoy the full sun."

FOOTNOTES

1. line 330
2. *Dictionnaire des Antiquités Grecques et Romaines*, Volume 3, pages 193-195.
3. There are many allusions to the expertise of the Trojans in horse breeding. Troy is εὐπῶλος (abounding in horses) (*Iliad* Book 5 line 551) and the Trojans are ἰππόδαμοι (horse-taming) (Book 4 line 352). Aeneas' horses were descended from the famous breed given by Zeus to Tros as compensation for Ganymede (Book 5 line 265) and Dardanus' son, Erichthonius had 3000 mares (Book 20 lines 219-222).
4. See Chapter 5, footnote 17.
5. It is probable that Sophocles based his description of this chariot race on the Pythian games of the fifth century B.C. with which he was personally familiar, although the event is set in the Heroic period.
6. See also Ps. Demosthenes 61.28.
7. Pindar *Pythian* 5 celebrates the victory of Arcesilaos of Cyrene in the chariot race at the Pythian games of 462 B.C., in which an alleged 40 chariots crashed (lines 49-53). The Delphic hippodrome must have been of considerable dimensions to accommodate such a large field of horses.
8. For further references to dusty racecourses, see Bacchylides 5.44, Nonnus *Dionysiaca* 37.281.
9. SEG 27.119.
10. SIG 636.
11. SIG 253u.
12. An inscription (CIG 1688, line 36) containing a decree of the Amphictyonic Council mentions "the racecourse and the fountain on the plain". J.G. Frazer *Pausanias's Description of Greece* London 1913, volume 5 page 458, concludes from this that the hippodrome must have been near the site of Itea.
13. The altar of the Taraxippus allegedly frightened horses without reason as they ran past it in the course of a race. Pausanias lists possible mythological origins, and mentions that such existed also at the Isthmus and Nemea.
14. For a full discussion of this starting mechanism, see Chapter 4.

15. Lines 17-18.
16. Pindar *Olympian* 3.33-34.
17. Bacchylides 5. 36-41. For horse racing at Delphi
cf. Sophocles *Electra* 699.
18. See page 244.
19. Cf. W.B. Stanford, London 1958, page 161.
20. Mounds of earth or hills to provide seating arrangements for spectators seem to have been common in ancient Greece (see Pausanias 9.23.1., Nonnus *Dionysiaca* 37.269.).
21. Hippodromes and stadiums were situated beside each other at Mt. Maenalus (Pausanias 8.36.8), Mt. Lycaeon (Pausanias 8.38.5), Mantinea (Pausanias 8.10.1) and Delphi, in the time of Pindar before the hippodrome was relocated on the plain of Crisa (Pindar *Pythian* 10.23, 11.20).
22. Plutarch *Solon* 23.
23. Pausanias 6.16.4.
24. For the text of this manuscript, see H. Schöne, *Neue Angaben über den Hippodrom zu Olympia*, JDAI 12 (1897), page 155.
25. One plethron was equal to 100 feet.
26. RE, volume 8.2. column 1742.
27. *Olympia*, Stuttgart 1967, pages 97-98.
28. For a hippodrome situated on Mount Parparos in Argolis, see IG 5.1.213 and C.D. Buck, *The Greek Dialects*, Chicago 1955, page 270.
29. *Fragmenta*, ed. Rose, Leipzig 1886, no. 637
30. SIG 314 (circa 320-303 B.C.).
31. O. Broneer, *Isthmia II; Topography and Architecture* Princeton 1973, pages 117-122.
32. See page 126. The Melling Road, which bisects Aintree racecourse at Liverpool, is a contemporary example of this.
33. cf. IG 2.1.444, SIG 697H, and IG 9.2.527 where σκοπος ἵππων appears to be the equivalent of ἀφ' ἵππου ἀκοντίων. See also Plato *Laws* 8.834D.

34. See pages 142-145.
35. Much has been debated on the exact location of this hippodrome. See W. Judeich, *Topographie von Athen* Munich 1905, pages 402-403. W.S. Ferguson, *The Salaminioi of Heptaphylai and Sounion*, *Hesperia* 7 (1938) pages 25-26. S. Benton, *Echelos' Hippodrome*, *ABSA* 67 (1972) pages 13-19. D. Kyle *Athletics in Ancient Athens*, Leiden 1987, pages 95-97.
36. See pages 134-135.
37. *Sport in Greece and Rome*, New York 1972, page 162.
38. cf. also Plato *Meno* 93D.
39. Xenophon *Agesilaus* 1.25.
40. Polybius 7.17.2.
41. *ibid.* 5.59.1.
42. Cf. also Aeschines *Against Ctesiphon* 88, Procopius *History of the Wars* 1.24.42.
43. *op.cit.* page 162.
44. For a list of costs involved in the upkeep of the hippodrome at Delphi in the third century B.C. see SEG 27.119.
45. Demosthenes 47.53, SIG 636.
46. IG 5.1.213.
47. IG 2.3.1638
48. SIG 736 line 33, Pausanias 8.10.1, 8.38.5.
49. CIG 1688 line 36.
50. 52.1.
51. *Pindar. Olympian and Pythian Odes*, London 1885, page 159.
52. CIG 4342.
53. *Inscriptions de Delos* 1406 B, see also SEG 29.732. For other references associating hippodromes and gardens see Plato *Critias* 117 C and IG 2.2.817.
54. For further reading see M. Gothein, *Der griechische Garten*, *AM* 34 (1909) pages 116-132. P. Grimal, *Les Jardins Romains*, Paris 1969, pages 249-253. J. Ebert, *Olympia* Leipzig 1980, pages 138-139. A. Hoffman, *Das Gartenstadion in der Villa*

Hadriana, Mainz 1980, pages 65-66. J. Humphrey,
Roman Circuses: Arenas for Chariot Racing, London
1986, pages 568-571.

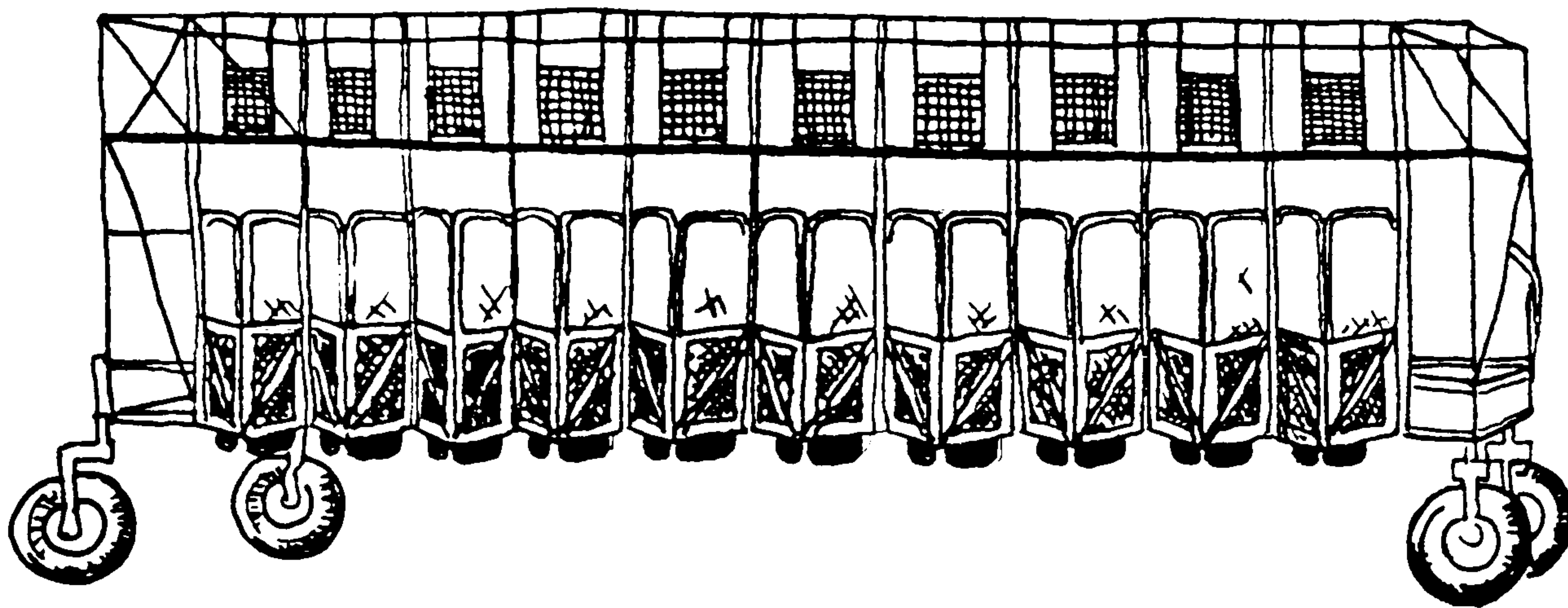
THE STARTING MECHANISM ON THE OLYMPIC HIPPODROME

Ensuring a fair start in any race has been a problem for track officials throughout the ages. The question of how to send a field of excited racehorses on their way (whether yoked to chariots or not) has not only caused a headache for the stewards concerned, but has also invariably provided an interesting spectacle for the crowds which flock to the racecourse. If the start of the most thrilling horse race in the world today, the Grand National at Aintree with up to 40 horses stretched across the course, can still produce such tension and excitement for stewards and spectators alike, how much more so must have been the case in the races at ancient Delphi in the time of Pindar when fields of 40 four-horse chariots are recorded as having taken part¹.

The difficulties posed by the start of a horse race have been tackled in two main ways down the centuries. The first and seemingly most simple answer to the problem is to stretch a rope across the track in front of the horses. Such a method was used for all flat races in Britain until the 1960s and is still used today for all National Hunt races². The starting apparatus, which consists of one or two ropes extended across the course about five feet from the ground and fixed to a post on either side of the track, is operated by a steward standing on a platform. From this

position he can check that all the horses are in line and that the jockeys are ready. When he is satisfied that everything is in order, a white flag is raised to inform jockeys and spectators that the race is about to begin, and a lever is pulled causing the ropes to be raised quickly, thus letting the horses race off. This method works particularly well for long-distance races of two miles (3200m) or more where a few lengths lost at the start have a negligible effect on a horse's chance in a race, and indeed it is common nowadays to see the tapes being raised and the race started even when the horses are approaching the starting position in Indian file, the most important consideration being that they are facing in the right direction. However starting a horse race in this fashion has obvious disadvantages, especially with regard to the shorter sprint races of five and six furlongs (1000m and 1200m), where a few lengths poached at the start can prove crucial to the outcome of a race. And thus in the 1960s starting stalls were introduced to British racecourses to ensure fairer starts in the shorter, faster flat races. These stalls are constructed to withstand the force of excited horses, and are mounted on wheels to be transported wherever necessary on the course³. The horses enter the stalls, which are stretched in a straight line across the track, from the rear and leave when the two small metal gates in front of each stall are sprung open. This starting mechanism invariably ensures an even break and rules out entirely

false starts. The only drawback of this system is that a horse may refuse to enter the stalls and have to be withdrawn from the race.



The earliest forms of horse racing in ancient Greece however knew no complicated methods of starting. In Homer's description of the chariot race at the funeral games of Patroclus in *Iliad* Book 23 line 358, the competitors simply lined up (στὰν δὲ μεταστοιχί) along a starting line, probably scratched in the dust⁴, and the race began. We are left to assume that Achilles gave some form of signal, but there is no mention of a rope being used, and it obviously cannot have been a question of starting stalls, since the race took place on the Trojan plain and not in a hippodrome proper, if such even existed in Homer's time.

Sophocles' account of the chariot race at Delphi

several centuries later, in which Orestes was reported to have come to grief, does not indicate much development in starting techniques since the time of Homer, if his description can be taken as representative of the methods employed on racecourses in the fifth century B.C.⁵. In this event, the contestants drew lots, as in Homer, for their position on the starting line, and the race began with the blast of a trumpet. Here again, no ἰππάρφεις (starting device) is mentioned.

The first certain record of a specific starting device or mechanism used in a hippodrome in ancient Greek literature occurs in Plato's *Phaedrus* (254E), written early in the fourth century B.C.⁶. Here Plato, describing the antics of an unruly horse at the start of a race, mentions how it rears up at the starting gate. The term he uses for this device is ὕσπληξ, a word which appears frequently in connection with both the stadium and the hippodrome from the Classical period onwards, indicating perhaps its widespread popularity as a starting mechanism. Exactly how it functioned in the hippodrome, or indeed what it looked like, is open to speculation, but an examination of other passages where the ὕσπληξ, or other devices related to the starting of races, are mentioned sheds considerable light on the subject.

One of the earliest and most informative of these passages is an epigram from the third century B.C. celebrating the Olympic victory of Attalos in the four-horse chariot race for young horses⁷.

[Πο]λλὰ μὲν ἐγ Λιβύης ἦλθ' ἄρματα, πολλὰ
 [πο]λλὰ δὲ πικείρης ἦλθ' ἀπ' Ἄργεως,
 [οἰ]σίιν ἐνηριθμείτο καὶ Ἀττάλου. ἄθροα
 πάντα διὰ στρεπτοῦ τείνατ' ἔχουσα κάλω.
 [ἦ] μέγ' ὑπακῆσασα θοᾶς ἐξήλασε πώλους,
 αἶ δὲ διὰ σταδίου πυκνὸν ὄρεγμ' ἔφερον
 ἄλλαι ἐπ' ἄλλα θέουσαι. ὅ δ' Ἀττάλου
 δίφρος αἰὲν προτέραν ποσίλιν ἔφαινε κόνιν.
 κοῖ μὲν ἔτ' ἀμπνεύοντες ἐδήριον. αὐτὰρ
 ἐγράφεθ' Ἑλλάνων ταῖς τόκα μυριάσιν.
 φῆμα δ' εἰς φιλέταιρον ἀοίδιμος ἦλθε καὶ
 οἴκους
 Περγᾶμου, Ἀλείωι τειλισαμένα στεφάνωι.

(Many teams came from Libya, many from Argos, and many from rich Thessaly, and in this number was also that of Attalos. The hysplex was stretched and kept them all in check with its twisted rope. With a loud crack it drove out the swift horses. They strove together through the racecourse at great speed, one following another. But the chariot of Attalos, like the wind, always whirled up dust in front of the others with the horses' feet. And panting, the others still contended. Nevertheless the countless Greeks who were then present considered him already the victor. The glorious news came to Philetairos and to the houses of Pergamum and brought them honour with the crown of Elis.)

In this epigram, where the start of the race is described, several important features of the ὑσπληξ are mentioned. The most noticeable is that the device consists of a rope stretched in front of the horses. The simplicity and effectiveness of this starting method clearly appealed to the Greeks at this early date, and it was employed not only in the hippodrome. In the opening scene of Lycophron's *Alexandra* (lines 13-15), also from the third century B.C.⁸, the slave likens himself to a runner at the start of a race in the stadium.

ἐγὼ δ' ἄκραν βαλβίδα⁹ μηρίνου σχάσας,
 ἀνείμι λοξῶν εἰς διεξόδους ἐπῶν,
 πρώτην ἀράσας νύσσαν ὡς πτηνὸς δρομεύς.

(Cutting the rope at the top of the starting-
 post, I will follow the paths of her ambiguous
 speech, striking the first turning post like a
 winged runner.)

The starting method described here by Lycophron in
 this metaphor, i.e. a rope stretched in front of the
 athletes, was obviously the one with which he was per-
 sonally familiar and suggests, in the light of the At-
 talos epigram, that this was the prevailing starting
 technique of that period.

Returning then to the epigram celebrating the vic-
 tory of Attalos, we are told that the starting-rope was
 twisted (στρεπτός) and stretched (τείνειν) in
 front of the horses. To understand how this apparatus
 functioned, one must try to envisage, with the aid of
 related passages, what type of device is here being
 described. What does the author mean by διὰ στρεπτοῦ
 [...] κάλω? It could simply be a reference to the
 type of rope used, i.e. one that has been plaited from
 several strands of fibre to give added strength - much
 like the sort with which we are familiar today. This
 type of rope was certainly known in ancient Greece, and
 Plutarch (*Pericles* 12) lists καλωστρόφοι (rope-
 twisters i.e. rope-makers) among the tradesmen in Clas-
 sical Athens. However, a more suitable interpretation
 in this context might be that of a rope twisted many
 times and held tightly in that position so that on
 release, its untwisting would provide the force to

operate the starting mechanism and thus begin the race. In the obvious absence of electrically-powered motors, this source of power (i.e. the converting of the potential energy stored in a twisted rope into the kinetic energy needed to drive a mechanism) seems to have been widely used in ancient Greece. Aristotle (*On the Movement of Animals* 701b 3.9) compares the movements of animals to those of puppet-like dolls which function by means of the energy produced from twisting ropes.

ὡσπερ δὲ τὰ αὐτόματα κινεῖται μικρᾶς
κινήσεως γινομένης, λυομένων τῶν στρεβλῶν καὶ
κρουουσῶν ἀλλήλας [τὰς στρέβλας]

(just as puppets move as the result of a small movement when the twisted cords are released and strike each other).

Notice the use of the technical expression στρέβλων related to στρεπτός in our epigram¹⁰.

But even more pertinent to this argument is a passage in the *Περὶ Αὐτοματοποιητικῆς* of the Alexandrian engineer, Hero (2nd-1st century B.C.), in which the movement of a device on wheels is described.

πάντα δὲ ταῦτα τὰ ὑπάγοντα τὴν ἀρχὴν λαμβάνει τῆς κινήσεως διὰ ὑσπληγγοῦ ἢ λείας μολιβῆς. κοινὸν δὲ ἐστὶ τοῦ κινουμένου καὶ τοῦ κινουμένου σπάρτος ἔχουσα τὴν μὲν μίαν ἀρχὴν πρὸς τῷ κινουμένῳ προσδεσμένην, τὴν δὲ ἑτέραν πρὸς τῷ κινουμένῳ προσηγκυλιωμένην. τὸ δὲ κινούμενον ἄξων ἐστὶ, περὶ οὗ ἢ σπάρτος περιείληται. τῷ δὲ ἄξονι προσαρρότες εἰσὶ τροχοί, ὥστε τοῦ ἄξωνος στρεφομένου καὶ ἀπειλισσομένης τῆς σπάρτου συστρέφουσθαι καὶ τοὺς τροχοὺς ἐρείδοντας ἐπὶ τὸ ἔδαφος. τοῖς δὲ τροχοῖς περικείται τὸ τοῦ ὑπάγοντος αὐτομάτου πλινθίου. τᾶσιν δὲ ὑσπληγγοῦ ἢ βάρους λείας δεῖ πρὸς τὰ ὅλα ἠρμόσθαι, ὅπως μὴ κατακρατῆται ἢ τοῖς τῷ βάρους ἢ τῷ τοῦ ὑσπληγγοῦ τᾶσις ὑπὸ τοῦ πλινθίου. (2. 6-8)

(All these moving objects obtain the source of their power from a rope [hysplex] or a lead weight. Common to both the moving and the object

that is being moved is a rope, one end of which is tied to the moving object, the other end being attached with a loop to the object which is being moved. The object being moved, around which the rope is wound, is an axle. Fixed to the axle are wheels, so that when the axle turns and the rope unwinds, the wheels set on the ground turn. A case surrounds the wheels of the moving object. The tension of the rope [hysplex] or the weight of the lead must correspond to the whole so that neither the weight itself nor the tension of the rope [hysplex] is weighed down by the case.)

From the above passage, we see that the twisted rope used to drive the mechanism was actually called a ὕσπληξ and could well have functioned on a principle similar to the στρεπτὸς κάλωξ of the Olympic starting mechanism¹¹. What further strengthens this comparison is Hero's mention of the τάσις (tension) of the ὕσπληξ. To derive sufficient power from the twisted rope to turn the wheels, the ὕσπληξ had to be pulled tight or twisted to such an extent that its tension greatly increased, so that its unwinding turned the axle of the mechanism. That the Olympic starting device may have derived its power to withdraw quickly the rope from in front of the horses by this same principle specified by Hero is indicated by the use of τείναν in line 4 of the Attalos epigram. The loud noise resulting from the activation of the starting device (line 5) must further emphasize the tension of the rope which this verb implies.

As for τείνειν and its various compounds, they were used often to refer to the stringing or pulling tight of a bow¹². Herodotus (3. 35), in his description of an episode in which the mad Persian King Cambyses

shoots a young boy, uses the verb διατείνειν to suggest pulling a bow to its utmost to achieve the fullest effect and to obtain the maximum power. This was obviously also the degree of strain on the rope which was needed to activate properly the starting mechanism on the racecourse, as the Attalos epigram implies, and as is confirmed by a later reference to such a starting device in *Etymologicum Magnum* (186.15) using the same verb διατείνειν.

