When we encounter some new invention or discovery, it is natural to ask who invented, discovered, created, or produced it.¹ The ancient Greeks were no exception. Indeed, their urge to connect every novelty with a famous name seems almost obsessive, even pathological. The gods were first in line. Demeter gave us grain, Dionysos gave us wine, Athena gave us the olive, and so on; then, coming down a notch, Prometheus gave us fire, Orpheus gave us music, and the Cyclopes taught us the crafts.²

By the seventh century BC, a formula was coined: the ἀρχαῖος ἑρετής—the ‘first discoverer’ of this or that new skill, artefact, literary genre, or social practice.³ The keyword here is τεχνē. Basically untranslatable, it is best understood through its two English derivations, technique and technology. Technē is the understanding, ingenuity, and skill that one applies to a problem in order to solve it, or to brute matter in order to make something useful of it.⁴

The Greeks soon realised that technē was the driving force behind the advance of civilization, and applied the word to any skill, craft, art, or profession that contributed to this advance. Sailing, agriculture, divination, cooking, medicine, carpentry, flute playing, rhetoric, and politics were all technē in this sense. And so were architecture, painting, and of course sculpture.

The remainder of this essay, like Caesar’s Gaul, is divided into three parts. Part I sketches and occasionally critiques the scholarship on individuality and innovation in Greek sculpture from antiquity to the present. Part II offers a few cautionary remarks about craftsmanship and the limitations it imposed on individual initiative in ancient Greece. And finally Part III presents some test cases from the fifth century BC, in order to examine what individual achievement could amount to in that golden century.

I. SCHOLARSHIP: ANCIENT AND MODERN

Although the invention of the Doric and Ionic orders, and of the two main archaic sculptural types, the standing naked youth (kouros) and standing draped woman (korē), seem to predate not Greek curiosity per se about inventors and their inventions but its commemoration in writing, later pundits soon filled the lacuna—at least in the case of sculpture. So we hear that either the Rhodian Telchines or the Cretan Daktyloi were the first to make images of the gods, and the first to work iron and bronze in order to do so.⁵
And Daidalos, no less, invented the kouros (fig. 1). His statues, we are told,

were exactly like living beings, for they say that they could see and walk, and were so completely true to life that the statue produced by art seemed to be a living being. For Daidalos was the first to represent the eyes open and the legs separated as they are in walking.6

Perhaps not surprisingly, the century that allegedly saw these discoveries, the seventh century BC, also produced some of the earliest artists’ signatures. They appear on a kouros base by Euthykartides of Naxos, and on a fragmentary late geometric sherd from Ischia.7 As Alison Burford has remarked, ‘During the 7th century BC craftsmen ceased to be anonymous; never again in antiquity did there occur so momentous an alteration in their status or in their thinking as this.’8

Now, thanks largely to these signatures and the indefatigable Roman-period traveller Pausanias, we know a certain amount about archaic sculptors active between Daidalos and the Persian wars. But it was the invention of the classical style and particularly of contrapposto, apparently in the 470s, that greatly increased the range of innovation that was possible in sculpture and prompted increasing public and private comment upon it. For once these sculptors had invented contrapposto—the counterpoise of limbs and resulting asymmetrical distribution of the body’s weight—there was no going back.

The whole field of movement and composition, of what the Greeks called rhythmos, was now open to individual experiment and innovation. Moreover, other technai were taking off at this very time, including medicine, cosmology, physics and rhetoric. It was the Age of the Sophists. So it is not surprising that the first comments about individual style concern sculptors of this period, and the first judgements of quality as well.

Thus we read that bronzes by Kritios and Nesiotes were ‘compact, sinewy, hard, and precisely divided into parts by lines’.9 The implied comparison is between their
famous bronze Tyrannicides of 476 BC (fig. 2), today known only in marble replica, and the statuesque, kouroï-like late archaic bronzes such as the Piraeus Apollo (fig. 3). At about this time Aeschylus, too, supposedly remarked that ‘the old statues, though simply made, are thought divine; while the new ones, though superbly made, have less of the divine in them’.10 Presumably he was comparing works such as the Piraeus Apollo with the supple and very human ‘musing’ pose of its early classical successors.

The next generation fared somewhat better with the critics. The sculptor Phidias set such a standard with his Athena Parthenos (see fig. 10) and Olympian Zeus and the sculptor Polykleitos with his Doryphoros (fig. 4) that Socrates, Xenophon, and Aristotle all judged them the best in their respective professions. Just as they ranked Homer the best epic poet, Melanippides the best lyric one, Sophocles the best tragedian, and Zeuxis the best painter, they agreed that Phidias made the best statues of the gods and Polykleitos made the best ones of mortals. Indeed, Socrates went further, contemptuously dismissing Polykleitos’s sons, who had followed in his footsteps, as ‘nothing beside their father’. Soon, Plato famously turned the entire discussion on its head, declaring that precisely because Greek art changed and developed, it was inferior to Egyptian, which supposedly did not.11

By the early Hellenistic period, these ad hoc value judgements had begun to lengthen into narratives. Thus around 280 BC, Poseidippos of Pella produced this long, recently discovered epigram praising his particular hero, the fourth-century bronze caster Lysippus:

Imitate these works, and the antique laws of colossi,
Statue makers—yes!—outrun them!
For if the ancient hands of [Dry]ops or of Hageladas,
A pre-Polykleitan, wholly primitive practitioner of the art,
Or the hard creations of [the Daidalids] had entered the field,
There’d be no reason at all to invoke Lysippus’s new grace
As a touchstone. But if need should arise,
And a contest among moderns occur, he’d thrash them all.12
In the same period, Douris of Samos produced a series of anecdotal artists’ biographies, including one of Lysippus. Douris may be responsible for those anecdotes in Pliny’s Elder’s *Natural History*, composed in the 70s AD, that elevate the artist almost to culture-hero status, the companion and occasionally counsellor of kings like that other gadfly, the court philosopher.13

Meanwhile Xenokrates of Athens, a pupil of Lysippus and a practising sculptor in his own right, wrote handbooks on the development of Greek sculpture and painting, apparently based on formal criteria such as the artist’s individual contributions to the development of *symmetria* or proportion, *rhythmos* or composition, and *akribeia* or naturalistic detail; and in painting, to the development of line, colour, composition, and perspective. Some of Pliny’s stylistic judgements probably are taken from his work.14

The floodgates were now open. By the end of the Hellenistic period, the foundations for the work of Vitruvius, Pliny, Quintilian, Pausanias, Lucian, and Philostratos—and art history as enshrined in our own textbooks, the present author’s included—were firmly in place. It is largely because of them that we are quite well informed not only about the virtuoso artists and architects, but also about many others whose contributions were far more modest. Individualism is built into Greek and Roman discourse about art from start to finish, so we should not make light of it.

As for innovation, these writers signal it in three main ways. As we’ve seen, the artist may be described as: (1) a discoverer of a new technique or image type (as its *prôtos heuretês* or *prīmus inventor*). But like Kritios, Nesiotes, Polykleitos, and Lysippus, he may be singled out also as: (2) a stylistic paradigm, and/or as: (3) the founder of a school. We shall return to these three criteria shortly.

But in the 6th century AD or thereabouts, art history itself stopped, only reviving over a thousand years later. For the discipline’s real founding hero was not the sixteenth-century painter and scholar Vasari, nor even Aldrovandi or Ursinus, but Johann Joachim Winckelmann in the mid-eighteenth century. Convinced that ‘good taste was born under the skies of Greece’, Winckelmann began his career by systematically tackling the issue of the sculptural and pictorial models that contemporary artists should use, predictably endorsing only those that he felt exhibited the ‘noble simplicity and quiet grandeur’ of the classical ideal—such as, curiously to our eyes, the Laokoon (fig. 5).

Winckelmann’s second and most important book, the *Geschichte der Kunst des Alterthums* (Dresden: Waltherisches Hof-Buchhandlung, 1764), was the first such systematic account ever. But surprisingly, it says very little about personalities. Winckelmann was of course thoroughly familiar with most of the ancient sources on Greek art, particularly Pliny and Pausanias and their rosters of artists great and small. But his interest in environmental, social, and political factors and his desire to define ideal beauty itself pointed him in other directions.

Notoriously, Winckelmann never went to Greece, and despite the wealth of ancient sculpture on display in Rome, he ventured only eight actual attributions, of which only two—the Apollo Sauroktonos (fig. 6) and Resting Satyr given to Praxiteles—are taken seriously today.15 Others were less reticent. Reproductions in miniature on the coins of Knidos had already enabled seventeenth-
century scholars to identify Praxiteles’ Knidian Aphrodite, and by 1800 Emilio Quirino Visconti, then director of the Vatican Museums, had both debunked a number of Winckelmann’s attributions and added some of his own.

Visconti’s ventures on this front included giving the Lancelotti-type Diskobolos to Myron, the Vatican Ganymede to Leochares, and the seated Vatican Tyche to Eutychides. In each case the ancient critics had described the work in enough detail to enable its identification among the mass of marbles on show; but Visconti was fully aware that he was dealing not with Greek originals but with Roman copies that translated them from bronze into marble. And he also knew that the Ganymede and Tyche were less than faithful copies at that, because both of them were mere statuettes.