ἦσαν δὲ εὐλα δύο, ἀφ' ὧν σκοινία διατείνεται
 ἀφ' ἧς βαλβίδος ἐξέτρεχον οἱ ἀγων-
 ιζόμενοι.

(There were two posts from which ropes were stretched tightly. From this starting place the competitors ran off.)

The question now arises as to how this power or energy contained in the twisted ὕσπληξ was released. Our epigram from Pergamum is silent on this particular detail, but fortunately there are several other passages in the ancient writers which describe the activation of a starting device, and which therefore may give a reliable indication as to how this specific Olympic starting apparatus was operated.

Pausanias, who also gave an account of the starting gate on the Olympic hippodrome, though perhaps not as it functioned in the day of Attalos' victory, described its moment of activation as follows.

πρῶται μὲν δὴ ἐκατέρωθεν αἱ πρὸς τῇ στοᾷ τῇ
 Ἀγνάπτου χαλῶσιν ὕσπληγες, καὶ οἱ κατὰ
 ταύτας ἐστηκότες ἐκθέουσιν ἵπποι πρῶτοι.
 (6.20.13)

(First the ropes on either side by the Stoa of Agnaptos are released and the horses standing there run off first.)

Although this description does not outline in detail the method by which the ropes were released, it is interesting to note Pausanias' choice of verb in this context. The use of *καλᾶν* suggests the releasing of something held tight, since this verb was often used in the sense of unstringing a bow¹³, and it would thus link up with the picture we have formed so far of the ὕσπληξ.

However, we must look elsewhere if we are to obtain a clearer picture. In the passage of Lycophron's *Alexandra* to which we referred earlier, the phrase used to describe the activating of the starting apparatus was *βαλβίδα μηρίνου σχάσας. σχάζειν*, meaning generally to relax or slit open an object, was used frequently in connection with starting a race, and especially with the term ὕσπληξ¹⁴. However, it is not from *σχάζειν* itself but from a derivative *σχαστηρία* that we may find the answer to our problem.

A *σχαστηρία* was the technical expression used in antiquity to denote a device designed to trigger various machines and engines. It occurs often in the treatises on mechanics of the Greek writers of the fourth to second centuries B.C., and Polybius (8. 5.10 - 6.4.) mentions that Archimedes used this method to activate several of his ingenious inventions designed to drop large stones on the Romans besieging Syracuse in 212 B.C.. However, it is a reference in the works of Galen to a *σχαστηρία* being used in connec-

tion with the start of a race that is of the greatest interest to us.

καὶ μέντοι καὶ νῦν ἔτι λέγουσιν ἔν τε τῇ Κῶ
καὶ σχεδὸν ἅπασι ταῖς Ἑλληνίσιν πόλεσι
σχαστηρίαν, ὡς ἐπιβαίνοντες ἑξαίφνης κατα-
πίπτειν ποιοῦσι τὸν κανόνα, ὃ παρεστήκασιν
ἅπαντες οἱ μέλλοντες τρέχειν. (18[1].438)

(And they still even now in Cos and in nearly all Greek cities call a σχαστηρία the device on which one steps to make the barrier fall down¹⁵ suddenly, beside which those about to run are standing).

From the above passage it is clear that the σχαστηρία was a common feature on racecourses in the time of Galen in the second century A.D.. However, it is uncertain whether this particular manner of starting races using a trigger mechanism was known at Olympia and at the other major Greek hippodromes in the period of our inscription from Pergamum. There are several reasons why one cannot simply assume that this was the case. First of all, there is a 400 year time gap between this comment of Galen and the victory of Attalos at Olympia. Secondly, we cannot be sure what type of race Galen has in mind here, though the phrase ὃ παρεστήκασιν ἅπαντες οἱ μέλλοντες τρέχειν would suggest a foot race in the stadium. And thirdly there is no definite indication that this particular starting mechanism was of the ὕσπλης type known at Olympia. Nevertheless, there are also several compelling reasons for suggesting that such a σχαστηρία might have been utilized on Greek hippodromes long before the time of Galen¹⁶. First of all, the fact that a σχαστηρία as a triggering device¹⁷

was known at least as early as the third century B.C.¹⁸, prompts one to consider the possibility of its early use in hippodromes and stadia alike in view of the perennial problems involved there with the starting of races. Secondly, even if the passage of Galen concerns specifically races in the stadium, one should be able to draw safe parallels with the hippodrome, since it is likely that any device found to be effective to start races in the stadium would also have been incorporated into the starting mechanism of the hippodrome and vice versa. Thirdly, although the term ὕσπληξ does not actually occur in the comment of Galen, one could be reasonably sure in assuming that this was the particular device Galen had in mind, since he states that nearly all the cities in Greece used this method, and the ὕσπληξ was easily the most common starting mechanism known in antiquity. And finally, the very fact that nearly all cities in Greece had a σκαστηρία suggests that such a device must have been around for a long time, since communication and the spread of ideas happened much more slowly in ancient times than today. This is shown most clearly in Galen's use of ἔτι.

Such a device as a σκαστηρία, then, would have been particularly appropriate to operate the ὕσπληξ described in the Attalos epigram, which functioned through the releasing of a rope with whip-like force. This sudden release of the ὕσπληξ is described in the epigram as being accompanied by a loud

noise - (ἤ) μέγ' ὑπακήσασα θοὰς ἐξήλασε
 πῶλους. This could have been caused by the recoiling
 of the rope, and emphasizes further the idea of power
 generated by the ὕσπλης. J. Ebert compares the
 use of ὑπηκεῖν in line 5 to that of ἰακεῖν
 in Homer *Iliad* 4.125 to describe the twang of a
 bowstring when released - a point which yet again
 forces a comparison between the tension of the
 ὕσπλης and that of a bowstring¹⁹. And the concept
 of the ὕσπλης making a noise when activated is
 not peculiar to this epigram, as Ebert further points
 out. There is an obvious parallel with the epigram on
 the runner Pericles which mentions the ὕσπλης in
 the stadium making a loud noise²⁰.

Τὸ στάδιον Περικλῆς εἴτ' ἔδραμεν, εἴτ'
 οὐδεὶς οἶδεν ὅλως. δαιμόνιος ἐκάθητο,
 ὁ ψόφος ἦν ὕσπλης ἐν οὐασι, καὶ
 ἄλλος, καὶ Περικλῆς δάκτυλον οὐ προέβη.
ἐκάθητο, τραδυτήης.

(No-one really knows whether Pericles ran or sat
 in the stadion race. Marvellous slowness! The
 sound of the hysplex was in our ears and someone
 else was being crowned and Pericles had not moved
 an inch.)

If these two references do indeed signify that the
 ὕσπλης itself was responsible for the noise, and
 that it was not a case simply of someone standing at
 the starting place blowing a trumpet, we surely then
 must envisage a device of reasonable mechanical com-
 plexity.

What is further significant about line 5 of the
 Attalos epigram is the striking use of the phrase

ἡ ἰσc. ἡ ὕσπληξ][...]θοῶς ἐξήλασε
πῶλους (the hysplex drove out the swift horses). Com-
mentators have invariably passed over this phrase, at-
taching little or no importance to it. This oversight
must indicate their failure to appreciate the par-
ticular picture of the starting mechanism intended by
the author in these few lines. It goes without saying
that one would find it strange indeed today to read in
the vivid post-race account of the Epsom Derby or the
Grand National, that the race had begun by the starting
mechanism driving out the horses. There is nothing
about contemporary starting methods for horse racing
which would conjure up such an image in a journalist's
mind. Why then can our author of the third century B.C.
freely employ such a metaphor without fear of striking
a discordant note? It does not seem that
ἐξελαύνειν was borrowed unsuitably from an older
description of a chariot race known to the author. The
chariot race of Orestes in Sophocles' *Electra*
(lines 698-760), which has influenced much of this
epigram, contains no instance of ἐξελαύνειν²¹ in
connection with the start of the race, even to describe
the action of the chariot drivers. Nor indeed does the
start of this race seem to have been modelled to any
degree on Homer's famous description of the chariot
race in *Iliad* Book 23 which would have been well
known to the author. The solution quite simply must lie
in the nature of the ὕσπληξ itself. The epigram-
matist has chosen ἐξελαύνειν to emphasize the

whip-lash action and cracking sound of the rope being released, and, although the ὕσπληξ itself obviously did not strike the horses, the metaphor of the ὕσπληξ driving out the horses is not a clumsy one. And this image is made even more effective by the popular ancient etymological connection, correct or otherwise, of the ὕσπληξ with a pig-whip²².

ὕσπληξ - οὖν λέγεται, παρὰ τὸ ἀπὸ τῶν
 τριχῶν τῶν ὕων (τουτέστι τῶν χοίρων) γίνεσθαι
 τὴν μάστιγα.

(The hysplex is so called, as it is a whip made from the hair of pigs (i.e. young pigs).

So, having made a not too tenuous connection between the ὕσπληξ described in the epigram from Pergamum and other technical devices such as the σκαστηρία mentioned in Galen, and the ὕσπληξ described by Hero, a resulting summary representation of a starting device on the Olympic hippodrome in the third century B.C. points to a mechanism of some complexity. Its power is generated by the rapid unwinding of a tightly-held twisted rope, the whole apparatus is activated by a triggering device probably operated by foot, and the consequent release of the rope is attended by a loud noise.

Unfortunately, at this stage a more detailed reconstruction of the ὕσπληξ used in the hippodrome is impossible. The above hypothesis serves only to complement previous research carried out on this subject, and cannot present the reader with a concrete picture of the mechanism. So long as we lack a detailed

literary description of the ὕσπληξ from antiquity, we will never be sure of its exact working. And archaeologists can offer us little or no help due to the obvious perishable nature of the device. The most one would expect to find today of an ancient ὕσπληξ would be the holes in the ground into which its constituent parts fitted. However, this expectation is itself redundant while we have yet to locate a major hippodrome.

More exact suggestions have been made as to the functioning of the ὕσπληξ or βαλβίς in the ancient stadium. The latest research carried out on this subject by several reputable scholars, notably O. Broneer, H. Harris and J. Jüthner, has been attended by some success. The main body of their work is based on the archaeological finds in several ancient Greek stadia. The most productive of these has been at the ancient sanctuary of Isthmia where Broneer conducted extensive excavations in the 1950s. He describes the proposed area of the starting-line in this stadium as follows.

"It consisted of one half of a large triangle which was paved with thin poros (a soft limestone) slabs and bordered at the base with a row of thicker slabs. Cut into the surface of the pavement were eight grooves of unequal length. At either end of each groove was a bronze staple, fastened with lead to the stone. They were set at such a low level that a string passing through the two staples from one end of the groove to the other lies below the surface of the poros slabs. The inner ends of the grooves form the arc of a circle which is concentric with the rim of a pit about one metre deep and 55cm in diameter. In the spring we found the other half of the triangle [...]. A row of equally spaced wooden uprights would have been fixed in the vertical cuttings at

the base of the triangle, and horizontal bars hinged to these posts at an appropriate height. Cords attached to the horizontal bars would pass over the top of the vertical posts, and then down through the bronze staples and along the grooves to the pit at the centre. A man stationed in the pit would be able to manipulate the cords from all sixteen bars, letting them down to start the runners on their course."²³

This type of starting apparatus, although its exact design may not have been normative for ancient Greek stadia, is evidence of the considerable lengths to which the Greeks were prepared to go to ensure a fair start. Its layout, incorporating a bar attached to a hinge which was dropped by the releasing of a rope, explains conveniently the problem posed by the several references in post-Classical authors to the ὕσπληξ falling at the beginning of a race²⁴. These authors cannot have been suggesting that a rope or bar which was stretched in front of the athletes or horses was suddenly dropped on to the ground to start the race, since as Harris rightly points out "all the runners would have tripped over it at the first stride and gone sprawling on their faces"²⁵. What must have been intended, and this is in fact strongly suggested in the passage of Galen which we examined earlier, was that a bar attached to a hinge fell to the side and the race began as described above in Broneer's hypothesis.

The discovery of this type of starting device in the stadium is of some significance to our study of the ὕσπληξ in the hippodrome. It is very doubtful whether a similar type of construction could have been used effectively in the hippodrome due to its

fragility. The fact that racehorses become nervous and excited before racing was as true in ancient Greece as it is today. Plato (*Phaedrus* 254E) refers to racehorses rearing up at the ὕσπληξ, and Dio Chrysostom (12. 19) compares the warriors he encountered in Thrace to highly-strung racehorses at the starting gate.

ἀλλὰ μετεώρους καὶ ἀγωνιῶντας καθάπερ
ἵππους ἀγωνιστάς ἐπὶ τῶν ὕσπληγῶν, οὐκ
ἀνεχομένους τὸν χρόνον, ὑπὸ σπουδῆς δὲ καὶ
προθυμίας κόπτοντας τὸ ἔδαφος ταῖς ὀπλαῖς.

(But they were highly-strung and tense like racehorses at the hysplex, not bearing the delay, and striking the ground with their hooves in their excitement and eagerness.)

Under such conditions, a starting mechanism similar to that in the Isthmian stadium would have been too easily and frequently broken beneath the weight of horses which jockeys had difficulty controlling. Either a more sturdy construction, such as the starting stalls at Olympia described by Pausanias, or a more simple device consisting merely of a rope stretched in front of the horses, would have been needed. If this then was the case, the excavations in the stadium at Isthmia facilitate our understanding of the starting gate for racehorses in ancient Greece, if only by limiting those references to the ὕσπληξ falling to the type of device used in the stadium.

How widely and for how long the ὕσπληξ device described in the Attalos epigram may have been incorporated in the Olympic and other hippodromes in ancient Greece is difficult to tell. As already men-

tioned, Aristophanes and Plato used the term ὕσπληξ to denote a starting apparatus, but whether these authors had in mind such a mechanism as confronted the drivers on the day of Attalos' victory in the third century B.C. is impossible to say. Tracing with any accuracy the chronological development of the ὕσπληξ as a starting device in the hippodrome is a hopeless task due to the scant evidence that has survived from antiquity. And one is faced with the same problem, but to a greater degree, when attempting to determine which hippodromes in ancient Greece employed a ὕσπληξ to start racing. We know that such was the case at Olympia, but beyond that we cannot be sure. A fragment of an inscription dating to around 327 B.C. seems to mention the designer of a starting mechanism on the Delphic hippodrome - τῶι ἀρχιτέκτονι τῆς ἵππ[αφέσεως]²⁶. The supplement by Dittenberger is convincing, especially since the term ἵππάφεις occurs in the inscription recorded by Pausanias under the statue of Cleoetas, the inventor of the famous starting stalls at Olympia. However, whether the ἵππάφεις at Delphi was similar to the ὕσπληξ of the third century B.C. at Olympia, or to the later starting stalls which seem to have replaced it, or indeed was of a completely different design, one cannot say. Excepting the racecourses at Olympia and Delphi, there is no other definite mention in our ancient sources of a starting mechanism on any other Greek hippodrome. One can assume that other

racetracks may have been equipped with such a device due to its obvious practicality and inexpensiveness. And there are enough references to the ὑσπληγῆς being used in stadia such as at Delos, Epidaurus and Athens firstly to prove that the hippodromes of Olympia and Delphi did not have a monopoly on starting gate technology, and consequently to suggest that although we have no evidence, literary or otherwise, for starting mechanisms in the hippodromes of Athens, Nemea, the Isthmus, and Mt. Lycaeon, we should not suppose they did not exist.

As mentioned earlier, Pausanias in his account of the Olympic hippodrome written at some time in the second century A.D. describes a starting mechanism which seems to be of a different type to that pictured in the Attalos epigram of the third century B.C..

ὑπερβάλλοντι δὲ ἐκ τοῦ σταδίου, καθότι οἱ Ἕλληνοδίκαι καθέζονται, κατὰ τοῦτο χωρίον ἐς τῶν ἵππων ἀνειμένον τοὺς δρόμους καὶ ἡ ἀφεσίς ἐστὶ τῶν ἵππων, παρέχεται μὲν οὖν σχῆμα ἢ ἀφείσις κατὰ πρῶραν νεώς, τέτραπται δὲ αὐτῆς τὸ ἔμβολον ἐς τὸν δρόμον. καθότι δὲ τῆ Ἀγνάπτου στοᾶ προσεχῆς ἐστὶν ἡ πρῶρα, κατὰ τοῦτο εὐρεία γίνεται, δελφίς δὲ ἐπὶ κανόνος κατὰ ἄκρον μάλιστα τὸ ἔμβολον πεποιήται χαλκοῦς. ἑκατέρα μὲν δὴ πλευρὰ τῆς ἀφέσεως πλέον ἢ τετρακοσίους πόδας παρέχεται τοῦ μήκους, ὠκοδόμηται δὲ ἐν αὐταῖς οἰκῆματα. ταῦτα κλήρω τὰ οἰκῆματα διαλαγκάνουσιν οἱ ἐσιόντες ἐς τὸν ἀγῶνα τῶν ἵππων. πρὸ δὲ τῶν ἀρμάτων ἢ καὶ ἵππων τῶν κελήτων, διήκει πρὸ αὐτῶν καλῶδιον ἀντὶ ὑσπληγος. θωμὸς δὲ ὠμῆς πλίνθου τὰ ἐκτὸς κεκονιαμένος ἐπὶ ἐκάστης Ὀλυμπιάδος ποιεῖται κατὰ τὴν πρῶραν μάλιστα που μέσσην, ἀετὸς δὲ ἐπὶ τῷ θωμῷ χαλκοῦς κείται τὰ πτερὰ ἐπὶ μήκιστον ἐκτείνων. ἀνακινεῖ μὲν δὴ τὸ ἐν τῷ θωμῷ μηχανήμα ὃ τεταγμένος ἐπὶ τῷ δρόμῳ. ἀνακινήθεντος δὲ ὃ μὲν ἐς τὸ ἄνω πεποιήται πηδᾶν ὃ ἀετὸς, ὡς τοῖς ἤκουσιν ἐπὶ τὴν θέαν γενέσθαι σύνοπτος, ὃ δελφίς δὲ ἐς ἔδαφος πίπτει. πρῶται μὲν δὴ ἑκατέρωθεν αἱ πρὸς τῆ στοᾶ τῆ Ἀγνάπτου καλῶσιν

ὑσπληγες, καὶ οἱ κατὰ ταύτας ἐστηκότες
ἐκθέουσιν ἵπποι πρῶτοι. θέοντές τε δὴ γίνονται
κατὰ τοὺς εἰληκότας ἐστάναι τὴν δευτέραν
τάξιν, καὶ τηνικαῦτα καλῶσιν αἱ ὑσπληγες αἱ
ἐν τῇ δευτέρα τάξει. διὰ πάντων τε κατὰ τὸν
αὐτὸν λόγον συμβαίνει τῶν ἵππων, ἔστ' ἂν
ἐξισωθῶσιν ἀλλήλοις κατὰ τῆς πρώρας τὸ
ἔμβολον. τὸ ἀπὸ τούτου δὲ ἤδη καθέστηκεν
ἐπίδειξις ἐπιστήμης τε ἡνιόχων καὶ ἵππων
ὠκύτητος. τὸ μὲν δὴ ἐξ ἀρχῆς Κλεοίτας
ἐστὶν ἄφειν μηχανησάμενος, καὶ φρονῆσαί γε
φαίνεται ἐπὶ τῷ εὐρήματι, ὡς καὶ ἐπίγραμμα
ἐπὶ ἀνδριάντι τῷ Ἀθῆνῆσιν ἐπιγράψαι

ὅς τὴν ἵππάφειν ἐν Ὀλυμπία εὐράτο
πρῶτος,
τευξέ με Κλεοίτας υἱὸς Ἀριστοκλέους.

Κλεοίτα δέ φασιν ὕστερον Ἀριστείδην σοφίαν
τινὰ καὶ αὐτὸν ἐς τὸ μηχανήμα
ἐσενέγκασθαι.

(Crossing over out of the stadium where the Hel-
lanodices sit, one comes to the place set aside
for horse racing and the starting apparatus. The
starting apparatus is in the form of the prow of a
ship, the ram of which is turned towards the
racecourse. At the point where the prow meets the
Stoa of Agnaptus, it becomes wider, and at the tip
of the ram a bronze dolphin has been mounted on a
pole. Each side of the starting apparatus is more
than 400 feet long, and in these are built stalls.
Those taking part in the races are assigned these
stalls by lot. A rope is stretched before the
chariots or racehorses instead of a hysplex. An
altar of unbaked brick, plastered on its outside,
is made for each Olympiad as close as possible to
the centre of the prow and a bronze eagle with
wings fully outstretched is placed on the altar.
The man appointed to start the racing activates
the mechanism in the altar. Once this has been ac-
tivated, the eagle is made to jump upwards so that
it can be seen by the crowd, and the dolphin falls
to the ground. First the hysplexes on either side
by the Stoa of Agnaptus are released and the
horses standing there run off first. When they run
and reach those who have been assigned the second
set of stalls, the hysplexes of these are
released. The same thing happens for all the
horses until at the ram of the prow they are all
level with each other. From this point it becomes
a display of the drivers' skill and the horses'
speed. Cleoetas was the original designer of the
starting mechanism, and it seems that he was proud
of his invention, as he wrote on a statue in
Athens the following inscription -

He who first invented the starting
apparatus for horses at Olympia made me,

Cleoetas the son of Aristocles.
They say that after Cleoetas, Aristides introduced
some new dimension to the mechanism.)