It was upon this foundation that the first systematic history of Greek sculptors, published by Heinrich Brunn in 1853, was created. Now Brunn felt somewhat differently than Winckelmann about art and artists. A Kantian, he believed that great art was the product of individual genius. So the individual artist automatically became his focus, and resurrecting him—the process of Meisterforschung—became his solemn duty.

By the last decade of the nineteenth century, the rapidly growing corpus of sculptures and inscriptions, the refinement of archaeological positivism with its focus upon the telling detail, and the adoption of the new technique of photography—all these had greatly increased both the scope and the ambitions of the attribution game and its practitioners.

The big breakthrough came in 1893 with Adolf Furtwängler’s Meisterwerke der griechischen Plastik. This bold attempt to reconstruct the output of the giants of classical Greek sculpture, penned by Brunn’s star pupil and dedicated to him, caused a sensation. Furtwängler adopted the methods of the positivist connoisseur Giovanni Morelli (aka Ivan Lermolieff), who from 1874 had published hundreds of re-attributions of Old Master paintings that tabulated and compared the formulae their authors employed for anatomical details, drapery, and so on. In his preface Furtwängler declared that only photographs could sustain such a programme, and proceeded to document his attributions with an impressive array of them. Yet mere attribution was by no means his prime goal. As he indicated by his choice of subtitle, Kunstgeschichtliche Untersuchungen or ‘Art-Historical Studies’, he wanted to historicise, to trace development, and he carefully subordinated each ‘masterpiece’ to this agenda. His address to the ancient literary sources, however, was deliberately casual—a slap at the text-based art history for which Brunn’s book had been the bible.

From then on, all serious scholars of ancient sculpture began to use photographs as a matter of course—some so recklessly that in 1908 the sculpture specialist and topographer Adolf Michaelis felt he had to protest. While
conceding that photographs had been instrumental in converting Greek sculpture studies from a text-based methodology to a style-based one, he warned that Furtwängler’s attributions were both inflated and inattentive to the texts, and his imitators were beginning to arrive at wildly contradictory ones for the same pieces. Stylistic analysis without external controls was a perilous enterprise indeed.19

Furtwängler’s critics had also chastised him for his over-reliance on Roman copies. For since Greek originals by the great masters were in short supply—in fact, all but non-existent—both Brunn and he had been compelled to devote most of their pages to works preserved only in copy. Furtwängler had blithely used these copies as if they were Greek originals, whereas it was crystal clear not only that in many cases they translated bronze into marble, but also that often they reproduced details somewhat capriciously—truly a Morellian nightmare. So the next generation began to develop the science—some might call it the pseudo-science—of Kopienkritik, ‘copy criticism’, to overcome these problems, and worked ever harder to refine the attributions based upon it.

Meanwhile still others, disturbed by Michaelis’s warning, began to step back and look at the entire scene afresh. Inspired by the great formalist critics Adolf Hildebrand, Alois Riegl, Franz Wickhoff and Heinrich Wölfflin, they sought, in Wölfflin’s famous words, to offer the world an ‘art history without names’. In Greek sculpture studies, the two favorites were Stilphasen, a quasi-deterministic sequence of formal antitheses such as closed to open, haptic to optic, linear to painterly, planar to recessional, and simple to complex; and Strukturforschung, which tried to discover the essential structure (psychological and thus formal) of a given culture and its artworks. Gerhard Krahmer was the acknowledged master of Stilphasen and Guido Kaschnitz von Weinberg of Strukturforschung.20 Krahmer preferred to write articles rather than books, however.

Students of Hellenistic sculpture, largely deprived by the ancient classicising critics of names, dates, texts, histories, and frequently even of copies, found overarching schemes of this kind particularly appealing.

So far, every scholar mentioned in this essay has been German or at least German-speaking. In the rest of the scholarly world both the attribution game and totalising evolutionary schemes such as these were less popular than in Germany, and still are, though monographs on individual Greek sculptors still continue to appear. They include Giorgios Despinis’s dissertation on Agorakritos, Olga Palagia’s on Euphranor, Paolo Moreno’s three books on Lysippus, Antonio Corso’s quartet (soon to be a quintet!) on Praxiteles, and the present author’s own dissertation on Skopas. Not to mention the recent Praxiteles exhibition organised by Alain Pasquier and Jean-Luc Martinez at the Louvre. All of them rely heavily upon copies.21

In the United States, the leading postwar theorist was the charismatic American scholar Rhys Carpenter. A brilliant teacher and powerful writer, in 1960 Carpenter produced a highly influential survey entitled Greek Sculpture: A Critical Review.22 Although all but ignored on the European continent, this book took the world of Anglo-American sculpture studies by storm. (One of this author’s own professors, Robert Cook, declared it the best thing ever written on the subject, and gave it a glowing three-page review.)23

Carpenter too was a disciple of Hildebrand and Wölfflin. Although apparently he never cited them, he must have known their work: his approach is too close to theirs for coincidence. For he too wanted an ‘art without artists’ and an ‘art history without names’ but pressed his case even further. Bluntly characterising Greek sculpture as the ‘anonymous product of an impersonal craft’, he argued that it was ‘strictly conditioned by evolutionary laws which are in turn dependent upon the unchangeable dictates of the mechanism of human vision’.24 Names do, in fact, crop up in his book—Polykleitos, Phidias, Praxiteles, and Lysippus in particular. But its thrust is quite different—a challenging, highly rhetorical, and often unorthodox sketch of an inexorable, even deterministic evolution from a purely frontal art to a fully three-dimensional one, and from glyptic to plastic form.

Carpenter’s most influential pupil was Brunilde Ridgway, who began to teach at Bryn Mawr College in 1960, and in 1977 was named Rhys Carpenter Professor of Classical and Near
Eastern Archaeology at that college. Although Ridgway’s approach is more nuanced than Carpenter’s and cannot be easily summarised, she too is an enthusiastic debunker, banishing many works formerly attributed to the great masters to the later Hellenistic or even Roman periods, and casting grave doubt upon others.²⁵ Ridgway and her many pupils now constitute what can fairly be called a school.

Yet Carpenter’s ‘art history without names’ has not gone unchallenged. In particular, many historians of ancient sculpture heartily disliked an approach that not only denied the artist’s existence as a social being, but also brusquely expelled many works from their cozy niches in the 4th century BC and banished them to the advanced Hellenistic period. In 1980 Richard Wollheim briskly critiqued this whole enterprise on a theoretical level in his path-breaking book *Art and its Objects*:

[First, these formalist scholars] had far too narrow a conception of the range of devices operative in art [...] Secondly, they had no theoretical means of fitting together stylistic changes on the general or social level with changes of style on an individual or expressive level: Wölfflin’s famous program of an ‘art history without names’ is in effect the denial that there is any need to make the fit since all change occurs primarily or operatively on the more general level. Thirdly, all these writers were confused about the status of their investigation. From the fact that it is in the nature of art that it changes or has a history, they tried to move to the conclusion that the particular history it has, the particular changes that it undergoes, are grounded in the nature of art.²⁶

As regards Greek sculpture, we might add, fourth, that individuality and innovation are central to Greek and Roman discourse on art, so we are not entitled to ignore them.

The upshot of all this activity, at least as regards current work on Greek sculpture, is that personalities and period styles now coexist quite uneasily. While some foreground the individual sculptor, his teachers, and his pupils to the almost complete exclusion of any overarching vision, others focus upon the big picture to the almost complete exclusion of the individual sculptor. And still others—the present author included—attempt to reconcile the two approaches, often with mixed results.

Moreover, the Roman copies have become quite controversial, at least in the United States. Traditionally the backbone of our reconstructions of the history of Greek sculpture, they are now decidedly problematic. Again following the Germans, this time the 1970s generation led by Paul Zanker and Raimund Wünsche, some now argue that Latin literature should be our guide—especially texts such as Plautus’s comedies and Vergil’s *Eclogues, Georgics*, and *Aeneid* that ‘emulate’ Greek models rather than copy them outright. As this author’s former student and now colleague Christopher Hallett has noted,

Our failure to recognise this in the visual arts (so this line of reasoning runs) may be put down mostly to prejudice and a lack of imagination. On this analysis, if we can only learn to overcome our modern parochialism, the genuine *Romanness* of all this material will become unmistakably apparent.²⁷

Yet not only have Zanker, Wünsche, and the others turned away from what one might call this ‘irrationally exuberant’ Romanitas of the 1970s, but both images and texts offer little support for it. Whatever the status of these pieces as Roman art—and here there is certainly much room for reconsideration—their credentials as replicas of Greek originals, more-or-less, are impeccable.