It must be said at the outset that a comparison of
this passage with our epigram from the third century
B.C. is of limited value, since the latter is primarily
a victory poem in which a mere two and a half lines are
devoted to the starting mechanism. Although it is not
meant to be, as the Pausanias passage is, a comprehen-
sive description of the layout and working of the
device, nevertheless some indication as to the develop-
ment of starting techniques at Olympia may be found by
such.

Of the lines in question of the Attalos epigram -
ἀθρόα δ' ὕσπληξ πάντα διὰ στρεπτοῦ τείνατ'
ἔχουσα κάλω (lines 3+4), Fränkel²⁷ says

"Diese Worte decken sich genau mit der Angabe des
Pausanias (6.20.11) in der Schilderung der
ἄφεις τῶν ἵππων in Olympia: πρὸ δὲ τῶν
ἀρμάτων ἢ καὶ ἵππων τῶν κελήτων διήκει
πρὸ αὐτῶν καλῶδιον."

H. Wiegartz²⁸ suggests that Fränkel is here
viewing the singular ὕσπληξ as dependent on the
metre and is therefore to be understood poetically, and
he thus arrives at the conclusion that the ἄφεις
described by Pausanias existed already at Olympia be-
tween 276 and 264 B.C.. However, this must surely be a
false interpretation. Why, if the starting apparatus
alluded to in the Attalos epigram was actually the
prow-shaped device, is there no mention of its extraor-
dinary construction, since a ὕσπληξ per se must
have been a commonplace mechanism on racecourses in the

Hellenistic period? Rather it would seem that the author of this epigram has painted a completely different picture in these few lines - a picture which any habitu  of contemporary National Hunt race meetings would recognize, i.e. that of excited racehorses and jockeys crowded behind the starting tape waiting for it to be raised. In addition it is difficult to see how Fr nkel's argument could explain the use of       in the epigram, since this runs in direct contradiction to Pausanias' account in which the horses are reported to have stood in separate stalls stretched out over a distance of more than 400 feet on either side of the starting apparatus. As for the fact that both mechanisms used a rope stretched in front of the horses, this is hardly evidence enough to suggest that they were one and the same device, as Fr nkel would have us believe. We have already seen that a rope was an integral component of the starting mechanism in the Isthmian stadium reconstructed by Broneer - a device which was of a completely different design to the starting stalls described by Pausanias.

If the respective Olympic starting devices mentioned in the Attalos epigram and Pausanias are indeed different, one is forced to reconsider the traditional standpoint of scholars such as Harris and Gardiner that the starting stalls described by Pausanias were introduced to Olympia some time in the fifth century B.C.. The evidence for this view is based firstly on an assumed connection between the Cleoetas who invented the

starting stalls at Olympia and a sculptor of the same name who is recorded as having lived in Athens in the fifth century B.C.. Concerning this, Pausanias (6.20.14) tells us that Cleoetas, the inventor of the starting mechanism was the son of Aristocles, and in another passage (5.24.5.) that the famous sculptor Aristocles was the son of Cleoetas. Frazer²⁹ connects these two strands and says of the family relationship as he sees it:

"Thus we have the three generations - Aristocles, Cleoetas, Aristocles. It was a common custom in the families of artists for the names thus to alternate in alternate generations."

Dating an inscription on an extant work of a sculptor named Aristocles to the second half of the sixth century B.C., Frazer then supposes that his son Cleoetas was the inventor of the starting stalls and that he flourished in the early part of the fifth century B.C.. Frazer's dating of Cleoetas to the fifth century B.C. would seem to agree roughly with a mention of probably the same family in an Attic inscription (IG 2.2.652b line 31) of 398/7 B.C., thus confirming the family's existence in this period.

The question now arises of whether one can justifiably on this evidence connect the Cleoetas who invented the starting mechanism with this Cleoetas-Aristocles family of sculptors of the sixth and fifth centuries B.C.. A point in favour of such a link is provided by Pausanias' record of the inscription on the base of the statue mentioning the invention of the

starting stalls - ὅς τὴν ἱππάφειν ἐν Ὀλυμπία
εὔρατο πρῶτος τεῦξέ με Κλεοίτας υἱὸς
Ἀριστοκλέους. It would seem from the use of
τεύχειν that the Cleoetas mentioned here was also a
sculptor, and the fact that the statue in question
stood in Athens, the home of the Cleoetas-Aristocles
family of sculptors, can only strengthen this par-
ticular argument. However, it must be said that none of
the above evidence proves beyond doubt that the inven-
tor of the starting stalls in the Olympic hippodrome
was Cleoetas the famous fifth-century B.C. Athenian
sculptor, and it could simply be the case that both
shared the same name but lived centuries apart.

The second reason given by Harris³⁰ for dating the
introduction of starting stalls to the Olympic hip-
podrome as having occurred in the fifth century B.C. is
that, according to Livy, "the Romans introduced start-
ing traps (carceres) into the Circus Maximus in 429
B.C.", and since "the gate for chariots at Olympia may
have been invented early in the fifth century B.C., it
is probable that here as elsewhere the Romans followed
a Greek example". Harris goes on to say that taking
Cleoetas, the inventor of the starting gate, and
Cleoetas the fifth century B.C. sculptor as the same
person

"would fit well with Livy's date for the introduc-
tion of the carceres at Rome, and support the
belief that the idea for the latter was borrowed
from Olympia."

This argument, however, holds no water since
Harris has mis-dated Livy's comment by a century. Livy

(8.20.1.) gives the date for the introduction of the carceres into the Roman Circus as the same year the Roman army besieged Privernum, and this siege is accepted universally as having taken place in 329 B.C. and not 429 B.C. as per Harris³¹.

So stands the evidence for and against the dating of the invention of the Olympic starting stalls to the fifth century B.C.. It is clear that neither case is watertight and, in the light of the reasonably sound arguments on which both depend, it would perhaps be rash to dismiss completely either one or the other. However, even taking into consideration the poetic licence which may have been exercised by the author, it would seem that the Attalos epigram is a *terminus post quem* for the use of the prow-shaped starting mechanism on the Olympic hippodrome.

Attempting a reconstruction of this prow-shaped device on the evidence of Pausanias, and then endeavouring to explain more or less how it functioned, has occupied the time of many scholars, particularly in the past century, and has produced equally many varying results and interpretations³². Before embarking on a similar task, the following stumbling blocks should be noted. First of all, a cursory glance through this passage of Pausanias confirms that the starting device which he is describing has no modern parallel in terms of shape or operation. Secondly, a clear understanding of his account is made more difficult to obtain due to the fact that his description is patchy, and probably

aimed at the more informed readership of his own period, who would have been acquainted with this apparatus. Thirdly, corroboration on specific details unfortunately cannot be sought elsewhere in ancient literature, as Pausanias' account of this starting mechanism is the only one which has survived. And finally, one cannot turn to archaeological evidence for any clues or support, since the ancient Olympic hippodrome still has to be unearthed (if indeed that is still possible), quite apart from its starting device. As for vase paintings and murals, nothing at all has turned up in this connection.

In recent years, the most comprehensive treatments of the question of how the starting mechanism on the ancient Olympic hippodrome functioned have been provided by H. A. Harris and H. Wiegartz, both of whom have produced widely differing interpretations of Pausanias' passage. By summarizing first of all their respective theories and then examining them in detail with regard to the text of Pausanias, one may be able not only to shed light on how these contrary opinions were produced, but also to take a further step in the direction of understanding the layout and working of this device.

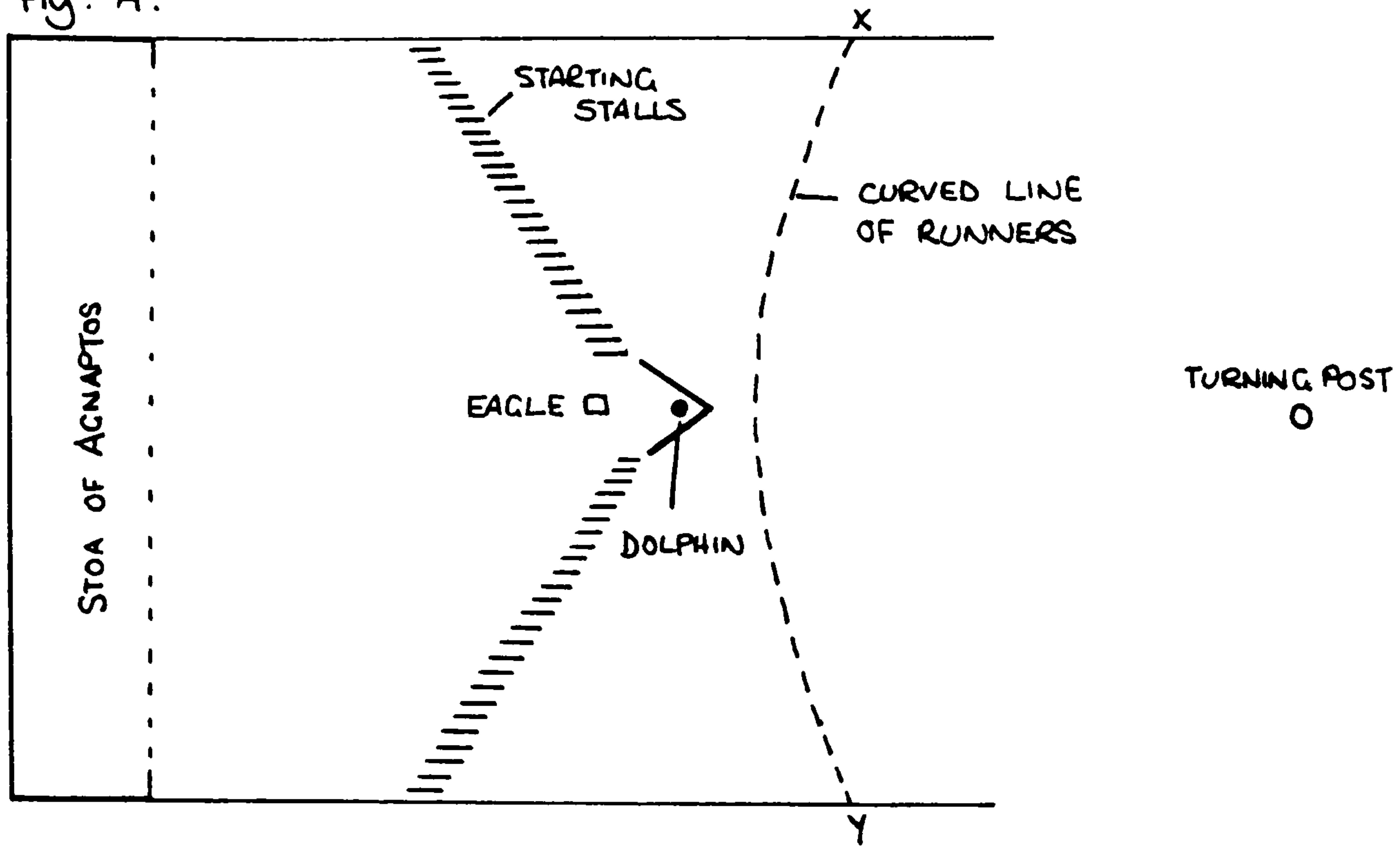
H.A. Harris' treatment of this subject draws heavily on archaeological evidence uncovered for the Roman Circus as a basis for his understanding of the Olympic starting mechanism. As was the case with the carceres in the Roman Circus, Harris supposes that the

starting stalls contained in the prow-shaped device were stretched right across the Olympic hippodrome. Since there was no spina or barrier down the middle of the track, separating the outward from the inward lanes, there was no need to have the stalls positioned solely on the right-hand side of the track and to start the race from there³³. The main reason why the starting mechanism was in the shape of the prow of a ship was to produce a curved line of runners across the course at the moment the last two horses were released. This curved-line formation was meant to overcome any disadvantage the horses on the extreme outside would otherwise suffer if the race were started with the horses positioned in a straight line. The prow-shaped starting device achieved this concave curve by giving the horses starting first from the outside stalls at the back of the mechanism a flying start over their inside neighbours, thus effecting a curved line at the tip of the prow. To ensure that this curved-line formation was achieved, and to prevent accidents at this early stage of the race, the horses had to keep to their lanes, in more or less straight line until they reached a certain point (imaginary or otherwise) just beyond the tip of the starting mechanism, when a trumpet was blown or some signal was given to allow the jockeys to break and begin the race in earnest. Once the race was under way, the horses were permitted to run on either side of the near turning post to the far end of the track. To achieve the same aim as the prow-shaped starting

mechanism on the Olympic hippodrome, the carceres in the Roman Circus were arranged in an arc to reduce the handicap to the horses starting on the outside.

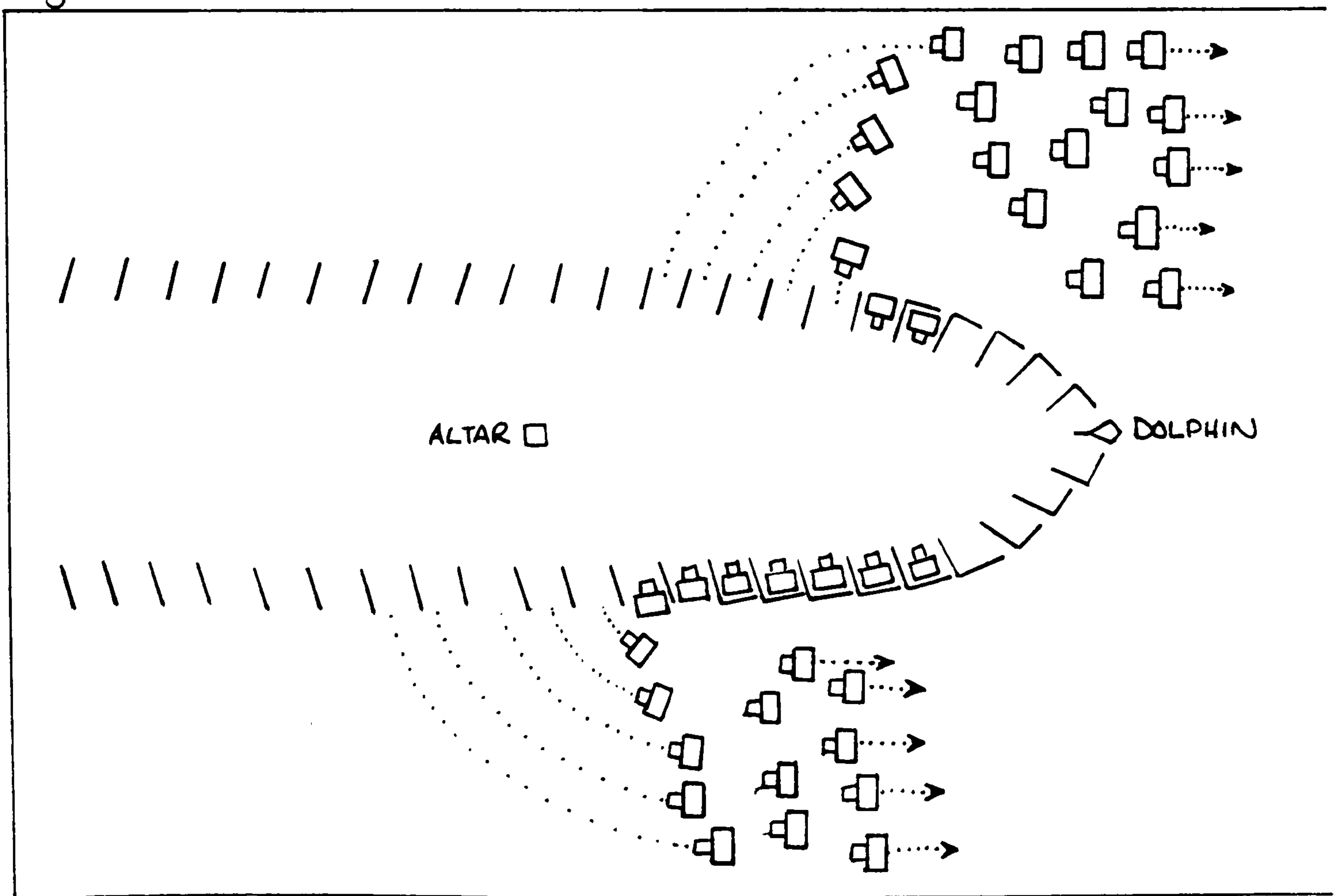
Wiegartz' opinion of how the starting mechanism worked bears little resemblance to that of Harris. Unlike Harris who supposed that the prow-shaped device was stretched right across the course at a very wide angle, Wiegartz suggests a much narrower and more elongated mechanism shaped rather like a large cigar, and positioned only on the right-hand half of the track. This device had to be thin enough to fit into the narrow Olympic hippodrome and long enough to have a capacity for starting up to 60 four-horse chariots. Since it was thus necessary to have a long, cigar-shaped mechanism, it was impossible to have the stalls, which were set in its sides, opening in the direction of the racecourse. Instead they opened at right angles to the direction of the track, and the horses had to turn immediately on leaving the stalls. The modern Le Mans 24-hour race begins in a similar fashion, with the cars leaving their starting position at a right angle to the direction of the track. Due to the fact that the track in the area of the starting mechanism was not wide enough to accommodate a large number of chariots stretched across the course in a line, the chariots formed themselves into a grid formation when they were being released consecutively from their stalls. This allowed the jockeys and drivers the option either of conserving energy in the initial stages of the race by

fig. A.



The starting mechanism on the Olympic hippodrome according to H.A. Harris (fig. A) and H. Wiegartz (fig. B).

fig. B.



staying at the back of the field, or of making a fast break in the hope of securing an early lead.

It is apparent from these two different summaries that any comprehensive interpretation of Pausanias' description of the starting mechanism at Olympia involves considerable speculation. In view of the many previous attempts at a reconstruction of this starting device, it is perhaps time to re-examine the original text of Pausanias, but not with the aim of solving this persistent problem once and for all, as many scholars have tried and failed to do in the past. Rather, such a study would aim to extricate from the text only the facts (and no more), in this way highlighting also the unlikely nature of any arguments that might be contained in such interpretations as those of Harris or Wiegartz. For this purpose, the text can be divided into four parts.

1. Ὑπερβάλλονται δὲ ἐκ τοῦ σταδίου, καθότι οἱ Ἑλλανοδίκαι καθέζονται, κατὰ τοῦτο χωρίον ἐς τῶν ἵππων ἀνειμένον τοὺς δρόμους καὶ ἡ ἄφεις ἐστὶ τῶν ἵππων. παρέχεται μὲν οὖν σχῆμα ἢ ἄφεις κατὰ πρῶραν νεώς, τέτραπται δὲ αὐτῆς τὸ ἔμβολον ἐς τὸν δρόμον. καθότι δὲ τῆ Ἀγνάπτου στοᾶ προσεχῆς ἐστὶν ἡ πρῶρα, κατὰ τοῦτο εὐρεῖα γίνεται, δελφίς δὲ ἐπὶ κανόνος κατα ἄκρον μάλιστα τὸ ἔμβολον πεπσίηται χαλκοῦς.

(Crossing over out of the stadium where the Hellenodices sit one comes to the place set aside for horse racing and the starting apparatus. The starting apparatus is in the form of the prow of a ship, the ram of which is turned towards the racecourse. At the point where the prow meets the Stoa of Agnaptus, it becomes wider, and at the tip of the ram a bronze dolphin has been mounted on a pole.)

Exactly what type of ship Pausanias has in mind

here, he does not specify. However, since we can say with reasonable accuracy that the ships of the Hellenistic and post-Hellenistic periods were in shape generally much longer than they were wide, probably in a ratio of about 4:1 or 5:1, this does not pose a problem.

Presuming that Pausanias meant by the prow of the ship the front quarter or so, this would suggest that the starting mechanism on the Olympic hippodrome had quite a slender form. The mention of the ram of the ship has no technical significance for the working of the apparatus except to indicate (as Pausanias states) in which direction the mechanism was pointed.