The facts are well known and shouldn’t need repeating, but apparently they do. First,
when one lines the copies up it is clear how astonishingly similar they often are, which presumes the existence of a common—surely Greek—archetype. Second, quite a few of them can be matched directly with surviving Greek originals, such as the well known Erechtheion Caryatids and the fragments of Agorakritos’s Nemesis so brilliantly rediscovered by Despinis and placed in his reconstruction precisely with the aid of the copies. In recent years, Despinis and other Greek scholars have identified and joined original fragments of more than a dozen classical statues on the Akropolis using this method, some of them masterpieces by named sculptors seen and described by Pausanias in his tour around the citadel.28 The Romanitas movement, as one might call it, has ignored this work entirely.

Third, a sculptor’s workshop buried by the eruption of Vesuvius in AD 79 and excavated in the 1960s has yielded hundreds of fragments of ancient plaster casts. Moulded from Greek bronze originals such as the Tyrannicides, they show that although the marble replicas are legion, in each case a core group of them conforms faithfully to the spirit and often to the letter of its Greek archetype.29 And finally, as Hallett also has pointed out, the crucial Latin word aemulatio, ‘emulation’, seems to mean in fact not ‘rivalry by being authentically and obviously Roman’ but ‘rivalry by being as Greek as possible’.30

So when Pliny describes Nero’s commission to the great Zenodoros to make facsimiles of two cups by the classical Greek silversmith Kalamis, he says that Zenodoros ‘reproduced them in such a way that there was almost no difference in workmanship between them and the originals’. The word he uses for ‘reproduce’ is precisely aemulare, ‘to rival’.31 So as Michael Koortbojan has shrewdly remarked, in ancient Rome: ‘It is a striking paradox […] that […] what made something recognisable as roughly equivalent to our modern notion of a “work of art” was, more often than not, the fact that it was not an original invention but a “copy”’.32 Surely it is this uniquely Roman attitude to replication that needs more thought and more work, not the replicas’ departures from their Greek models, which often are trivial and probably fortuitous.

So where do we go from here? Not, surely, down the road so often taken, of trying to link every Greek original and Roman copy with a name. Still less should we join those who rush to attribute new discoveries in the same way. Guesses of this sort hamper our address to the work in question, skew our discussion of it, substitute sloganeering for thought, and seldom lead anywhere productive. If the Holy Grail of three centuries of advanced scholarship on two continents and in six languages is simply a name, one may justly ask, ‘What’s the point?’.

So instead of obsession over names, it is better to reorient the discussion and ask, first of all, what possibilities were available to the individual sculptor in ancient Greece? Second, what did innovation in this medium actually consist of? And third, what can we learn from the monuments and sources about such innovations in the particular case?

II. CRAFTSMANSHIP, ANCIENT AND MODERN

As to possibilities, in ancient Greece (it will be recalled), sculpture was a technē—art and craft combined. Moreover, what today’s war-gamers would call the ‘action horizon’ of a Greek sculptor and what sociologists would call his ‘power of agency’ was quite limited (and of Roman ones even more so, though that is beyond the scope of this essay).

To begin with, the time required to train a good craftsman is often estimated (most recently by Richard Sennett) at around 10,000 hours or about seven years.33 Or, if one wants to be apprenticed to Jiro Ono, reportedly the finest sushi chef in Tokyo, at least ten years—and that is just the beginning, according to David Gelb’s superb documentary on him.34 Pliny records a similar training regimen in the studio of the notoriously exacting fourth-century painter Pamphilos of Sikyon: to study with him cost a tidy 500 drachmas per year for twelve years.35 Or, if one wants to be apprenticed to Iiro Ono, reportedly the finest sushi chef in Tokyo, at least ten years—and that is just the beginning, according to David Gelb’s superb documentary on him.34 Pliny records a similar training regimen in the studio of the notoriously exacting fourth-century painter Pamphilos of Sikyon: to study with him cost a tidy 500 drachmas per year for twelve years, and involved instruction ‘in all branches of learning, especially arithmetic and geometry’.35 Lengthy apprenticeships such as these would tend to turn all but the boldest pupils into plodding conservatives.

Then, once our young sculptor struck out on his own, he faced a society where such
work was always done on commission and was constrained by genre, function, and the need always to please a public. For in ancient Greece and Rome, sculpture was a public art form, even when (as later) displayed in private houses. Moreover, the risk involved in experiments that might turn bad—ruining an entire block of marble, losing time, losing money, losing face, and so on—was great. That is why, in ancient art, period style usually eclipses personal style almost completely. So one must expect innovators to be few and far between, and their innovations perhaps not always of the sort that one would expect.

Bearing all this in mind, Part III of this essay selects some test cases from the fifth century BC. Essentially, the argument will be that our view of innovation in this medium is too narrow, and that a formalist obsession with style often has led to other, more interesting avenues being overlooked or underestimated.

III. FIVE TEST CASES

First, Kritios and Nesiotes, the authors of the Tyrannicides (fig. 2). These statues, originally of bronze and set up in the Athenian Agora in 476 to replace an earlier group stolen by the Persians, are each represented today by half a dozen Roman copies, another half-dozen fragments of plaster casts from the aforementioned copyist’s workshop in Baiae, and numerous echoes in the Athenian minor arts. Moreover, part of their original base has survived, plus over a dozen ancient texts that mention them and sometimes even describe
their style, such as Lucian’s comment, quoted earlier, that they were ‘compact, sinewy, hard, and precisely divided into parts by lines’. So (miraculously) their identity, date, and form are all secure.

It’s now clear on archaeological grounds that the style they exemplify, the early Classical or Severe Style, postdates the Persian invasion of 480. So it seems likely that, in Brunilde Ridgway’s felicitous phrase, they do indeed mark the ‘legal birthday’ of this new Severe Style. They break decisively with the sleepwalker pose of the kouros and its derivatives (see figs. 1–2), the mannered formalism of the late archaic period, and the startling realism of some contemporary reliefs and bronze statuettes of athletes. Perhaps this is why Pliny and Pausanias give Kritios and Nesiotes a substantial list of pupils—four generations of them, in fact. It is the ancient way of signalling that they innovated stylistically, and that their innovations stuck.

Next, another Severe Style ensemble, the sculptures of the Temple of Zeus at Olympia, described by Pausanias and dated by him to ca. 470–457 (figs. 7–9). Although he attributes them to Pheidias’s pupils Alkamenes and Paionios, this cannot be right, since these two men lived over a generation later, in the last third of the century. Nevertheless, over the years some diehards predictably have expended considerable quantities of ink in defending this attribution, just because its source is the usually reliable Pausanias: plus ça change. But most of us continue to call their author simply the ‘Olympia Master’.

Now this individual could not have carved all these figures himself, and they are not particularly innovative stylistically.

Their contributions to the Severe Style are incremental at best—indeed quite modest when one compares the spectacular bronzes discovered in 1972 in the sea off Riace Marina in Italy, for example. So why include them here? Simply, because the Olympia Master was the first Greek sculptor to create what we would call a world: a rounded, wholly credible kosmos of gods, humans, and beasts. His theme is grand: nothing less than the Justice of Zeus.

On the temple’s twelve metopes (fig. 7), Herakles’ inborn talent duly expands under Athena’s mentorship to fill the space allotted to it, taming the earth for humankind. The pediments (figs. 8–9) show the results of such training in the lives of Pelops, Theseus, and Peirithoos, and of their anonymous but obedient families and retainers, when pitted against its opposite, the villainous Oinomaos and the bestial Centaurs. Each class has its own path to tread, its own predetermined destiny to fulfil: That is the Justice of Zeus. It is universal, because the gods are omnipresent to enforce it; it is intersocial,
because all responsible participants know and accept their places in it; and it is absolute, as clear-cut as the geometry of the great temple itself. Elitist and conservative, the Olympia Master’s sculptures neatly complement and complete the well-ordered fabric—the *kosmos*—of Libon’s building. His innovations, then, are thematic and programmatic, not stylistic or iconographic.

Thirdly, we come to Pheidias, generally acknowledged in the ancient world as the greatest of Greek sculptors. But why? First and foremost, perhaps, because of the sheer grandeur of his two most famous works: the Athena Parthenos (fig. 10) and the Zeus at Olympia. After describing them, Pliny declares that, ‘Pheidias is deservedly judged to be the first to have revealed the capabilities and indicated the methods of *toreutice*’. Now, *toreutikê* is a Greek technical term. Emphatically not to be translated merely as ‘metalwork’, still less as ‘sculpture’, it is the *technê* of metal *embossing or repoussé*: of hammering metal sheets into a mould, turning...
them over for final finishing, and assembling them into a larger composition. Used—as it happens—for the Statue of Liberty but rarely practiced today, it receives no space in either the new Oxford Classical Dictionary or the new Grove Dictionary of Classical Art and Architecture.

Originally a Near-Eastern technique, toreutikê is well represented in archaic Greece by works ranging from gold and silver diadems and belts, through the embossed golden drapery of some sixth-century chryselephantine statuettes at Delphi, to the embossed, lifesize silver bull from the same site.44 In Classical and Hellenistic times, however, it became a major art form, apparently thanks largely or wholly to Pheidias.