Although one cannot be exact about the dimensions of this prow-shaped device, it is difficult to see how Harris' reconstruction of the starting mechanism accords with Pausanias' description. Harris has based his interpretation of the shape and positioning of the device on two main points. First of all, he concludes that

"since we need not assume a spina, there is no need to crowd the whole of the gate into the right-hand half of the hippodrome."

He thus proposes that the starting mechanism was stretched over the whole width of the track as were the carceres in the Roman Circus. Secondly, since Pausanias later tells us that the length of each side of the starting gate was 400 feet, Harris concludes that stretching the mechanism over the complete breadth of the track would agree very well with the dimensions

(630 x 325 yards) given for the hippodrome in the
Old Seraglio document found in Constantinople³⁴.

The main problem with this interpretation, however, is that not only does a starting gate positioned in such a fashion bear little resemblance to the prow of a ship, but also starting chariots and horses from such a layout would result in considerable difficulties in the early stages of the race. The first of these difficulties would be to avoid colliding with the near turning post. In the Roman Circus, in which there was a barrier down the middle of the track from turning post to turning post, and where the starting stalls were stretched right across the track, the chariots drawn in the left-hand stalls, immediately the race began, had to make for the right-hand side of the track. In order to facilitate this inconvenient manoeuvre, the near turning post was positioned quite a distance from the starting stalls to give the drivers sufficient time to steer their chariots safely towards the right-hand side before meeting the barrier. There is also some archaeological evidence to suggest that the starting stalls were positioned at a slight angle to the direction of the course favouring those chariots drawn on the left, as a means of compensating for the time they would otherwise lose by having to track over to the right-hand side of the course. However, since there does not seem to have been a barrier down the centre of the Olympic hippodrome, Harris suggests that for the first lap the chariots could race on either

side of the near turning post. If this were the case, then in a large field of chariots, those drawn on the extreme left hand side of the starting stalls would be forced to make a very sharp turn round the far turning post, since it would be very difficult for them to assume an advantageous position in the right-hand half of the track at this important opening stage of the race due to the numbers of other chariots between them vying for this coveted position. In such a situation, the distance between the two turning posts is crucial. The shorter the distance, the more disadvantageous would such a starting method be for those drawn on the extreme left of the racecourse. If we assume (as has been assumed elsewhere in this work) that the distance between the two turning posts at Olympia was a not unrealistic two stades (about 400 yards), then a four-horse team drawn on the left hand side of the starting stalls, racing at full speed, would have very little time to track over to the right-hand half of the hippodrome before having to round the far turning post. It is possible to get a rough idea of the time-lapse involved in this manoeuvre by comparing the time taken by a racehorse today to cover a similar distance at full racing speed. There are of course obvious differences between chariot racing in ancient Greece and modern thoroughbred horse racing, which may at first sight seem to render such a comparison totally invalid. However, some of these diversities may cancel each other out. For our purposes, the fact that the modern

thoroughbred is the result of several centuries of meticulous breeding aimed at producing the perfect racing machine, weighs heavily in its favour, giving it a considerable edge over its ancient counterparts. So if we assume that a four-horse chariot team at Olympia could perhaps race at about two-thirds the speed of the average modern thoroughbred which is capable of covering a distance of 400 yards at full speed (about 40 mph) in about 20 seconds, then one would expect a four-horse chariot to be able to complete the same distance in about 30 seconds. This brief space of time certainly would not allow a driver much opportunity to overcome his disadvantageous draw and steer his chariot into a position from which he could better approach and round the far turning post.

An additional problem with allowing the chariots to run on either side of the near turning post in the opening stages of a race is that a head-on collision could occur on rounding the far turning post between a fast starter drawn on the right-hand side of the track and a slower chariot drawn on the left³⁵.

The credibility of this argument is further weakened when one takes into account the effect of such a system on the κέλης event, which probably comprised a single circuit of the track. There would be little opportunity of making up for the disadvantage of being drawn on the extreme left of the hippodrome in such a short race, a consideration which Harris has completely disregarded.

In direct contrast to Harris' hypothesis, Wiegartz' long cigar-shaped mechanism, which is necessary for his theory that the starting apparatus effected a grid formation at the start, resembles more the complete hull of a ship rather than just the prow.

2. ἑκατέρα μὲν δὴ πλευρὰ τῆς ἀφέσεως πλεον
ἢ τετρακοσίους πόδας παρέχεται τοῦ μήκους,
ὑποδομήται δὲ ἐν αὐταῖς οἰκήματα.

(Each side of the starting apparatus is more than 400 feet long and in these are built stalls.)

The fact that the sides of the starting mechanism were each 400 feet long may tell us something about the largest number of competitors that could have taken part in an equestrian event. Although the size of the starting apparatus may have borne no relation to the number of runners in a race, it would have been strange indeed for the ancient Olympic authorities to have built such a large starting device, if the average size of the field taking part in the equestrian events were relatively small. To ascertain how many stalls could have been built into each of the sides (a fact which Pausanias has unfortunately omitted to tell us), it is necessary first of all to determine the possible width of a single stall. Harris, as before, goes to the Roman Circus for his answer and, discovering that the width of a Roman carcer was not more than ten feet, suggests "that the gate at Olympia could have accommodated sixty chariots with ease." However, this calculation is based on the assumption that the starting apparatus was stretched right across the course. It would have been

impossible to fit 60 stalls into a narrower, more prow-shaped device and still have all the chariots facing in the direction of the racecourse.

Wiegartz arrives at the same number of chariots as Harris, but by a different route. Instead of attempting to calculate the number of stalls which could have been built in the sides of the starting mechanism, Wiegartz suggests that the great prestige of Olympia was reason enough to suppose that fields of up to 60 chariots may have taken part. He bases this assumption on two main pieces of evidence. First of all, since Pindar (*Pythian* 5.49) records that a field of over 40 four-horse chariots took part at the Pythian games of 462 B.C., fields of 60 chariots must have been within the bounds of possibility for Olympia on account of the greater importance of the games there. And secondly, the fact that success in the chariot race at Olympia accorded the victor such outstanding political status, meant that great efforts were undertaken everywhere in the Greek-speaking world to gain such a victory. This eagerness to win such a coveted prize was typified in the entering by Alcibiades of seven four-horse teams for the Olympic chariot race of 416 B.C..

There are, however, several problems with this line of reasoning. The field of over 40 chariots which lined up at Delphi on the day of King Arcesilaos' victory in 462 B.C., which Wiegartz assumes was normal for the Pythian games, may well have been an exceptional turnout. And even if this large number of competitors

were typical of the size of field at Delphi, there is no reason for assuming that Olympia was necessarily accustomed to even greater numbers. Pausanias (10.37.4) tells us that the chariot and horse races of the Pythian games took place on the plain between Delphi and Cirrha, which was probably much more suitable for accommodating over 160 horses racing simultaneously than was Olympia. Although no archaeological evidence of the hippodrome at Olympia exists today, and we therefore cannot ascertain its exact size, it would have had to be of very considerable dimensions to hold the 240 horses which Wiegartz proposes.

There is no reason either for supposing that quantity was a more important factor at the Olympic games than quality, evidenced perhaps by the number of victors who won by a walkover (ἀκονιτί), and also by the fact that during the Hellenistic period, the ἀγὼν ἵππικός of the Olympic games comprised a mere six events while the ἀγὼν ἵππικός of the Panathenaic games included up to nineteen. As for Alcibiades entering seven four-horse teams in one race, Thucydides (6.16.2-3) suggests that the motive behind this apparent show of extravagance was not one of self-interest and pursuit of personal political advantage on the part of Alcibiades and therefore typical of other ancient Greek statesmen, as Wiegartz suggests, but rather that in 416 B.C., a crucial stage of the Peloponnesian War for Athens, he had entered seven teams in the same race to give the enemy the impression

that Athens was still economically strong³⁶.

Relying on this evidence and proposing that the Olympic hippodrome was relatively narrow, Wiegartz then has to fit 60 stalls into the two sides of the starting mechanism. As it is impossible to achieve this with a device which is long and narrow while still having the stalls facing in the direction of the racecourse, Wiegartz has suggested that the stalls opened at right angles to the direction of the track. Apart from the technical difficulties involved with such a starting method, which will be discussed later, it is surprising that Pausanias has made no mention of such an unusual positioning of the stalls.

3. ταῦτα κλήρω τὰ οἰκήματα διαλαγκάνουσιν οἱ ἐσιόντες ἐς τὸν ἀγῶνα τῶν ἵππων.

(Those taking part in the races are assigned these stalls by lot.)

Such a prow-shaped starting device could have been used by the authorities as a means of handicapping the competitors. The better horses could be placed in the rear stalls and the inferior horses in the front stalls, and, by opening all the stalls simultaneously, the horses at the back would have a greater distance to run to compensate for their superiority, thus theoretically giving all the horses in the race an equal chance of winning. A starting system which works on similar principles is used widely today in greyhound handicap races.

Another method of starting which could have been offered by a mechanism shaped like a ship's prow is

that of a grid formation. This type of start, as used today in Grand Prix motor-racing, would involve positioning the best horses at the tip of the prow, and the worst at the rear of the device. To qualify for the "pole position", a horse would have to win pre-race heats or trials. All the horses would then be positioned in the various stalls according to how they had fared in these heats. Once these respective starting positions had been determined, the race would be started by opening all the stalls at the same time, giving the best horses a clear lead over their rivals. This starting method is the exact opposite of the previous one.

Although the above statement of Pausanias, which mentions that the horses were assigned their stalls by lot, rules out both these methods of starting, it is worth noting that both the aforementioned starting techniques would have been possible from such a uniquely-shaped apparatus. Of course, the refusal of the Greeks to employ such methods is indicative of their attitude to sport. Handicapping is a concept which would have been totally foreign to them. If someone owned superior and more successful horses, that was evidence of the quality of his methods of breeding and training, and a sign of divine favour. To turn this achievement deliberately to his disadvantage was unthinkable. Therefore the only conceivable way of assigning the racehorses to their stalls in this unique starting mechanism on the Olympic hippodrome was by

drawing lots.

4. πρὸ δὲ τῶν ἀρμάτων ἢ καὶ ἵππων τῶν κελήτων, διήκει πρὸ αὐτῶν καλῶδιον ἀντὶ ὕσπληγος. ὄμων δὲ ὠμῆς πλίνθου τὰ ἐκτὸς κεκονιαμένος ἐπὶ ἐκάστης ὀλυμπιάδος ποιέται κατὰ τὴν πρῶραν μάλιστα που μέσην, αἰτὸς δὲ ἐπὶ τῷ ὄμῳ χαλκοῦς κείται τὰ πτερὰ ἐπὶ μήκιστον ἐκτείνων. ἀνακινεῖ μὲν δὴ τὸ ἐν τῷ ὄμῳ μηχανήμα ὃ τεταγμένος ἐπὶ τῷ δρόμῳ. ἀνακινήθεις δὲ ὃ μὲν εἰς τὸ ἄνω πεποιήται πηδᾶν ὃ αἰτὸς, ὡς τοῖς ἤκουσιν ἐπὶ τὴν θέαν γενέσθαι σύνοπτος, ὃ δελφίς δὲ εἰς ἔδαφος πίπτει. πρῶται μὲν δὴ ἐκατέρωθεν αἱ πρὸς τῇ στοᾷ τῇ Ἀγνάπτου καλῶσιν ὕσπληγες, καὶ οἱ κατὰ ταύτας ἐστηκότες ἐκθέουσιν ἵπποι πρῶτοι. θεόντες τε δὴ γίνονται κατὰ τοὺς εἰληκότας ἐστάναι τὴν δευτέραν τάξιν, καὶ τηνικαῦτα καλῶσιν αἱ ὕσπληγες αἱ ἐν τῇ δευτέρᾳ τάξει. διὰ πάντων τε κατὰ τὸν αὐτὸν λόγον συμβαίνει τῶν ἵππων, ἔστ' ἂν ἐξισωθῶσιν ἀλλήλοις κατὰ τῆς πρῶρας τὸ ἔμβολον. τὸ ἀπὸ τούτου δὲ, ἤδη καθέστηκεν ἐπίδειξις ἐπιστήμης τε ἡνιόχων καὶ ἵππων ὠκυτότος.

(A rope is stretched before the chariots or racehorses instead of a hysplex. An altar of unbaked brick, plastered on its outside, is made for each Olympiad as close as possible to the centre of the prow and a bronze eagle with wings fully outstretched is placed on the altar. The man appointed to start the racing activates the mechanism in the altar. Once this has been activated, the eagle is made to jump upwards so that it can be seen by the crowd, and the dolphin falls to the ground. First the hysplexes on either side by the Stoa of Agnaptus are released and the horses standing there run off first. When they run and reach those who have been assigned the second set of stalls, the hysplexes of these are released. The same thing happens for all the horses until at the ram of the prow they are all level with each other. From this point it becomes a display of the drivers' skill and the horses' speed).

This section of Pausanias' description has created perhaps the most controversy among scholars as regards its interpretation. The main problem lies in trying to visualize not only the functioning of the apparatus, but also how the device could have produced a fair

start, if indeed that was its primary purpose. As we have already seen, the sides of this mechanism were each 400 feet long, and together were in the form of a triangle. If we assume, as our previous calculations suggest, that this prow-shaped device was roughly an equilateral triangle, then the distance between the horses in the stalls nearest the front and those at the back would be about 350 feet, or more than half a furlong. Thus, to complete the race, the horses at the rear had considerably further to run than those at the front. The magnitude of this disadvantage depends on two factors - the overall distance of the race and the speed at which the horses were allowed to run in the initial stages. As can be seen elsewhere in this work, determining the distance of an event such as the four-horse chariot race for fully-grown horses at Olympia is, as yet, impossible to do with certainty. The difficulty lies in the fact that we do not know the length of the Olympic hippodrome - a measurement which is obviously vital to any calculation of race distances, especially since such distances were measured in terms of lengths or circuits of the hippodrome. To make matters worse, when Pindar (*Olympian* 2. 55) says that the four-horse chariot race for fully-grown horses was δωδεκάδρομος, there is a doubt as to whether δρόμος in this context means a "circuit" or simply a "length" of the racecourse³⁷. However, intelligent guesses on this subject can be made, and by taking the conjectured distances of the longest and shortest horse

races at Olympia as calculated in Chapter 2, we can see what effect starting from such a mechanism would have had on horses taking part in these races.

The longest horse race at Olympia was the four-horse chariot race for fully-grown horses. The majority of scholars who have investigated this question consider that this race was about six miles long (ca. nine kilometres). Such a race, which is half as long again as the modern Grand National at Aintree, would put a great premium on stamina, and consequently the drivers would be unlikely to race at full speed in the early stages. Therefore, the fact that the horses in the back stalls may have had up to a half a furlong further to race than those at the front would make little difference to their chances in the race. However, in the shortest horse race at Olympia, which was probably the κέλης event and which may have been only about half a mile long (ca. 750 metres, and shorter than any flat-race sprint in Britain today), the extra half-furlong at full racing speed which the horses at the rear of the starting mechanism had to run, could well have made a significant difference to their chances of winning. If such a disadvantage would accrue to those horses in the back stalls, it is possible that to overcome this, the horses and jockeys on leaving their stalls had to race at half speed until all the traps had been opened and the field was stretched out across the racecourse in a straight line³⁸. Then at this stage, at the sound of a trumpet or some other signal, they were allowed to

begin the race in earnest. This is possibly what Pausanias means when he says

διὰ πάντων τε κατὰ τὸν αὐτὸν λόγον συμβαίνει
τῶν ἵππων, ἔστ' ἂν ἐξισωθῶσιν ἀλλήλοις
κατὰ τῆς πρῶρας τὸ ἔμβολον. τὸ ἀπὸ τούτου δὲ
ἤδη, καθέστηκεν ἐπίδειξις, ἐπιστήμης τε
ἡνιόχων καὶ ἵππων ὠκύτητος.

(The same thing happens for all the horses until at the ram of the prow they are all level with each other. From this point it becomes a display of the drivers' skill and the horses' speed).

However, such a method of starting involves considerable synchronization, and its success would depend to a large extent on the self-restraint of the jockeys, who would undoubtedly be tempted in the excitement of the race to poach a few illegal lengths in these early stages.

Both Harris and Wiegartz have interesting theories as to why the Olympic starting mechanism had such an unusual shape, and how it managed to effect a fair start. Harris' hypothesis, as mentioned earlier, draws close parallels with the starting system in the Roman Circus.

"The convex line of stalls at Olympia is in strange contrast to the concave curve of the carceres in the circus. The explanation of the difference is that whereas the circus staggered the start in space, the Olympic gate staggered it in time. Gardiner quite rightly saw that the aphesis gave each driver a flying start on his inside neighbour, but so far from this being unfair, as he thought, it was the whole object of the device. The result of it was that when the last chariots, the pair in the middle, were released, the field formed a curved line (x-y fig. 5) exactly like that of the Roman carceres."

Thus as far as Harris is concerned, the primary purpose of this prow-shaped device was to produce a

fair start by effecting a curved line of runners across the course when all the horses had been released. However, if the Olympic authorities, when they discussed what type of starting mechanism to construct, decided that the most important criterion on which to base the design was that it should produce a concave curve of runners, they would surely have built simply a concave line of stalls across the course as in the Roman Circus. If the device functioned exactly as Harris suggests, they must have had something else in mind. Albert Martin³⁹ suggests that such a uniquely-shaped apparatus could have served as a form of tourist attraction, drawing people from all over Greece to see it in action.

"Il y avait certainement là de quoi charmer les spectateurs, de quoi rendre célèbre dans toute la Grèce l'aphesis des chevaux à Olympie."

R.E. Wycherley⁴⁰ considered also that there must have been more to this mechanism than simply a fair start.

"It is difficult to see what purpose this elaborate scheme served, since ultimately all the chariots had to come into line in the ordinary way. Possibly the object was merely spectacular."

Wiegartz considers that the primary purpose of this apparatus was to produce a fair start, but with a different result from that of Harris. Confining the starting gate to one half of the racecourse, Wiegartz states that the track in the area of the mechanism would not be wide enough to accommodate 40 four-horse chariots stretched in a line across the course, and,

even if it were, having all the runners in a line would need no starting mechanism at all.

"Sie sollte und konnte bei grossen Teilnehmerfeldern von 40 und mehr Viergespannen nicht dazu führen, dass alle Gespanne nach Passieren der Spitze der Aphasis "miteinander sich in einer Linie" befanden, weil dafür die Bahn bei weitem nicht breit genug war [...]. Anlass zu Bedenken hätte allerdings der Umstand geben sollen, dass eine Startsituation, die alle Starter nebeneinander auf eine Linie führte, die Startanlage erübrigt hätte."⁴¹

In adopting this stance, Wiegartz has brought himself into direct opposition with the statement of Pausanias (6.20.13.) (a fact which he admits) which suggests that all the chariots were in line at the point of the prow - ἔστε ἄν ἐρισωθῶσιν ἀλλήλοις κατὰ τῆς πρῶρας τὸ ἔμβολον. He suggests rather that Pausanias must have been mistaken when making this statement, since he had never seen the device in action. Thus Wiegartz considers that it was the narrowness of the track which compelled the Olympic authorities to construct such a device to accommodate large fields of runners. The fair start was achieved by releasing consecutively, as Pausanias states, the chariots, which were installed at right angles to the course. However, rather than forming a straight line, which they were unable to do due to the restriction in space, they effected a grid formation rather like the start of a Grand Prix, giving the chariot drivers the choice of breaking away early in the race, or of starting more slowly and adopting waiting tactics to conserve stamina.

Although Wiegartz' hypothesis makes some sense in

that it offers a practical answer to the question why the Olympic authorities had such a device constructed, i.e. due to the narrowness of the track, there are several fundamental reasons why his interpretation must be false. Firstly, towards the beginning of his lengthy article on the subject, Wiegartz declares his intention to re-examine the statements of Pausanias.

"Trotz dieser Ausgangslage soll im Folgenden ein neuer Versuch unternommen werden, die Angaben des Pausanias zum Hippodrom von Olympia zu überprüfen."⁴²

However, later in his article, he dismisses completely one of Pausanias' statements simply because it does not fit his theory. He says that Pausanias' statement that all the chariots would be in line at the tip of the prow must have been based on a mistaken estimation of the function of the ἄφεσις, which he had not seen in action. But one simply cannot tell whether or not Pausanias had ever seen the device working, and even if he had not, how can one dismiss this statement? It would seem that Wiegartz is making the evidence fit the theory rather than the theory fit the evidence.

The second reason why Wiegartz' interpretation should be doubted is that, like Harris, he has taken only the four-horse chariot race into his calculations. Such a method of starting, where the horses form a type of grid in the opening stages of the race, would in theory be very suitable for the long-distance four-horse chariot races, which may have been up to six miles long. But what about the much shorter κέλης

events? These races seem to have consisted of just one circuit of the track, and therefore any system which involved a staggered start in what was basically a sprint race would have been unfair in the extreme.