Today, though, only small-scale examples survive, chiefly bronze case-mirrors and Hellenistic silver cosmetic boxes (fig. 11).

So what Pheidias achieved was a tour-de-force of techné toreutikê on a colossal scale, using over a ton of beaten gold for each statue, and deftly combining it with ivory, enamel, glass, and other precious and semiprecious materials. The result was two stunning colossi whose beauty, Quintilian tells us, ‘is said to have added something to the traditional religion; to such an extent is the majesty of the work equal to the majesty of the god’.45 Beauty of facture, then, and formal beauty too.

But there is more. The Amazonomachy and Gigantomachy embossed on the exterior and interior, respectively, of the goddess’s shield were but two of the many mythological narratives to embellish these enormous statues. Whereas the Olympia Master had created a world high on the exterior of the god’s house, Pheidias now brought this world inside it, into its very heart. By repeating on the Parthenos several of the temple’s exterior themes (the Amazonomachy and Gigantomachy included), and by adding still others to the Zeus, he both enabled the awed visitor to follow the great chain of being to its source, and channelled the divinity’s cosmic power back to him in response. His innovations, then, were technical, stylistic, iconographic, and programmatic. No wonder the ancient critics regarded him as the greatest of Greek sculptors.

Fourth, Polykleitos and his Doryphoros or Spearbearer (figs. 4, 12).46 Here, it seems, we are faced with two innovations, one easily spotted and the other not. The naked warrior had been a staple of Greek sculpture since at least the sixth century. It came in two types: the striding and the standing. Polykleitos’s first innovation was to combine these types into a single, compelling image, by making the statue throw its weight all on one leg, as the pundits immediately noticed and as Pliny duly pointed out.47 This posture of mobile repose neatly kills two birds with one stone, proclaiming both the subject’s steadfastness in the landscape and his active engagement with the world.

By contrast, Polykleitos’s second innovation, his perfected proportional system or Canon, which others followed ‘like a law’,48 cannot be read directly off the statue (still less its copies)—the reason why no one has yet succeeded in reconstructing it to general approval. At best, it manifested itself only subliminally, unless one read his accompanying textbook. It therefore differs in kind from all the other innovations discussed here. Again, though, such canons were not new. They had been central to Greek sculpture for two centuries, ever since the

Fig. 12. Three Roman copies (marble, marble, and basalt) of the Doryphoros by Polykleitos of Argos, Fig. 4. Bronze original, ca. 440 BC. From left to right: Museo Archeologico Nazionale, Naples; Staatliche Museen, Berlin; Museo Archeologico Nazionale, Florence. PHOTO: HANS GOETTE.
first kouros (see fig. 1), but Polykleitos’s was apparently the first totally comprehensive and mathematically integrated one. And it was also most difficult to apply: he himself said that perfection comes about ‘just barely’ through many numbers, and that ‘the work is hardest when the clay is on the fingernail’.49

Along with the statue’s controlled pose, the Canon enthrones it as an icon of male beauty: the perfectly measured man. This ideal is fourfold, and recalls the sixth-century philosopher Thales’ famous statement that he was glad that he was a human being not an animal; a man not a woman; and a Greek not a barbarian.50 So:

1. The Doryphoros is a model human being, Nature personified;
2. He represents the best human type, a Greek male;
3. He is a model Greek male, the perfect citizen warrior; and
4. He is an artistic standard or law as well.

A true microcosm—a kosmos in a capsule—the Doryphoros was not only innovative iconographically and stylistically, but also represented what any fifth-century intellectual would kill for: a perfect synthesis of nature (physis) and culture (nomos). Predictably, then, the sources tell us that Pheidias and Polykleitos each inspired a school: two generations of pupils in Pheidias’s case, and three in Polykleitos’s.51

Now it may be no coincidence that all these men except for the Olympia Master were metalworkers. Mistakes in this medium are easier to repair, since metals can be recycled and reused but stone cannot—at least, not without considerable piecing and jointing, and sometimes not even then. So in conclusion, we turn to a marble worker, Paionios of Mende. He is known only from two references in ancient literature (one of them almost certainly wrong, as we have seen) and one signed statue.52 As noted earlier, Pausanias’s remark that he made the east pediment of the Olympia temple can be discarded. This leaves us with his signed Nike erected on a pillar in front of the temple (figs. 13–14).53

Pausanias and the Nike’s dedicatory inscription tell us that Paionios made it and the Messenians and Naupaktians dedicated it, presumably after their daring and unconventional victory (alongside the Athenians) over the Spartans at Sphakteria...
in 425. Succeeding in marooning a company of Spartans on the island, they achieved a coup hitherto thought impossible: the capture of a hundred and twenty of them alive. The myth of Spartan invincibility had taken a body blow from which it never fully recovered.