A third reason why one cannot take Wiegartz' hypothesis too seriously is that in practice it simply would not work. One has only to imagine a starting situation where three quarters of the sixty chariots have been released to see the problems arising. On a narrow track where the stalls do not open on to individual lanes, as they do in Harris' interpretation, the chariots in the stalls towards the tip of the prow would be faced with a block of perhaps 20 other chariots filling up the narrow track, and, having no room to perform the difficult 90-degree turn, they would have to wait until the others had passed before venturing safely out of their stalls. And if they were released just before the main group of chariots reached them, they would then have the unfair advantage of being able to secure the leading position in the race solely through being drawn in the front stalls.

The fourth reason for rejecting Wiegartz' hypothesis is that it is very difficult to see how Pausanias' description of the starting mechanism on the Olympic hippodrome could be used as a short summary of the relevant parts of Wiegartz' article - a test which one surely should be able to apply if both are describing the same device. Nowhere does Pausanias mention the narrow track, the starting stalls positioned at right

angles to the racecourse, or the ensuing grid formation of the chariots, all of which form the mainstay of Wiegartz' argument.

From our examination of Pausanias' description of the starting gate on the Olympic hippodrome, it still remains impossible to state with certainty exactly how the mechanism worked. Was the device stretched right across the track? Did the horses run at full speed on leaving the stalls? Was the primary aim of the mechanism to produce a fair start, or was its main purpose to provide an exciting spectacle? Unfortunately, the answers to these questions must remain open until some further evidence on the subject, literary or archaeological, appears.

FOOTNOTES

1. Pindar *Pythian* 5.49. Whether these figures of Pindar were typical of the average size of field for horse racing in ancient Greece or indicate only a race with an exceptional number of participants, is unimportant. The fact that more than 40 four-horse teams could line up at least once at Delphi to compete in a race would have demanded that the officials at the Pythian games of that period (462 B.C.) had a starting method capable of dealing with such a large field.
2. National Hunt racing is the term applied to that form of horse racing in Britain in which the horses jump over either fences or hurdles in the course of the race. These races vary in distance from two miles (3200m) to four and a half miles (7200m).
3. The only fixed line on a racecourse tends to be the finishing line. Thus the positioning of the starting stalls for a one-and-a-half-mile race is half a mile further down the course than for a one-mile race.
4. The technical term used in antiquity to denote a starting or finishing line scratched in the dust was γ ρ α μ μ ῆ .
5. *Electra* lines 698-760.
6. J. Jüthner (Die athletischen Leibesübungen der Griechen, II/I page 54) states that the reference to the ὕσπληξ in Aristophanes' *Lysistrata* line 1000 (411 B.C.) could be applied also to horse racing. But since there is no definite indication that Aristophanes meant it to be understood in that way, the passage of Plato must be regarded as the earliest certain source.
7. The text quoted is that of J. Ebert, *Griechische Epigramme auf Sieger an gymnischen und hippischen Agonen*, Berlin 1970, page 176. Cp. Fränkel, *Die Inschriften von Pergamon (I)* Berlin 1890, no. 10.
8. Some scholars have questioned the dating of the *Alexandra* to the third century B.C. (cf. OCD s.v. Lycophron, and A. Lesky, *A History of Greek Literature*, London 1966, pages 744-745).
9. βαλβίς was used often interchangeably with ὕσπληξ to denote the starting mechanism for either the stadium or the hippodrome (cf. Pollux 3.147, Apollonius Rhodius 3.1272), but it seems that it had the more precise meaning of a post on either side of the starting gate to which a rope was attached (cf.

Aristophanes *Knights* line 1158, *Etymologicum Magnum* 186). Equally, the term ὕσπληξ frequently denoted the starting-rope attached to these posts.

10. For the use of στρεβλοῦν to denote twisting or tightening, see Plato *Republic* 531b for the screwing-up of strings of a musical instrument, and Aristophanes *Frogs* line 620 for the stretching of a slave on the rack.

11. cf. also Theocritus 8.58 and Dionysius *On Birds* 3.18 where ὕσπληξ is a snare for birds.

12. cf. Homer *Iliad* Book 4 line 124.

13. *Homeric Hymn to Apollo*, line 6.

14. cf. Heliodorus, *Aethiopica* 4.3. ἔσχαστο ἢ ὕσπληξ, and Lycophron *Alexandra* line 21 κἀπὸ γῆς ἐσκάξουσιν ὕσπληγγας.

15. cf. scholia to Dionysius *Perigetes* 121 quoted in LSJ s.v. ὕσπληξ, where the ὕσπληξ is described as a machine which knocks away a barrier on the racecourse - τὸ μηχανήμα τὸ ἀποκροῦν τὸν κανόνα τοῦ δρομέως.

16. For a second century B.C. list of accessories used in conjunction with the ὕσπληξ on the racecourse cf. *Inscriptions de Delos* 1400.9.

17. In the same connection, compare the use, in about the same period, of σχάζειν quoted in Athenaeus 130a ff. of the mechanically-operated drawing of curtains - σχασθέντων τῶν φραγμάτων.

18. cf. *Inscriptions de Delos* 372 A 110

19. op.cit. pages 179-180.

20. *Anthologia Palatina* 11.86.. Ebert suggests convincingly that this epigram is a parody of an earlier one on the runner Ladas (*Anthologia Palatina* 16.53) based on the obvious similarity of the first two lines of both, and the connection by Plutarch (804e) of line 3 of the Pericles epigram ὁ ψόφος ἦν ὕσπληγος ἐν οὔρασι with Ladas. If Ebert's supposition is correct, it may provide us with an allusion to the ὕσπληξ dating to the middle of the fifth century B.C., when Ladas won his Olympic victory, earlier than both the Plato and Aristophanes references mentioned previously. However, although Ladas' victory was in 460 B.C., this epigram may have been written in

the Hellenistic period as a book epigram, since it seems Hellenistic in style and unlike the more simple epigrams of the Classical period.

21. ἐξελαύνειν was very commonplace of driving out animals, as in Homer *Odyssey* 9. 312 (which the Cyclops does πολλῆ ῥοίῳ in line 315).

22. *Etymologicum Magnum* 784

23. *The Enigma Explained*. *Archaeology*, 1956, volume 9 no. 4 pages 269-271.

24. e.g. cf. *Lucian Slander* 12, *Plutarch Moralia* 732d.

25. *Greek Athletes and Athletics*, page 67.

26. SIG 253U.

27. *Altertümer von Pergamon* VIIIi page 9.

28. *Zur Startanlage im Hipprodrom von Olympia*. Boreas. Münstersche Beiträge zur Archäologie, Volume 7(1984) page 70.

29. *Pausanias's Description of Greece*, volume 3, page 635.

30. *The Starting Gate for Chariots at Olympia*. *Greece and Rome*, 15 (1968) pages 113-126.

31. cf. *CAH* volume 7 page 594, *RE* volume 23:1 column 15.

32. cf. Visconti, *Museo Pio Clementino* 5 (1796) page 81. Lehndorff, *Hippodromos* (1876) pages 19-38. Pollack, *Hippodromica* (1890). Guhl-Koner, *Das Leben der Griechen und Römer* (1893) pages 233-239. Wernicke, *Olympische Beiträge* (1894) pages 199-204. Martin, *Dictionnaire Des Antiquités Grecques et Romaines* volume 3:1 (1900) pages 197-200. Schneider, *Hippodromos* 2 *RE* 8,2 (1913) columns 1737-1743. Wycherley, *Pausanias*, Loeb Classical Library, (1935) page 61. Harris, op. cit.. Vigneron, *Le Cheval dans L'Antiquité Greco-Romaine* (1968) pages 196-198. Patrucco, *Lo Sport Nella Grecia Antica* (1972) pages 392-395. Ebert, *Olympia* (1980) pages 66-67. Wiegartz, op. cit.. Humphrey, *Roman Circuses: Arenas for Chariot Racing* (1986) pages 7-11.

33. This is a strange statement by Harris. He seems to be suggesting that the presence of a spina down the middle of the track would necessitate the positioning

of the starting stalls only on one half of the track. This of course was not true of the Roman Circus.

34. cf. H. Schöne, *Neue Angaben über den Hippodrom zu Olympia* JDAI 12 (1897) pages 152-160.

35. For head-on collisions in horse racing, although not at the start of a race, see Sophocles *Electra* line 727, Ps. Demosthenes 61.28.

36. Wiegartz points out also that if Alcibiades alone entered seven teams in one race, the rest of the field must have been a considerable size. There is however no logical reason for such an assumption. In the 1983 Cheltenham Gold Cup, the most prestigious National Hunt race in Britain, the racehorse trainer Michael Dickinson entered five horses, which incidentally filled the first five places. The total size of the field was eight.

37. See Chapter 5 section 1.

38. cf. Gardiner, *Olympia: Its History and Remains* (1925).

39. op. cit. page 199.

40. op. cit. page 61.

41. op. cit. page 59.

42. op. cit. page 42.

TERMINOLOGY CONNECTED WITH THE HIPPODROME

Every translator and commentator who deals with the subject of sport in ancient Greece, at some time or other is faced with the problem of interpreting certain difficult passages. One only has to compare various translations of appropriate sections of Homer or Sophocles to see the degree of uncertainty which exists in this area. The main reason for this situation is undoubtedly the fact that a single ancient Greek word could have several different, even contradictory, meanings. This, of course, is not a peculiarity of ancient Greek - it is true of many other languages such as English and German. The difference, however, between ancient Greek and modern languages is that the former did not have developed predecessors from whose vocabulary it could construct new words. Thus many of its terms became overworked.

In this chapter, several terms connected with the hippodrome¹ have been selected and an attempt has been made to discover their correct meanings in a variety of contexts. In many cases this can be done with a reasonable degree of accuracy if one looks carefully enough in the works of other authors for similar usages or phrases.

(a) Race

This is perhaps the primary meaning of δρόμος. Beginning with the chariot race in Homer *Iliad* 23 (lines 300 and 361) which was called a δρόμος, this term was used throughout ancient Greek literature for a horse race² by Pindar³ and Pausanias⁴. It was of course also the standard word for a foot race⁵.

(b) Racecourse

Although more commonly used in the compound ἵππόδρομος⁶, δρόμος itself was used often to denote a hippodrome⁷.

(c) Pace of the horses

Two of the earliest instances of δρόμος being used to denote the running or speed of horses or athletes in the course of a race occur in Homer's account of the funeral games of Patroclus in *Iliad* Book 23. The first appears at line 375, midway through the description of the chariot race.

ἀλλ' ὅτε δὴ πύματον τέλεον δρόμον ὤκεις
 ἄψ ἐφ' ἀλὸς πολίης, τότε δὴ ἀρετὴν γε
 φαίνεται, ἄφαρ δ' ἵπποισι τάθη δρόμος.
ἵπποι
 ἐκάστου

(But when the swift horses were completing the final straight back towards the grey sea, then the excellence of each was made clear, and immediately the pace of the horses was stretched.)

A.T. Murray, the Loeb translator, renders ἄφαρ

δ' ἵπποισι τάθη δρόμος as "the pace of their horses was forced to the uttermost." Willcock⁸ agrees with Murray's interpretation, suggesting a literal translation of "their running was stretched", and compares the use of τείνειν here to that of τανύειν (line 324) and τείνειν (line 758).

Rendering τάθη δρόμος in this instance as "their running was stretched" fits appropriately with the image Homer is presenting of chariots racing down the crucial final straight of a racecourse, where the ability of the horses is being tested to the utmost - τότε δὴ ἀρετὴ γε ἐκάστου φαίνεται.

The second instance of δρόμος being used to denote "pace" or "speed" in *Iliad* 23 occurs at line 758, the beginning of Homer's account of the footrace.

στὰν δὲ μεταστοιχί. σήμηνε δὲ τέρματ' Ἀχιλλεύς.
τοῖσι δ' ἀπὸ νύσσης τέτατο δρόμος.

(They stood in a line. Achilles showed them the boundaries [of the track] and the pace was forced from the start).

Opinion is divided among scholars on how to translate τοῖσι δ' ἀπὸ νύσσης τέτατο δρόμος, which occurs also in *Odyssey* Book 8 line 121 in Homer's description of the foot race at the Phaeacian games. Most translators and commentators⁹ prefer to render δρόμος in this phrase as "running" or "pace", making a direct connection with *Iliad* Book 23 line 375, which we have just discussed. W. Leaf takes this view and translates "the running was forced from the start", as does Willcock who suggests "they went off at

a fast pace". However, some scholars¹⁰ render δρόμος here as "course". Murray in the Loeb "and a course was marked out for them from the turning-point", while Weiher offers "Die Laufbahn streckte gerade sich hin".

Translating δρόμος as "course" here has several serious drawbacks. First of all, it does not fit the context as well as "pace". Murray's interpretation requires that Achilles, after having pointed out the ῥέματα to the athletes (line 757), then marks out a course for them from the turning post¹¹ (line 758). An immediate objection to this interpretation is that line 758 becomes for the most part an unnecessary repetition of the previous line, and therefore one of the two should be regarded as either superfluous or spurious. As for Weiher's translation, although at first sight it might appear logical that after the athletes had lined up nervously at the start, a seemingly endless racecourse stretched in front of them, it is more likely that Homer wanted to describe the actual start of the race.

Secondly, the most striking aspect of this phrase is its obvious similarity in grammatical construction to *Iliad* 23 line 375 which we examined earlier, i.e. in the dative plural (τοῖς/ἵπποισι), the past tense of τείνειν (τέτατο/τάθη), and δρόμος. With both phrases describing an important stage in a race where speed plays an essential part (*Iliad* 23 line 375, the beginning of the home stretch, and both *Iliad* 23 line 758 and *Odyssey*

8 line 121, the start of the contest), it is surely not inappropriate in the light of τάθη δρόμος (line 375) to translate τέτατο δρόμος as "the running was forced", as many modern scholars have done.

Thirdly and most convincingly, several later ancient literary sources reinforce strongly the interpretation of δρόμος as "pace". The scholiast on *Iliad* 23.758, although he confirms Murray's interpretation of νύσσα as "turning-point", offers a completely different interpretation of δρόμος.

ἐπεὶ μὴ κάμπτουσιν, οὐ ταμνεύουσιν εἰς
τέλος το τάχος. ἀλλ' εὐθέως προπηδῶσιν

(Since the race has no turn, the runners do not conserve their speed until the end [of the race], but instead they jump off straight away.)

It is clear that the scholiast understood by Homer's use of δρόμος in this line, "speed" or "pace" and not "racecourse".

Three post-Classical Greek authors provide further ratification of this interpretation. Quintus Smyrnaeus, in Book Four of his account of the fall of Troy, describes the funeral games for Achilles, modelling these to a large extent, as regards language and content, on those for Patroclus narrated by Homer in *Iliad* Book 23. Quintus relates the beginning of the κέλης event, a race not included in Homer's narrative, as follows:

τοῖς δ' αἶψα τάθη δρόμος. οἱ δ' ἀπὸ νύσσης
καρπαλίμως οἴμησαν ἐρισμαίνειν μεμαῶτες
[...] (4. 550-551)

(Immediately the pace was stretched. They rushed swiftly away from the start, eager for the contest).

The first phrase τοῖς δ' αἶψα τάθη δρόμος is borrowed from the chariot race in Homer *Iliad* 23 line 375, while the second οἱ δ' ἀπὸ νύσσης [...] μεμαῶτες, although not taken word-for-word from Homer, must be regarded as conveying the same idea as τοῖσι δ' ἀπὸ νύσσης τέτατο δρόμος.

Our second passage for comparison occurs in that other late Greek epic poem in which the funeral games of Patroclus are imitated, namely the *Dionysiaca* of Nonnos. Here we twice find an echo of *Iliad* 23 line 758. The start of both the chariot race and the foot race is marked with the following phrase - τοῖσι μὲν ἐκ βαλβίδος ἔην δρόμος¹². Although Nonnus rarely uses Homeric language in this section of the poem, he does follow very rigidly Homer's description of events, much more so than Quintus Smyrnaeus. Bearing this important point in mind we must conclude that τοῖσι μὲν ἐκ βαλβίδος¹³ ἔην δρόμος, by virtue of its position in the narrative and its similar sentence structure, must be Nonnos' equivalent of τοῖσι δ' ἀπὸ νύσσης τέτατο δρόμος. And since δρόμος here in Nonnos cannot mean "course", as the phrase would then not make sense, we must further conclude that "pace" or "running" is also the correct translation in Homer. W.H.D. Rouse, the Loeb translator of Nonnos, renders line 242 as "the race started from the barrier", not in the sense of "the race started at the start" which would be tautological, but rather "the race began in earnest from the barrier".

The third and most convincing contribution to this argument is provided by Heliodorus. In his *Aethiopica* 4.3.3, he describes the start of the race in armour between Ormenos and Theagenes as follows.

ὡς γὰρ εἰς ἀκοὴν πάντων ὁ κῆρυξ τοὺς
 δραμουμένους κατήγγειλεν ἀνείπε τε « Ὀρμενος
 Ἀρκᾶς καὶ Θεαγένης Θεσσαλός », ἔσχαστο μὲν
 ἢ ὕσπληξ τέτατο δὲ ὁ δρόμος μικροῦ καὶ τῆν
 τῶν ὀφθαλμῶν κατάληψιν ὑποτέμνων.

(When the herald announced the runners so that everyone could hear and he called out "Ormenos the Arcadian, and Theagenes the Thessalian", the starting barrier was released and the pace was stretched so that the eye could scarcely follow them).

Setting aside the obvious play between *σχάζειν* and the contrary term *τείνειν*, it is impossible to read here "the course was marked out" for *δρόμος τέτατο*, as Murray does in *Iliad* 23 line 758, since the race has already started with the releasing of the *ὑσπληξ*. And the idea of speed intended by Heliodorus in his use of *δρόμος* is reinforced by the latter half of the sentence. When a literary intellectual such as Heliodorus uses *τέτατο δρόμος*, we can be sure he employed it correctly. It was obviously borrowed from Homer, since the combination *τέτατο* and *δρόμος* is somewhat unusual.

One finds this use of *δρόμος* to denote "pace" or "speed" throughout extant ancient Greek literature. In the fictitious chariot race in Sophocles' *Electra* (line 754), in which Orestes allegedly crashed and was dragged along by his horses, we are

told that his fellow charioteers had to check the δρόμος of his horses before they could extricate him. Pausanias (6.13.9.) used δρόμος also in this connection to describe the speed of the mare, Aura, winning at Olympia. Having rounded the turning post and heard the trumpet, she quickened her pace (ἐπετάχυνεν ἐς πλεόν τὸν δρόμον) and won the race.

(d) Lane

Two instances of δρόμος being used to denote a "lane" can be found early in ancient Greek literature. The first occurs in Aristophanes' *Clouds* (line 25), where Pheidippides, asleep and dreaming that he is taking part in a horse race, calls to his fellow-competitor not to cheat but to keep to his own lane - φίλων, ἀδικεῖς. ἔλαυνε τὸν σαυτοῦ δρόμον. And the second metaphorically in Aeschines' *Against Timarchus* (176), where the orator warns the people not to let the defendant wander from the point, but to make sure that he keeps in lane just as one must do in a horse race - ἀλλ' ὥσπερ ἐν ταῖς ἵπποδρομίαις εἰς τὸν τοῦ πράγματος αὐτὸν δρόμον εἰσελαύνετε. In both instances we can be reasonably sure that the idea of "keeping in one's lane" is the meaning intended by the respective authors. It is unlikely, however, that on the ancient hippodrome such lanes were marked out¹⁴, as is the case with modern day athletics tracks. Instead, competitors would have

realised the danger of swerving across in front of an opponent or wandering off a true line, and thus each would try as far as possible to keep to an imaginary lane. It was for breaking this rule that Menelaus so severely reprimanded Antilochus in the chariot race at the funeral games of Patroclus¹⁵.

The term δρόμος was used in later ancient Greek literature also to denote a "lane". Pausanias (6.23.1) seems to have this meaning in mind when describing the gymnasium at Elis. In this building or enclosure, where athletes trained prior to the Olympic festival, plane trees grew in lines to separate the individual lanes or tracks - πλάτανοι μὲν ὑψηλαὶ διὰ τῶν δρόμων πεφύκασιν. Whether these lanes were narrow, specifically designed for just one runner, or wide enough to accommodate several, is not of great importance, since in either case the concept is clear.

Two references in the scholia on Homer's *Iliad* strengthen further the case for ascribing the meaning of "lane" to δρόμος. The first occurs in connection with the chase of Hector by Achilles around the walls of Troy. As Homer tells the story in Book 22, Hector made several attempts during the chase to get inside the city walls, but as often as he tried, Achilles managed to cut him off, forcing him back out to the plain. The scholiast (22. 194-8 Erbse) says that Achilles took the inside lane or course and thus managed to stop Hector getting into the city - τὸν ἔνδον δρόμον ἔχων Ἀχιλλεύς ἐδιώκεν αὐτόν

εἰς τὸ πεδίον.

The second concerns the chariot race in *Iliad* Book 23. As mentioned earlier, Menelaus found reason to chide Antilochus for taking his ground in the course of the race, forcing him to hold back his horses to prevent an accident. The scholiast (23. 423b) says that Antilochus took the straighter inside lane while Menelaus chose the safer outside course.

ἵνα παρελάσῃ τὸν ἐντὸς ἔχων δρόμον
ὀρθότερον καὶ φθάσῃ ἐπὶ τὸν καμπτήρα. ὁ δὲ
Μενέλαος ἐξωτερῶ τὸν ἀσφαλέστερον ἤλαυνε
δρόμον.

This tactic of taking the inside course is employed often by jockeys today, especially in long National Hunt races, in order to minimise the distance which their mounts must run. It is however, as in Homer's day, still regarded as the most dangerous.

The whole concept of straying from one's δρόμος (lane) or going outside the δρόμος (racecourse) was taken seriously by the Greeks on account of the obvious danger of doing so in a horse or chariot race. This is reflected in the metaphorical and proverbial usage which various phrases connected with this concept came to have in association with losing one's mind or going mad¹⁶.

(e) Straight

This usage of δρόμος is similar to the previous one, but instead of meaning a single lane on a racecourse, it denotes a whole straight of the track,

whether it be the outward or inward half. Homer employed it as such to describe the final straight down which the chariots were racing after they had rounded the turning post in the chariot race in *Iliad* Book 23 lines 373-4.

Ἄλλ' ὅτε δὴ πύματον¹⁷ τέλεον δρόμον ὠκέες
ἵπποι
ἄψ' ἐφ' ἀλὸς πολιῆς [...].

(The swift horses were completing the final straight back to the grey sea [...]).

The same expression ἄλλ' ὅτε δὴ πύματον τέλεον δρόμον is used again by Homer of the runners in the foot race at these funeral games¹⁸.

The idea of "final straight" seems also to be what Pausanias has in mind when explaining the rules of the κάλπη (dismounting/trotting race) at Olympia, in which the jockeys, at a particular stage in the race, jumped off and ran alongside their mounts. The expression used by Pausanias to denote this part of the race is ἐπὶ τῷ ἐσχάτῳ δρόμῳ. Could ἐσχάτος δρόμος here be the prose equivalent of πύματος δρόμος in Homer? Strangely, translators have not committed themselves on this point. Jones and Ormerod in the Loeb, following Sir James Frazer's earlier translation, suggest simply "the last part of the course". Ernst Meyer in the Artemis edition is equally reluctant to be specific, and proposes neutrally "gegen Schluss des Rennens". Pausanias himself unfortunately does not supply any clues by going into more detail or telling us how many laps the race comprised¹⁹. However, his

lack of elaboration on ἐσχάτος δρόμος in this context suggests that δρόμος had a more definite meaning, immediately recognizable to his readers, than simply a "part" of the race. The final δρόμος probably began immediately after the rounding of a turning post - either the second-last, signifying the start of the last lap, or the last itself, at the entrance to the final straight. In the light of *Iliad* Book 23 lines 373 and 768, the latter seems more likely.

The scholiasts and later lexicographers were certainly acquainted with this usage of δρόμος to denote a "straight". A scholium on line 373 of *Iliad* 23 explains Homer's use of πύματος δρόμος as follows:

εἰ δὲ λέγει ἀλλ' ὅτε δὴ πύματος (Ψ373),
τῶν δύο τὸν ἐσχάτον φησίν.

(If he says the last [dromos], he means the last of two).

Two important facts stand out in this explanation. Firstly, ἐσχάτος is used in connection with δρόμος, as noted earlier in Pausanias (5.9.2), strengthening the supposition that πύματος/ἐσχάτος δρόμος meant the same to the ancient Greeks as "finishing straight" would mean today to a spectator at an athletics meeting or a horse race at a North American dirt track²⁰. Secondly, the mention that this δρόμος was the second of two δρόμοι, i.e. an outward and inward straight, confirms the possible use of δρόμος to denote both halves of a race.

The use of δρόμος to signify either the outward or inward straight on a racecourse is supported by three additional references. The first is a scholium on a passage from the section of Aristophanes' *Clouds* which we looked at earlier under (d). In line 28 of the main text of the comedy, Pheidippides, still dreaming, calls out and asks how many δρόμοι the war chariots race. The scholiast explains that one δρόμος extended from the starting gate to the turning post (i.e. the outward straight) - πόσους δρόμους [...] εἰς δ' ἔστιν ὑπό τῆς ἀφετήριας μέχρι τοῦ καμπτηῆρος.

The second reference occurs in the scholia to Aristophanes' *Birds* (line 293).

Δίαυλος λέγεται ὁ διπλὸν ἔχων τὸν δρόμον ἐν τῇ πορείᾳ, τὸ πληρῶσαι τὸ στάδιον καὶ ὑποστρέψαι²¹.

(The race which comprises a double straight - completing a length of the stadium and then returning - is called a diaulos.)

The final reference is found in the work of the twelfth-century A.D. Byzantine scholar Johannes Tzetzes (6.699). In discussing the respective distances of various races, he calls the δόλιχος race ἐπτάδρομος. By going on to explain that this race consisted of three and a half laps (τρῆις γὰρ καμπτηῆρας εἶχε καὶ τὸ καμπτηῆρος ἥμισυ), it is clear that ἐπτάδρομος here signifies "comprising seven lengths".

It would seem then that, geometrically speaking, the Greeks understood by δρόμος something long and narrow - roughly rectangular in shape. Thus when

Pheidippides calls to his fellow-competitor in Aristophanes *Clouds* (line 25) to keep to his own δρόμος, he means that he should remain within the bounds of the two imaginary lines drawn the length of the racecourse which separate each contestant from his neighbour. The δρόμος here could be compared to a lane on a 100 metres track or in a swimming pool. δρόμος could be used also to denote something broader than a single lane on an athletics track, but still rectangular in form. When Homer said that the competitors were racing down the final δρόμος in the chariot race at the funeral games of Patroclus, he meant by δρόμος something resembling the shape of a complete 100 metres track with all its lanes. And finally, the δρόμος on which Orestes took part in that supposedly fatal chariot race at Delphi²² would have been roughly the shape of two 100 metres tracks set side by side, i.e. much like the shape of the inside of a modern athletics stadium viewed from one end.

(f) Circuit

This is a favourite meaning ascribed to δρόμος in a racing context by many translators and commentators. We know from a reference in Lucian²³ that δρόμος had such a meaning at least in post-Classical Greece²⁴.

τὸν μὲν γε τὴν Κυρηναίων ἄρματηλασίαν
ἐπιδεικνύντα πολλοὺς περὶ τὴν Ἀκαδημίαν
ἐξελαύνειν δρόμους ἐπὶ τῆς αὐτῆς
ἄρματοτροχιάς ἅπαντας μηδὲν παραβάντα, ὥσθ'
ἐνὸς δρόμου σημεῖα κατὰ τῆς γῆς
ὑπολείπεσθαι.

(It is said that he [Anniceris] showed Cyrenian skill in his chariot, by driving many laps round the Academy, keeping each time to the same track so that the mark of just one circuit was left in the ground.)

There are however many instances of δρόμος in connection with horse racing in early Greek literature, particularly in Pindar, which are not quite so easy to interpret.

In four of his victory odes, Pindar alludes to the length of the four-horse chariot race at either Olympia or Delphi, and in three of these he uses as a unit of measurement the term δρόμος. In *Pythian* 5 line 33, the four-horse chariot race is described as comprising twelve swift δρόμοι of the racecourse - πωδαρκέων δώδεκ' ἄν δρόμων τέμενος. On the evidence of Homer and later lexicographers quoted in (e), one would assume that these twelve δρόμοι were twelve lengths of the racecourse, or six complete laps. The scholiast on this passage offers little help with this problem by pointing us to a fragment of Callimachus (no. 674 Pfeiffer), which unfortunately appears to be corrupt and makes little sense.

The second reference to the length of the four-horse chariot race in Pindar (*Olympian* 2 line 50) describes the race as δωδεκαδρόμος - comprising twelve δρόμοι. In this case, one could substitute either "length" or "circuit" for δρόμος and both would make perfectly good sense. The scholiast has fortunately given us his interpretation as to what Pindar meant by δωδεκαδρόμος.

δωδεκαδρόμων. ὅτι δώδεκα δρόμους ἔτρεχον τὰ
τέλεια ἄρματα τουτέστιν ἰ καὶ ἕ καμπτήρας.

([A race is called] duodekadromos because the
chariots with fully-grown horses ran twelve dromoi
i.e. twelve circuits).

However, the interpretation of καμπτήρ here as
"circuit" should not be taken as indubitable²⁵.

The third passage of Pindar (*Olympian* 6 line
75) in which δρόμος is used to denote a unit of
measurement for the four-horse chariot race, although
it does not unequivocally state it, does seem to sug-
gest that δρόμος in this instance (and therefore by
necessity in the other two since they are all connected
with the same event) means a "circuit" or "lap".

οἷς ποτε πρώτοις περὶ δωδέκατον δρόμον
ἐλαυνόντεσιν

(to those who are first, driving round the twelfth
dromos).

The crucial word in this line is obviously the
preposition περί. It is difficult to see how one
could substitute adequately the meaning "length" or
"straight" for δρόμος in this instance, since the
line would no longer make sense, and, with the circular
motion implied in περί, δρόμος here must mean
"circuit".

This assumption is borne out by the fourth of
Pindar's references to the length of the four-horse
chariot race, namely that in *Olympian* 3.33.

τῶν νιν γλυκὺς ἴμερος ἔσχεν δωδεκάγναμpton
περὶ τέρμα δρόμου
ἵππων φυτεύσαι.

(A sweet desire came to him to plant them [the
olive trees] around the turning post which is
rounded twelve times on the hippodrome).

The turning post on the Olympic hippodrome around which these olive trees were planted was, according to the scholiast on Aristophanes *Frogs* (line 995), the one which served also as the finishing post²⁶.

ἐν τῷ τέλει τοῦ τόπου οὗ ἐτελείτο ὁ
 δρόμος, ἐλαῖαι στιχηθὸν ἴσταναι, οὔσαι
 κατάντημα τοῦ δρόμου [...].

(At the end of the area where the race finishes, olive trees stand in rows, being the goal of the race).

If this post was rounded twelve times²⁷, then the second turning post at the opposite end of the racecourse must have been turned also twelve times, making a total of 24 turns. This would result in a race of twelve laps for the four-horse chariot and not six as would be the case if one were to translate δρόμος in this context as "length" or "straight".

That the four-horse chariot race for fully-grown horses at Olympia, and on the evidence of Pindar *Pythian* 5 line 33 also at Delphi, comprised twelve circuits is attested by the Old Seraglio manuscript found at Constantinople, which mentions the dimensions of the Olympic hippodrome and the distance of some races - τρέχουσιν [...] (sc. four-horse chariots) κύκλους δώδεκα. (The four-horse chariots for fully-grown horses run twelve circuits.)

There is an obvious problem in translating δρόμος in certain contexts, since it can mean both "straight" and "circuit". In some passages the context will leave the translator in no doubt as to which meaning is correct (e.g. Homer *Iliad* 23 line 373

"straight", Pindar *Olympian* 6 line 75 "circuit"), but how can one be sure what is meant by δρόμος in Sophocles' *Electra* line 726, τελούντες ἕκτον ἔβδομον τ' ἤδη δρόμον, when the immediate context offers no help? This line could just as easily be translated "having finished the sixth length, they were already on the seventh", as "having finished the sixth circuit, they were already on the seventh". Both translations are equally possible and both meanings of δρόμος are equally well attested in racing contexts. However, since we must assume that the contemporary reader would have been in no doubt as to what was meant here, either because he knew that δρόμος had always the same meaning when used to divide up and measure horse races, or because as a spectator he had first-hand knowledge of whether chariot races were counted in circuits or straights, then we must decide what was the standard meaning of δρόμος in such instances. In section (e) we came to the conclusion by comparing Homer *Iliad* 23 line 373 with Pausanias 5.9.2. that a Greek reading the phrases πύματος δρόμος²⁸ or ἐσχάτος δρόμος in a racing context would understand immediately "finishing straight" or "home stretch", without needing or obtaining further clarification from the author. He would recognize both as standard terminology. Equally, the Greek reader of the fifth-century B.C. should also have had no difficulty in understanding the line of Sophocles just quoted, or, as a further example, what was meant by

Pheidippides in Aristophanes' *Clouds* (line 28) when he asked πόσους δρόμους ἔλατ' τὰ πολεμιστήρια; (How many dromoi do the war chariots run?).

Since there must have been a standard meaning for δρόμος when used as a unit of measurement, we must translate it in these cases as "circuit" for the following reasons. Firstly, in the four references in Pindar where the length of the four-horse chariot race is specifically mentioned, two of these point conclusively to δρόμος being translated throughout as "circuit", while the other two could suggest either "circuit" or "straight". Secondly, in the passages in Homer and Pausanias mentioned above where δρόμος is translated "straight", it could be argued that δρόμος is being used topographically to denote a part of the racecourse, rather than a standard measurement of distance in a race. In the passage of Homer (if not also that of Pausanias), the race in question is a δίαυλος which comprised only one circuit of the track and therefore πύματος δρόμος by necessity refers to the final straight. Thirdly, if we interpret δρόμος not so much as "circuit" or "lap", but rather "complete circuit of the course", envisaging more of the idea of "racecourse" as in section (b), then the question asked by Pheidippides might mean to the Greek reader "How many courses (i.e. full circuits of the track) do the war chariots run?". This would suggest that the Greeks measured their horse races in much the same way as long-distance races on a track are

measured today i.e. in laps or circuits, with the one difference that the Greeks did not employ a separate word for "circuit" or "lap", but instead used δρόμος meaning "racecourse" for this purpose. Thus a Greek, wishing to find out how many laps made up a particular race, would ask "How many courses?" (i.e. How many times round the racecourse?). This of course removes the slight problem which had arisen over δρόμος, which had seemed in most instances to signify something straight and rectangular²⁹, now being used to denote something circular, as it would if πύσσους δρόμους; meant purely "How many circuits?".

(a) Homeric Usage

The term νύσσα occurs five times in the epics of Homer (four of these alone in Book 23 of the *Iliad*), each time in a sporting context. The first three in *Iliad* Book 23 occur in Nestor's speech (lines 306-348) to his son Antilochus. Here Nestor advises his son on how to drive in the chariot race at the funeral games in honour of Patroclus. The old man knows that Antilochus' horses are not the fastest in the race, and he therefore concentrates on tactics for rounding the turning post where a clever strategy can win the race. In each case (lines 332, 338, 344), it is clear that νύσσα in this context can mean only far turning post³⁰.

The other two occurrences of νύσσα in Homer both appear in the same formulation - τοῖσι δ'ἀπὸ νύσσης τέτατο δρόμος³¹ - and both describe the start of a foot race. In *Iliad* Book 23 line 758, the athletes are about to race off in the fourth discipline in the funeral games for Patroclus. Achilles shows the competitors the τέρματα (boundaries of the course). At the same point in the earlier chariot-race (lines 358-9), the τέρματα were said to be τηλόθεν ἐν λείῳ πεδίῳ (far off on the flat plain), and we assumed that the τέρματα there referred simply to the far turning post. In the case

of the foot race, there is no further qualification as to where the *τέρματα* lay or of what they consisted. Perhaps one is expected to assume that they were the same as for the chariot race. Our examination of *νύσσα* in line 758 may help to resolve this.

If we interpret *τέτατο δρόμος* as "the pace was forced"³², line 758 must mean "the pace was forced from the *νύσσα*". But what then does *νύσσα* mean in this context? There are three possible interpretations.

(i) Starting-line/Starting-post. This is an interpretation favoured by many translators and commentators. K. Ameis³³ offers the following explanation:

"*νύσσα*, die Schranke, die den Ausgangspunkt und nach Erreichung des Zieles wieder den Endpunkt für den Wettlauf bildete."

Such a translation assumes that Homer used *νύσσα* to denote both "starting line" and "turning post" in *Iliad* Book 23. W. Leaf³⁴ connects *νύσσα* with *νύσσειν* "to scratch", and proposes that *νύσσα* is "exactly equivalent to our word *the scratch*"³⁵. It would appear then that Ameis, Leaf and many other scholars³⁶ consider that the athletes who took part in this foot race had to complete the same course as the competitors in the chariot race.

(ii) Near turning post. This retains the sense of "turning post" in *νύσσα* and implies that the race was at least a *δίαιλος*, with this *νύσσα* serving as a starting post, possibly a turning post depending

on the length of the race, and probably also the finishing post. However in neither the chariot race nor the foot race is there a mention of more than one lap. There would therefore have been no need for a second turning post. Yet if there was a tradition of racing over several laps, although in these two instances neither of the two races consisted of more than one lap, it is still reasonable, when laying out a temporary racecourse, to erect two posts, both of which would be called a *νύσσα* and use one solely as a starting and finishing post. In this respect, this interpretation of *νύσσα* has much in common with the first one.

(iii) Far turning post. This agrees with the other three instances of *νύσσα* in *Iliad* Book 23, although it is the interpretation least supported by modern scholars. This race would then have been an *ἀκάμπιος*, starting perhaps from what served as the far turning post in the chariot race or from another selected for the purpose. On this interpretation, the previous line in which Achilles points out the *τέρματα*, and which seems to suggest that the event was a *δίαιλος* like the chariot race, would either be spurious³⁷ or require to be reinterpreted. The most likely solution could be that *τέρματα* here signifies "boundary" in its fullest sense, i.e. from the starting line to the finishing post, and not just the turning post as was the case with the earlier

chariot race.

If this race was then an ἀκάμπιος, like the later στάδιον race at the Olympic games, the athletes must have first walked to the other end of the racecourse before starting. Such at least was the scholiast's understanding of this line. He makes the following comment:

ἐπεὶ μὴ κάμπουσιν, οὐ ταμיעύουσιν εἰς τὸ τέλος τὸ τάχος, ἀλλ' εὐθέως προπηδῶσιν.

(Since they do not turn, they do not conserve their speed to the end of the race, but instead they leap forward immediately).

Eustathius (1328.20) takes a similar view, actually stating that the race was an ἀκάμπιος.

Εἰς δὲ τὸ ἀπὸ νύσσης φασὶν ὅτι δολιχὸς ἦν ὁ δρόμος καὶ ἢ ἀφ᾽ εἰς ἀπὸ τοῦ καμπτήρος ἐγένετο ἄνω πρὸς τὴν ἀφ᾽ εἰρηρίαν. καὶ ἴσως οὗτος ἐστὶν ὁ λεγόμενος ἀκάμπιος δρόμος.

(As regards ἀπὸ νύσσης, they say that the race was long and that it started at the turning post and finished up at the starting place. This is the so-called ἀκάμπιος race).

So what are the main arguments for and against such an interpretation? First of all, in the description of the start of the chariot race there is no mention either of a νύσσα or of a starting line. Instead, νύσσα was used solely as a term for turning post. Why then does Homer now use νύσσα to denote the starting post, which was not mentioned in the chariot race? Secondly, in ancient Greece the foot race was normally shorter than the chariot race. It stands to reason that horses, being stronger and faster than humans, should have to race over longer distances.

Therefore such a short, straight race as this would have its rightful place in the agonistic tradition of the ancient Greeks as the predecessor of the στάδιον race at Olympia. And thirdly, there is no indication during this foot race that the athletes rounded a turning post.

There are, however, some counter-arguments to this position. First of all, although Homer never mentions the athletes rounding a turning post in the course of the race, he does repeat a phrase which he used in his description of the chariot race to signify the competitors entering the final straight. This phrase occurs in the foot race at line 766 - ἀλλ' ὅτε δὴ πύματον τέλεον δρόμον. It is clear in the context of the chariot race that πύματον δρόμον in line 373 denotes the final straight of a δίαυλος, and therefore one could conclude that this foot race comprised also two straights since this phrase is repeated here. However it is possible that πύματος δρόμος signified something less specific in this context such as "last stretch" or "final phase", due to the many different meanings of δρόμος. This latter interpretation of πύματος δρόμος is supported by the mention in the chariot race of the competitors "returning towards the sea", having just rounded the turning post. However, this was not the case with the foot race, perhaps because it was an ἀκάμπιος event with the entire race being run in one direction.

Secondly, as was mentioned earlier, this line of

the *Iliad* is found also in the *Odyssey* Book 8 line 121 in Homer's account of the foot race at the Phaeacian games in honour of Odysseus. In this case, there is no previous chariot race, nor a description of the racecourse. It is more difficult to translate *νύσσα* here as "far turning post" since no turning post has already been mentioned.

The answer to this problem could lie in the possibility that *ἀπὸ νύσσης* might have been a standard expression for a straight race or an *ἀκάμπιος*. Going back to the Phaeacian games in the *Odyssey* Book 8, we are told that the contests were held in the agora³⁸. If we assume that this was the usual venue for sporting contests in Phaeacia, it is likely that there were one or perhaps two turning posts permanently situated there, and both a starting and finishing line marked out. *Δίαυλος* races would begin at one end of the agora and finish at this same end. *Ἀκάμπιος* races on the other hand would start at the other end where the turning post of the *δίαυλος* stood, and could well have come to be called "*ἀπὸ νύσσης*" (from the turning post), simply another way of saying *ἀκάμπιος*.

(b) Classical and Hellenistic Usage

The term *νύσσα* does not appear to have been favoured by authors of the Classical period, *στήλη* and *καμπή/καμπτήρ* being used instead. A passage

of Plato (*Ion* 537B-C), in which the chariot-race at the funeral games of Patroclus in Homer's *Iliad* 23 is being discussed, serves as a typical illustration of this. In the dialogue, Socrates calls the turning post a *καμπή*, whereas in the passage being quoted from Homer it is called a *νύσσα*³⁹.

In the Hellenistic period, *νύσσα* seems to have been used solely with the meaning "turning post"⁴⁰.

(c) Post-Hellenistic Usage

In the post-Hellenistic period, *νύσσα* was used most often to denote a turning post. Pausanias employed it as such to signify both the far⁴¹ and the near⁴² turning posts on the Olympic hippodrome.

By the post-Hellenistic period, however, *νύσσα* had definitely acquired the two additional meanings in a sporting context (starting line, and finishing post) that we suspected it might have had as far back as Homeric times.

(i) Starting line/post. Oppian (*Halieutica* 5. 642), describing a diver standing on the prow of a ship waiting for the right moment to enter the water, compares him to an athlete standing on the starting line (*ἐν νύσσῃ*). The idea here is one of a line or a slab of stone on which runners positioned themselves at the start of a race, rather than a post⁴³. Such a usage would suggest a close etymological connection between

νύσσα and νύσσειν (to scratch). In the same work, Oppian (1. 205) again uses νύσσα with the possible meaning of starting line/post. He relates how pilot fish, due to their fear of dry land, always turn back and swim out to sea again when they get too close to the shore. This retreat is likened to the speed (of athletes) racing away from a νύσσα. A. W. Mair in the Loeb edition interprets νύσσα here as starting-post. However it is possible that Oppian pictured athletes slowing down to round a turning post safely and then accelerating on entering the straight. This would be a particularly appropriate illustration for fish which swim up to the shore and then quickly back out to sea. The scholiast on this line certainly recognized both these possible meanings of νύσσα.

ἔστι νύσσα ἀφετήριος, ἀφ' οὗ τοὺς ἵππους ἀφίᾳσι τρέχειν. ἔστι δὲ καὶ καμπτήριος, ἐν ᾗ τρέχοντες κάμπτουσι [...].

(There is a starting nussa, from which the horses are sent off to race, and a turning nussa, around which they turn during the race [...]⁴⁴.)

Quintus Smyrnaeus (4. 507) used νύσσα also to denote a starting line. At the beginning of the chariot race in the funeral games for Achilles, we read that the competitors each stood on the νύσσα - ἐπι νύσσης δ' ἕσταν ἕκαστοι. Here, νύσσα must mean "starting line" due to Quintus' use of the preposition ἐπι followed by the genitive case. Later in the same book, describing the start of the single horse race Quintus borrows the phrase ἀπὸ νύσσης⁴⁵ from

Homer which we discussed earlier. Due to the fact that Quintus uses $\nuύσσαν$ to mean both turning post and starting line in his writings, it is difficult to decide on the correct interpretation in this instance. To some extent the same arguments apply here as were offered above in the discussion on the corresponding lines of Homer.

(ii) Finishing post. $\nuύσσαν$ was also used in the post-Hellenistic period to denote the finishing post or goal of a race. Oppian employs it twice in his *Halieutica* (3.11, 4.104) with this meaning⁴⁶.

3. ΚΑΜΠΤΕΙΝ, ΚΑΜΠΉ and ΚΑΜΠΤΉΡ

The verb κάμπτειν was much used in agonistic descriptions and metaphors, especially by the dramatists of the Classical period. Its primary meaning is "to turn". Thus Sophocles describes a horse turning the post in the fictitious chariot race in the *Electra* as a κάμπτοντος ἵππου (line 744). Theocritus (24 lines 119-20) also uses κάμπτειν of rounding a turning post - περὶ νύσσαν ἀσφαλῆως κάμπτοντα.

However, from the idea of rounding a turning post (which in a δίαυλος race would mean entering the final straight), κάμπτειν acquired the meaning of "to complete", i.e. to round the turning post and complete the final stretch of the track. This has to be the meaning of κάμψαι διαύλου θάτερον κῶλον πάλιν (Aeschylus *Agamemnon* line 344) which Denniston and Page render in an amplified translation as "turn <round the bend and traverse> the second leg of the course." A similar sense is also intended in Bacchylides' use of κάμπτειν in Ode 9 line 26. The athlete to whom the poem is dedicated is said to have fallen into the crowd after he had completed the four-lap race - τετραῖαλικτον ἐπεὶ κάμψεν δρόμον. The notion of "turning", of course, is still present in the reader's mind as he pictures the athlete running round the racecourse. In Euripides' *Helen* (line 1666), κάμπτειν is similarly used of living out or com-

pleting one's life - ὅταν δὲ κάμψῃς καὶ τελευτήσῃς βίον⁴⁷.

Such metaphorical usages of κάμπτειν occur several times in Euripides, each evoking the imagery of the racecourse which the poet employed so frequently. However it is difficult to find one English word which would adequately serve as a translation for each instance. Where κάμπτειν can be rendered "to complete" in *Helen* line 1666, it cannot be so translated in *Electra* line 956. In this passage Electra, addressing the corpse of Aegisthus, warns that one must wait until death before assessing whether or not one has been fortunate in life.

μή μοι, τὸ πρῶτον βῆμ' εἰδὼν δράμῃ καλῶς,
νικᾶν δοκείτω τὴν δίκην, πρὶν ἂν πέρας
γραμμῆς ἴκηται καὶ τέλος κάμψῃ βίου.

(Let no-one assume, although he may have begun the race well, that he has conquered justice, before he has arrived at the winning line and reached the goal of life) (954-6).

The final phrase of this quotation could conceivably be translated "and round the goal of life", taking κάμπτειν in its primary meaning of "to turn". But it is difficult to see then the exact picture Euripides had in mind. Rather, one is compelled to render κάμπτειν as "reach". And this must be the meaning intended by Euripides (*Hippolytus* line 87) - τέλος δὲ κάμψαιμ' ὥσπερ ἤρξάμην βίου. (May I reach the end of my life as I began.)

A further shade of meaning for κάμπτειν is found in Euripides *Suppliants* lines 748-9.

πόλεις τ', ἔχουσαι διὰ λόγου κάμψαι κακά,
φόνψ καθαιρέϊσθ', οὐ λόγῳ, τὰ πράγματα.

(Cities, which could end evil by dialogue, resolve instead the issues by death).

In this context, κάμπτειν cannot be rendered as "turn", "complete" or "reach", but rather "end" or, as Collard suggests, "leave behind".

With such a variety of translations possible for κάμπτειν in sporting metaphors, it is hardly surprising to discover that καμπτήρ and καμπή, the substantives derived from this verb, had also several different meanings.

The most obvious of these is "turning post", and both καμπή and καμπτήρ were widely used in this sense. Plato (*Ion* 537a) uses καμπή as such in his dialogue between Ion and Socrates at the point where the chariot race at the funeral games of Patroclus in Homer's *Iliad* Book 23 is being discussed.

Εἶπε δὴ μοι ἃ λέγει Νέστωρ Ἀντιλόχῳ τῷ
υἱεῖ, παραινῶν εὐλαβηθῆναι περὶ τὴν καμπὴν
ἐν τῇ ἵπποδρομίᾳ τῇ ἐπὶ Πατρόκλῳ.

(Tell me what Nestor says to his son Antilochus when he advises him to be careful round the turning post in the horse race in honour of Patroclus).

It is interesting to note Plato's choice of terminology here. Ion goes on to quote from memory Nestor's advice to his son during which the turning post is called a νύσσα, yet Plato himself in the main dialogue prefers καμπή.⁴⁸

Due to the nature of the ancient Greek racecourse

or stadium where the two turning posts could also serve as starting and finishing posts, words denoting a turning post, such as *νύσσα* and *καμπτήρ*, often came to have these two additional meanings.

In the case of *καμπή* and *καμπτήρ*, both acquired the meaning "finishing post". This would seem to be the correct interpretation of *καμπή* in Euripides' *Electra* 659 - *πάλιν τοι μῦθον εἰς καμπὴν ἄγε* - which A. S. Way in the Loeb translates "yet toward thy goal turn thou thy speech!"⁴⁹.

A clear example can be found in Aristotle's *Rhetoric* 1409a 32, where the philosopher, discussing the merits of various styles of speech, employs a metaphor from the racecourse to clarify his view.

διόπερ ἐπὶ τοῖς καμπτήρσιν ἐκπνέουσι καὶ ἐκλύονται. προορῶντες γὰρ τὸ πέρασ οὐ κάμνουσι πρότερον.

(That is why athletes lose their breath and faint at the finishing posts, but beforehand when they see the end in front of them, they do not tire).

On the use of *καμπτήρ* in this passage of Aristotle's *Rhetoric*, Sandys and Cope (page 93) make an erroneous statement which has been repeated by reputable scholars many times since⁵⁰. In explaining why *καμπτήρ*, the primary meaning of which is turning post, also came to mean finishing post, they state,

"This interpretation [...] makes the *καμπτήρ*, which is properly the turning post of the *δίαυλος* - whence its name - here the goal of the *στάδιον* or single race, in a straight line: the *καμπτήρ* of the *δίαυλος* being in fact the *πέρασ* of the *στάδιον*."

The error in this view lies in the fact that the

turning post in the δίαυλος was not the goal of the στάδιον race but rather the starting post. In the ancient Greek stadium, as at any modern racecourse or athletics track, it was desirable that all races finished in the same place. Thus at Olympia, the competitors in the δίαυλος foot race, which was simply once up and once down the track, started at the western end of the stadium and ended at the western end. The στάδιον race, which consisted of one length of the track, began therefore at the eastern end of the stadium where the turning post for the δίαυλος was positioned, and ended, like the δίαυλος, at the western end where the majority of spectators would have gathered. Eustathius (1328.20), commenting on the foot race at the funeral games in honour of Patroclus in Homer's *Iliad* Book 23, which he obviously believed to be similar to the στάδιον race at Olympia, confirms this fact.

ἡ ἄφεςις ἀπὸ τοῦ καμπτήρος ἐγένετο ἄνω
πρὸς τὴν ἀφετηρίαν. καὶ ἴσως οὗτος ἐστὶν
ὁ λεγόμενος ἀκάμπιος δρόμος.

(The race was from the turning post up to the starting place. This was perhaps the so-called "race without a turn".)

καμπτήρ thus came to denote a finishing post, not because the καμπτήρ of the δίαυλος served as such, but rather because there was also a turning post at the western end of the stadium and hippodrome at Olympia for the δόλιχος foot race and the chariot races which comprised several circuits of the track. Since all races finished at the western end, the

turning post there was used also as a finishing post.

As a parallel to κάμπτειν meaning "to complete, reach, end", καμπτήρ came to be used in later Greek literature to denote a lap of the racecourse. The idea was probably that of a "completed turning" of the track, involving the two main senses of κάμπτειν, much like the English word "circuit". The scholiast to Pindar *Olympian* 2.55 employed καμπτήρ thus in noting the distance covered by the four-horse chariot for fully-grown horses at Olympia.

δώδεκα δρόμους ἔτρεχον τὰ τέλεια ἄρματα,
τουτέστιν ἰ και ἑ καμπτήρας

([...] the four-horse chariot for fully-grown horses ran twelve dromoi, i.e. twelve circuits).

καμπτήρ was used clearly with the sense of "circuit" also by the Byzantine scholar of the twelfth century B.C., Johannes Tzetzes (*Chil.6. Hist. 698-700*).

Δίαυλος δρόμος, ὁ διπλοῦς, ἓνα ποίων
καμπτήρα. ὁ δολιχός, ἑπτὰ δρόμος, τρεῖς γὰρ
καμπτήρας εἶχε καὶ τὸ καμπτήρος ἥμισυ.

(The diaulos was the double dromos, comprising one lap. The dolichos was seven dromoi, for it had three and a half laps.)

There are several other occurrences of καμπτήρ in extant Greek literature from the Hellenistic and post-Hellenistic periods which may also be correctly translated as "lap". The earliest appears in Fragment 10 of the third-century B.C. mimographer Herodas.

ἔπην, τὸν ἑξηκοστὸν ἥλιον κάμψης,
ὦ Γρύλλε, Γρύλλε, θνήσκε καὶ τέφρη γίνεο,
ὡς τυφλὸς οὐπέρι κειν(α) τοῦ βίου καμπτήρ.
ἤδη γὰρ αὐ(γ)ή τῆς ζωῆς ἀπήμβλυνται.

(Gryllus, Gryllus, when you have completed your sixtieth year, die and become ashes. The following lap of life is blind, for the light

of life is already dimmed.)

Commentators have invariably interpreted *καμπτήρ* here as meaning "lap", and compare its usage in this fragment to an occurrence of *καμπτήρ* in a first-century B.C. epigram of the poet Meleager (*Anthologia Palatina* 12.257)⁵¹.

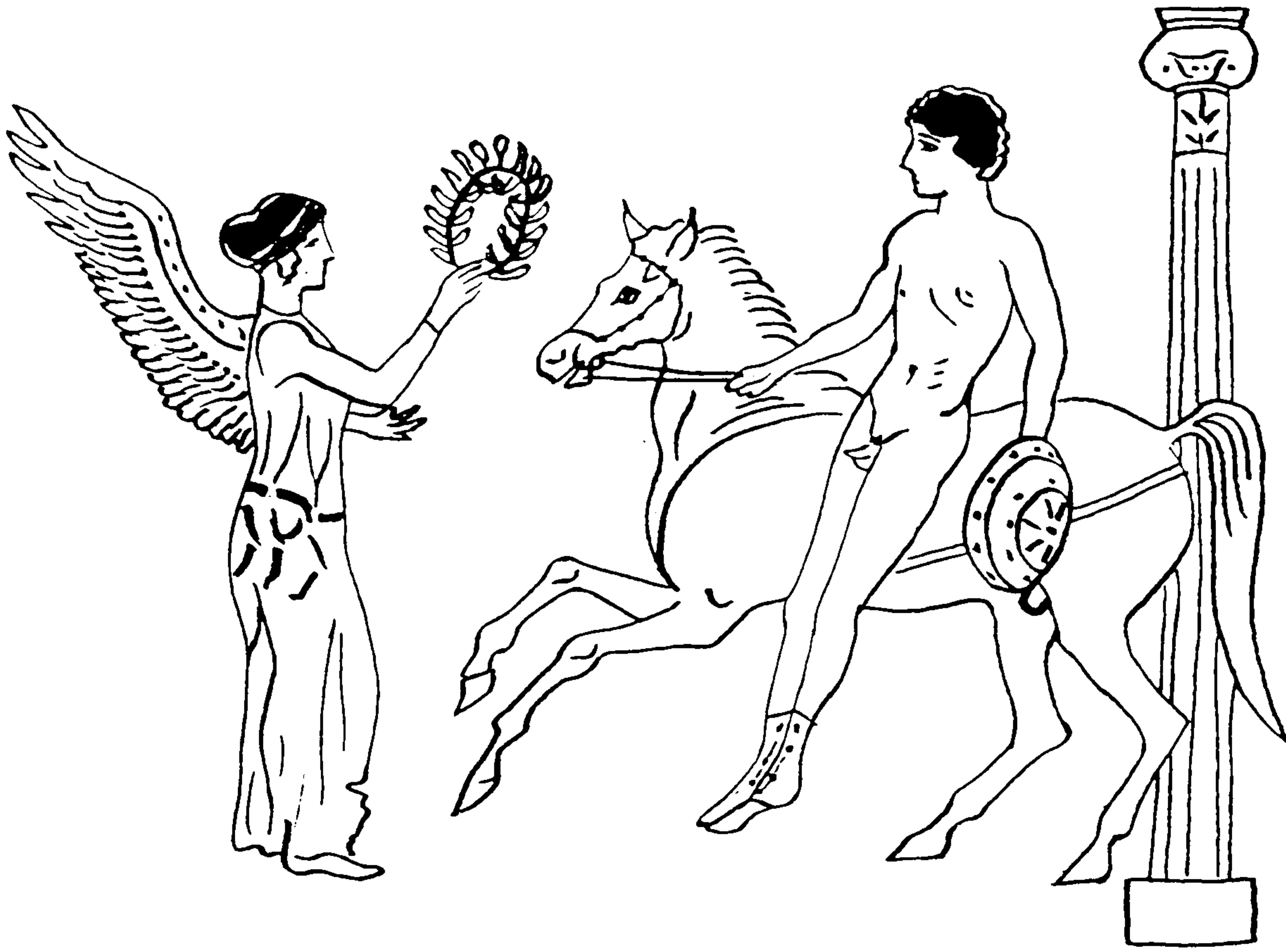
Ἄ πύματον καμπτήρα καταγγέλλουσα κορωνίς
[...].

(I, the flourish announcing the last kampter).

In the Herodas fragment, "lap" is perhaps the most convincing translation, especially since *κάμπτειν* is used two lines earlier apparently with the sense of "to complete". However, it is more difficult to ascribe the meaning of "lap" to *καμπτήρ* in the Meleager epigram as commentators on Herodas have done. A *κορωνίς* (flourish), which Meleager says marks the last *καμπτήρ*, was normally a stroke of the pen signifying the end of a chapter of a book. A more appropriate interpretation of *πύματος καμπτήρ* here would surely be "finishing post", and not "lap"⁵².

A further usage of *καμπτήρ* in the post-Hellenistic period with the possible meaning of "lap" occurs in a fable of Babrius (29) in which an old racehorse, retired from competition and harnessed to a mill-stone laments 'its fate - *ἐκ δρόμων οἴων καμπτήρας οἴους ἀλφιτεῦσι γυρεύω*. Perry in the Loeb translates "Alas, what courses once I ran, and now what wretched goal-posts must I turn about to serve these millers!" Such an interpretation of *καμπτήρ*

as goal-post requires καμπτήρας to be taken as the direct object of γυρεύω. However, a more likely translation would be - "what laps I now circle..." - taking καμπτήρας as a cognate accusative. This interpretation avoids the possible technical difficulty encountered in Perry's translation of explaining the plural καμπτήρας when, if καμπτήρ denotes a goal post or turning post, one would expect a horse to be circling only one post in the context of a mill.



4. ΤΈΡΜΑ

As with many ancient Greek words connected with the hippodrome, τέρμα had several meanings, all of which were semantically interlinked.

(a) Turning Post

We first meet τέρμα in a horse-racing context in Homer's *Iliad*. In the description of the chariot race at the funeral games in honour of Patroclus in Book 23, the term occurs three times in the plural (lines 309, 333, 358) and twice in the singular (lines 462, 466), and on each occasion clearly denotes the far turning post. The plural τέρματα occurs also in a racing metaphor in Book 22 (line 162) where Achilles and Hector are likened to two racehorses running περὶ τέρματα. In this case, the plural "turning posts" seems to fit the context better.

τέρμα can be found throughout extant ancient Greek literature with the meaning of turning post⁵³. It came to have this meaning probably because a turning post marked the furthest point or end of the racecourse.

(b) Boundary

τέρμα was used frequently to describe the geographical boundary or limit of an area. Herodotus (7.54) employed it thus to denote the final frontier of Europe which Xerxes hoped to reach in his conquests.

This usage has much in common with that of "turning post", the furthest point on a racecourse. It is difficult, however, to find an instance of $\tau\acute{\epsilon}\rho\mu\alpha$ describing the boundary line of a hippodrome. An obvious explanation for this is that many racecourses in ancient Greece were not enclosed on all sides and therefore could not be said to have had a definite boundary.

(c) Finishing Line

It is not surprising to find the finishing line on a racecourse being called the $\tau\acute{\epsilon}\rho\mu\alpha$, although practically all instances of such a usage occur in Hellenistic or post-Hellenistic authors⁵⁴. $\tau\acute{\epsilon}\rho\mu\alpha$, however, was frequently used metaphorically by the tragedians of the Classical period to denote, for example, a goal which someone had achieved⁵⁵.

A particular use of $\acute{\alpha}\kappa\rho\omicron\varsigma$ should be mentioned here. The Greeks frequently combined this adjective with one of the many words for "finishing post" or "goal", such as $\tau\acute{\epsilon}\rho\mu\alpha$ or $\tau\acute{\epsilon}\lambda\omicron\varsigma$ as a way of emphasizing that point on a track which had to be reached

before a race could be officially won. An appropriate English translation for such a phrase could be "the final post" or more abstractly "the very end". Antipater of Thessalonica, the epigrammatist of the first century B.C., provides us with a clear example of this usage, describing the speed of the runner Aries⁵⁶.

ἢ γὰρ ἐφ' ὑσπλήγων ἢ τέρματος εἶδέ τις
 ἄκρου
 ἦίθεον, μέσσω δ' οὐ ποτ' ἐνὶ σταδίῳ.

(The boy could be seen only at the start or the very end of the race, but never in the middle.)

The combination of ἄκρος and a term for "goal" occurs frequently both literally and metaphorically in ancient Greek literature⁵⁷, but has on occasions been misunderstood. R. Jebb, in his commentary on Sophocles *Antigone* line 131, where the chorus tells of how Zeus struck down the victorious invader of Thebes who was βαλβίδων ἐπ' ἄκρων, interprets this phrase as "at his topmost goal, i.e. at his goal on the top of our walls". The evidence of the various passages cited above, however, suggests that βαλβίς and ἄκρος go together in the figurative sense, "the final goal". The idea that the literal goal, the battlements, was ἄκρος (high) is an added bonus, which may have further attracted Sophocles to use this particular metaphor, but this must still be regarded as of secondary importance.

The fact that the finishing post on a racecourse was often referred to as a τέρμα ἄκρον or an equivalent phrase adds a further dimension to an al-

ready confused question of direction on the racetrack. Plato (*Republic* 613B) uses the obscure phrases τὰ ἄνω and τὰ κάτω to denote the start and finish of a race.

οὐκ οἱ μὲν δεινοί τε καὶ ἄδικοι δρῶσιν
 ὅπερ οἱ δρομῆς ὅσοι ἂν θέωσιν εὖ ἀπὸ
 τῶν κάτω, ἀπὸ δὲ τῶν ἄνω μή; τὸ μὲν πρῶτον
 ὀξεῶς ἀποπηδῶσιν, τελευτῶντες δὲ καταγέλαστοι
 γίνονται, τὰ ὦτα ἐπὶ τῶν ὤμων ἔχοντες καὶ
 ἀστεφάνωτοι ἀποτρέχοντες.

(Are not clever but wicked men like athletes who run up the track well, but badly back down again? They start off sharply, but they end up being laughed at, and they run off the course uncrowned with their tails between their legs.)

One must assume that, although they occur only in Plato, the terms τὰ ἄνω (the upper end) and τὰ κάτω (the lower end), were perfectly comprehensible to the Greeks of the Classical period who were acquainted generally with the terminology of the racecourse. Competitors in a δίαυλος were therefore regarded as running *up* to the turning post and back *down* to the finishing line. We employ similar, if less concrete, terms to describe running today. The concept of the finishing line being at the lower end of a racecourse receives support from the fact that, at least in the post-Classical period, the "goal" of a race was sometimes referred to as the κατάντημα, which includes the idea of downward motion⁵⁸.

There is a temptation then, by a similar argument, to interpret τέρμα ἄκρον as the "high finishing post", i.e. the post at the top end of the racecourse, as opposed to the turning post at the lower end. The

competitors would thus run up to the finishing line, and indeed this is exactly what Eustathius (1328. 20-21), in his explanation of the foot race at the funeral games for Patroclus in Homer *Iliad* Book 23, claims they did.

ἡ ἄφεσις ἀπὸ τοῦ καμπτήρος ἐγένετο ἄνω
 πρὸς τὴν ἀφετηρίαν. καὶ ἴσως οὗτος ἐστὶν
 ὁ λεγόμενος ἀκάμπιος δρόμος.

(The race was from the turning post up to the starting line. This was the so-called race without a turn.)

The problem, of course, with such an interpretation of *τέρμα ἄκρον*, although it is logical and finds support in Eustathius, is that it directly contradicts Plato's use of *τὰ ἄνω* and *τὰ κάτω*.

FOOTNOTES

1. Discussion on the various terms for starting mechanisms on the ancient Greek hippodrome such as ὕσπλης and βαλβίς is to be found more appropriately in Chapter 4.
2. It was used perhaps more often in this context as the compound ἵπποδρομία (Xenophon *Symposium* 1.2, Aristotle *Athenian Constitution* 60.22)
3. *Olympian* 1.21
4. 6.13.9.
5. Pindar *Olympian* 13.30
6. Homer *Iliad* Book 23 line 330
7. Homer *Iliad* Book 23 line 321, Pindar *Olympian* 3.33, Sophocles *Electra* line 713.
8. St. Martin's Press (1984) page 304.
9. On *Iliad* 23.758 cf. Munro, Oxford (1890), page 414. Leaf, Amsterdam (1960), page 525. Hampe, Stuttgart (1979), page 496. Willcock, St. Martin's Press (1984), page 309. On *Odyssey* 8.121 cf. Butcher and Lang, London (1890), page 119. Ameis-Hentze, Amsterdam (1964), page 35. Stanford, London (1965), pages 334-5.
10. On *Iliad* 23.758 cf. Purves, London (1891), page 415. Murray, London (1976), page 550. On *Odyssey* 8.121 cf. Agar. Oxford (1908), pages 115-8. Weiher, Heimeran (1961), page 201. Hampe, who translated τοῖσι δ' ἀπὸ νύσσης κέτατο δρόμος as "Ab von der Startschwelle ging da der Lauf" in *Iliad* 23.758, translates this same phrase in *Odyssey* 8.121 completely to the contrary as "Vor der Schwelle erstreckte die Bahn sich".
11. The arguments for and against Murray's translation of νύσσα as "turning point" are to be found more appropriately on pages 227-232.
12. Nonnus *Dionysiaca* 37. 242,625.
13. The technical expression βαλβίς seems to have been unknown in pre-Classical Greek literature, the earliest surviving reference appearing in the fifth century B.C. in Sophocles' *Antigone* line 131.
14. On the idea of keeping to an imaginary lane in the Roman Circus, see Cassiodorus *Variae* 3.51.7.

15. Homer *Iliad* Book 23 lines 417-447. See also Aristophanes *Knights* line 1161, Theocritus 21 lines 26-27.

16. cf. Aeschylus *Prometheus* line 883. For other metaphorical usages of δρόμος in this connection, cf. Plato *Cratylus* 414b for wandering off the subject in a discussion, and Aeschylus *Libation Bearers* line 514, for doing something unacceptable. See also Aristophanes *Frogs* line 995 and scholium where ἐκτὸς τῶν ἐλαῶν is the equivalent of ἐκτὸς τοῦ δρόμου (see pages 130-131). Cf. also Aeschylus *Libation Bearers* line 1022, *Agamemnon* line 1245, Euripides *Bacchae* line 853.

17. It is interesting to note Homer's use of the superlative πύματος here and not δεύτερος, which, although it would not scan in this position, would have been more logical in a δίαυλος if δρόμος means "straight" and not simply "part of the course". Was he perhaps following a tradition which knew races of more than one circuit?

18. Line 768.

19. The κέλης event seems to have consisted of only one lap. The κάλπη, which closely resembled the κέλης event and perhaps was based upon it, may therefore have comprised also one lap. ἐπὶ τῷ ἐσχάτῳ δρόμῳ would then signify the "final straight".

20. Most horse racing in North America today takes place on rectangular-shaped tracks with rounded ends (like an athletics track). On turning the final bend the horses must race down a long finishing straight. American commentators invariably highlight this stage of the race by shouting at the top of their voices "And down the stretch they come!".

21. For a derivative of ὑποστρέφειν denoting the rounding of a turning post, see Sophocles *Electra* line 725.

22. Sophocles *Electra* lines 698-760.

23. *In Praise of Demosthenes* 23.

24. For a much earlier usage of δρόμος to denote a "circuit", although not in a horse racing context, see Plato *Euthydemus* 273a.

25. See pages 241-243.

26. The scholiast does not refer to the Olympic hippodrome by name, but we can be reasonably sure that this is what he had in mind (see pages 130-131).

27. In a race of twelve laps, the chariots would only round this turning post eleven times. However, since the Greeks often employed a system of inclusive counting, Pindar could quite properly use the adjective δωδεκάγναμπος.

28. cf. also the use of λοίσθιοι δρόμοι in Aeschylus *Agamemnon* line 120.

29. For similar usages of δρόμος, though not in a sporting context, cf. δρόμος II in LSJ.

30. cf. line 359. τέρματα here is used as a synonym of νύσσα.

31. *Iliad* Book 23 line 758, *Odyssey* Book 8 line 121.

32. cf. previous section on δρόμος in this chapter.

33. Amsterdam 1965, page 87.

34. London 1900-1902, reprint Amsterdam 1960, page 525.

35. cf. scholia to Pindar *Pythian* 9.209., where χαράσσειν (to scratch) is used of marking the starting line of a race.

36. Monro, Oxford 1890, page 414, Willcock, St. Martin's Press 1984, page 309. etc.

37. Aristarchus rejected this line, but for a different reason.

38. line 109

39. cf. also Xenophon *Symposium* 4.6.

40. cf. Theocritus 24. 119, Apollonius Rhodius 3. 1272, Lycophron *Alexandra* line 15 (and scholia where attempts are made to explain etymologically the νύσσα at either end of the racecourse), Callimachus *Iambi* 195. 26.

41. 6. 13. 9.

42. 6. 20. 19.. Although it is not actually stated in the text, the fact that this turning post had a statue of Hippodameia crowning Pelops would suggest that it was the near turning post/winning post.

43. For a discus-thrower actually standing on a special slab of stone called a βαλβίς, see Philostratus *Imagines* 1.24.2.

44. For a rather eccentric attempt at explaining these two meanings of νύσσα by two separate etymologies where νύσσα "starting line" comes from νύσσειν

"goad on" (of both jockeys and spectators at the start of a race), and *νύσσα* "turning post" comes from *νεύειν* "incline forward" (of horses rounding a post), see Tzetzes on Lycophron 15.

45. cf. also line 195

46. cf. also Nonnus *Dionysiaca* 12.87.

47. cf. also Herodas 10.1.

48. cf. also Aristophanes *Peace* line 905, Euripides *Iphigenia in Aulis* line 224, Pausanias 6.20.19, SEG 27.119, Pollux 3.147.

49. Denniston believes that *καμπή* in this line signifies "turning post", and that Euripides is referring distinctly to the *δίαυλος*. However his interpretation involves too complex a pattern of thought to be plausible.

50. cf. C.H. Keene, Euripides *Electra* line 659 (page 66), J.D. Denniston, Euripides *Electra* line 659 (page 132), LSJ s.v. *καμπτήρ* II.

51. J. Nairn, Oxford, 1904, page 103. W. Headlam, Cambridge, 1922, page 412.

52. W.R. Paton in the Loeb favours this interpretation, although, with his "last lap's finish", one feels that he is trying to get the best of both worlds.

53. cf. Anacreon 78.4, Pindar *Olympian* 3.33, Nonnus *Dionysiaca* 37.212 etc..

54. cf. Quintus Smyrnaeus 4.199, Pollux 3.147.

55. cf. Sophocles *Ajax* line 48, Euripides *Suppliants* line 369.

56. *Anthologia Palatina* 9.557

57. For *ἄκρος* with *τέρμα* cf. Oppian *Haliutica* 5.183; with *τέλος* cf. Pindar *Pythian* 9.118, *Isthmian* 4.32, Theognis 5.94; with *βαλβίς* cf. Sophocles *Antigone* line 131; with *γραμμῆ* cf. Euripides *Fragment* 169, (also Diodorus *Siculus* 17.118.3).

58. Scholia Aristophanes *Frogs* 995, Psalm 18(19) 6-7. The latter reference is particularly interesting as

it alludes to the sun rising at one end of the heavens and *going down* at the other like an athlete. It is also possible that there is a connection between *κατῶ* of the home straight and *κατέρχεσθαι* (to return from exile) and *κατάγειν* (to restore from exile).

EPILOGUE

Most modern bibliographies on horse racing in ancient Greece (including the one in this thesis) have as their first entry J.K. Anderson's *Ancient Greek Horsemanship*. Were such bibliographies not compiled alphabetically, but their works listed in order of importance for a study of this subject, Anderson's book would again probably occupy the first position.

However, the fact that Anderson's work has little directly to say about horse racing in ancient Greece, but concentrates more on points of general horsemanship, highlights the inadequate state of research in this area.

For some of the most comprehensive studies on horse racing in ancient Greece one has to go back to the works of Lehndorff, Pollack, and Martin in the nineteenth century. Lehndorff took a wide view of his subject and covered topics such as the Olympic hippodrome, prizes, rules for taking part at Olympia, and horsemanship. His is, however, a popular account, the value of which has diminished considerably in the light of more recent research. Pollack, on the other hand, concentrated exclusively on the hippodrome, discussing those described by various ancient authors. The real value of his work lies in his chapter on the starting mechanism on the Olympic hippodrome, which, although some of the theories need to be treated with circumspection, is a useful summary of previous research.

Martin's study of the Athenian cavalry and their participation in the festivals of the Panathenaia and Theseia is an invaluable tool for anyone researching the κέλης event in ancient Greece. However, it does not deal with more general points on horse racing.

As regards this century, little has been written on the κέλης event compared to other sporting disciplines in antiquity. In their works on ancient Greek sport in general, several scholars, notably Gardiner, Hyde, Harris, Ebert and Weiler, have touched on the subject, but there has been little original research which answers many of the fundamental questions on this subject.

The only area which has been satisfactorily dealt with until now is the Olympic hippodrome and its starting mechanism. Harris and Wiegartz (both of whose theories are analysed in Chapter 4 of this thesis) have written extensively on this question with particular reference to the starting gate, and it is clear that no further serious advance will be made in our understanding of this device or the hippodrome in which it was situated, until some new literary or archaeological evidence appears.

Several crucial areas have been neglected in modern scholarship. The distance of the κέλης event at the major festivals remains unknown. Since Schöne's research of the last century into the distances of the equestrian events at Olympia as recorded on the Old Seraglio manuscript, no significant con-

tribution has been made. I believe, however, that Professor J. Ebert intends to publish a new perspective on this ancient manuscript in the near future.

There is much to be gained by a detailed examination of the various passages in this work (and others I may have overlooked) concerning the ὕσπληξ, which pre-dated the prow-shaped starting mechanism on the Olympic hippodrome, and which seems to have been the most common type of starting device in antiquity. The extensive work carried out by Broneer on the functioning of such a device in the Isthmian stadium needs to be widened to address the different problems posed by the use of the ὕσπληξ in the hippodrome.

Finally, a study, perhaps in the form of a short lexicon, should be produced on the different meanings of the various *termini technici* related to the stadium, hippodrome, gymnasium and *palaestra* in ancient Greece and the sporting events held therein. Such a reference work would prove invaluable to translators and commentators, who are frequently faced with interpreting passages with obscure sporting allusions.

SELECTED BIBLIOGRAPHY

BOOKS

- ANDERSON J.K. *Ancient Greek Horsemanship*. California 1961.
- AZZAROLI A. *An Early History of Horsemanship*. Leiden 1985.
- BENGTSON H. *Die Olympischen Spiele in der Antike*. Zurich 1971.
- BUHMANN H. *Der Sieg in Olympia und den anderen panhellenischen Spielen*. Munich 1975.
- BURY J.B. and MEIGGS R. *A History of Greece*. London 1900 fourth edition, 1975.
- DREES L. *Olympia: Gods, Artists and Athletics*. New York and Washington 1968.
- DUCREY P. *Guerre et Guerriers dans la Grèce Antique*. Paris 1985.
- EBERT J. *Griechische Epigramme auf Sieger an Gymnischen und Hippischen Agonen*. Berlin 1972.
- EBERT J. *Olympia*. Leipzig 1980.
- FERRILL A. *The Origins of War*. London 1985.
- FINLEY M.I. and PLEKET H.W. *The Olympic Games: The First Thousand Years*. New York 1976.
- FORREST W.G. *The Emergence of Greek Democracy*. London 1966.
- GARDINER E.N. *Athletics of the Ancient World*. Oxford 1930.
- GARDINER E.N. *Greek Athletics Sports and Festivals*. London 1910.
- GREENHALGH P.A.L. *Early Greek Warfare: Horsemen and Chariots in the Homeric and Archaic Ages*. Cambridge 1973.
- HARRIS H.A. *Sport in Greece and Rome*. New York 1972.
- HÖNLE A. *Olympia in der Politik der griechischen Staatenwelt*. Bebenhausen 1972.
- HUMPHREY J. *Roman Circuses: Arenas for Chariot Racing*. London 1986.
- HYDE W.W. *Olympic Victor Monuments and Greek Athletic Art*. Washington 1921.
- KYLE D. *Athletics in Ancient Athens*. Leiden 1987.
- LASER S. *Sport und Spiel*. *Archaeologica Homerica*. Göttingen 1987.
- LEHNDORFF G. *Hippodromos*. Berlin 1876.
- MARTIN M.A. *Les Cavaliers Athéniens*. Paris 1887.
- MILLER S.G. *Arete: Ancient Writers, Papyri, and Inscriptions on the History and Ideals of Greek Athletics and Games*. Chicago 1979.
- MOMMSEN A. *Heortologie*. Leipzig 1864.
- MORETTI L. *Iscrizioni Agonistiche Greche*. Rome 1953.

- MORETTI L. *Olympionikai. I vincitori negli antichi agoni Olimpici.* Rome 1957.
- OLIVOVÁ V. *Sports and Games in the Ancient World.* London 1984.
- PARKE H.W. *Festivals of the Athenians.* London 1977.
- POLLACK E. *Hippodromica.* Lipsiae 1891.
- ROBINSON R.S. *Sources for the History of Greek Athletics.* Ohio 1955.
- SCANLON T.F. *Greek and Roman Athletics. A Bibliography.* Chicago 1984.
- TARN W. and GRIFFITH G.T. *Hellenistic Civilisation.* London 1927.
- VIGNERON P. *Le Cheval dans l'antiquité gréco-romaine.* Nancy 1968.
- WEILER I. *Der Sport bei den Völkern der alten Welt.* Darmstadt 1981.
- YALOURIS N. *Athletics in Ancient Greece.* Athens 1976.
- YOUNG D.C. *The Myth of Greek Amateur Athletics.* Chicago 1984.

ARTICLES

- BENTON S. *Echelos' Hippodrome.* ABSA 67 (1972) pages 13-19.
- BRONEER O. *An Archaeological Enigma.* Archaeology 9.2 (1956) pages 134-137.
- BRONEER O. *The Enigma Explained.* Archaeology 9.4 (1956) pages 268-272.
- CROWTHER N.B. *Studies in Greek Athletics.* The Classical World 78 (1984-85) pages 497-558 and 79 (1985-86) pages 73-135.
- DAVISON J.A. *Notes on the Panathenaea.* JHS 78 (1958) pages 23-42.
- GARDINER E.N. *Notes on the Greek Foot Race.* JHS 22 (1903) pages 261-268.
- HARRIS H.A. *The Starting-Gate for Chariots at Olympia.* Greece and Rome 15 (1968) pages 113-126.
- HOOD M.S.F. *A Mycenaean Cavalryman.* ABSA 48 (1953) pages 84-93.
- LÄMMER M. *Zum Verhältnis von Krieg und Sport in der griechischen Antike.* H. Becker (Ed.), Sport im Spannungsfeld von Krieg und Frieden. Fachtagung der DVS-Sektion Sportgeschichte vom 4.-6. April 1984 an der Führungs- und Verwaltungs-Akademie des Deutschen Sportbunds in Berlin, Clausthal-Zellerfeld 1985 pages 17-30.
- SCHÖNE H. *Neue Angaben über den Hippodrom zu Olympia* JDAI 12 (1897) pages 150-160.
- WIEGARTZ H. *Zur Startanlage im Hippodrom von Olympia.* Boreas. Münstersche Beiträge zur Archäologie 7 (1984) pages 41-79.

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I hereby declare that this thesis is the product of my own original research and that it has been composed entirely by me.

David J. Bell

David J. Bell

March 28th 1989

Edinburgh