Anyone seeing this project in progress must have thought that Paionios had gone completely insane. His statue, carved from a single piece of Parian marble, required a flawless block of it measuring 3 m high x 1.8 m wide x 1.2 m deep, or roughly 10 x 6 x 4 feet. Since marble weighs about 2560 kg per cubic metre or 168 lbs. per cubic foot, this monster would have weighed no less than 16.5 metric tons or 16.25 English tons. How could it be quarried and ferried all the way from the island of Paros to Olympia?

Of course, up to a third of the stone could be removed at source. But roughing out of this kind could only go so far: the delicate projecting parts—wings, cloak, head, arms, and feet—had to be safeguarded at all costs. And when the roughed-out block reached the site, another dilemma presented itself. The Nike had to stand atop a 9-metre or 30-foot high pillar. Cut away too little of the excess, and the task of hoisting and supporting it up there would be all but impossible; cut away too much, and breakage was certain. So now perhaps we can begin to understand what an awesome feat of sculptural techné this was. Paionios's innovations were not stylistic. His bravura drapery style is prefigured on the Parthenon pediments and directly anticipated on the Nike Temple parapet in Athens a few years earlier. Indeed, if the strong similarities between his work and the Nikai attributed to the parapet's Master B are anything to go by, apparently he pioneered it there.

So now perhaps we can begin to understand what an awesome feat of sculptural techné this was. Paionios's innovations were not stylistic. His bravura drapery style is prefigured on the Parthenon pediments and directly anticipated on the Nike Temple parapet in Athens a few years earlier. Indeed, if the strong similarities between his work and the Nikai attributed to the parapet's Master B are anything to go by, apparently he pioneered it there.

Instead, Paionios's triumph is a triumph of what art historians call facture: of material plus skill. A prudent man would have used bronze, but he chose marble. Yet in his hands, the stone has daringly defied—even negated—its own nature, becoming as supple as bronze and as weightless and insubstantial as gauze. So he has beaten both stone and bronze on their own home turf, just as his Messenian and Naupaktian clients had daringly beaten the supposedly invincible Spartans on theirs.

These innovations are by no means purely technical: they touch the very heart of the sculpture's meaning and reception. One only has to imagine the eastern sun rising over the sanctuary of Zeus and shining through those translucent marble wings and billowing cloak, in many places less than 1 cm (one-third of an inch) thick, to understand that what he had created was truly an epiphany divine. Bronze could never match it.

Not surprisingly, then, Paionios's inscribed signature deftly exploits all this. Punning on the title of his work, he boasts that he made it ‘when he had won (enika) the competition for the akroteria of the temple’, thus making his clients’ victory his own. But even this was not enough. For apparently the first time in Greek sculpture, his Nike brazenly bares a breast. Now this was no innocent ‘wardrobe malfunction’. A culture that instinctively gendered the spectator as male, carefully shielded its women from the prying eyes of strangers, anxiously defended the prerogatives of the gods, and regarded vision as long-distance touch, would see this gorgeous, provocative young woman as ravishingly sexy and inviting. Victory teasingly presents herself in the flesh—and what flesh!

So if this essay has achieved nothing else, it may serve as a reminder of the centrality of individuality and innovation in the ancient understanding of Greek art, and of the need to credit them properly when we study it. Moreover, perhaps it is now clear how varied these innovations could be, at least in the field of sculpture, and how diversely and decisively the individual sculptor could put his own stamp upon his work.

ANDREW STEWART FAHA is Nicholas C. Petris Professor of Greek Studies in the Departments of History of Art and Classics at the University of California at Berkeley, and Chair of the Graduate Group in Ancient History and Mediterranean Archaeology. His recent books include Attalos, Athens, and the Akropolis: The Pergamene Little Barbarians and their Roman and Renaissance Legacy (2004); and Classical Greece and the Birth of Western Art (2008). A book on Hellenistic art is in press.
1. This is an edited version of the Australian Academy of the Humanities' Trendall Lecture given in Sydney on Friday 18 January 2013.
   I thank Graeme Clark and the Academy for inviting me, and also the Australasian Society for Classical Studies for the warm reception my wife Darlis Wood and I received during our stay in Australia.


5. Diodorus Siculus 5.55, 64; Strabo 14.2.7, etc.

6. Diodorus Siculus 4.76.


10. Quoted by Porphyry, de Abstinentia 2.18.

11. Xenophon, Memorabilia 1.4.3; Plato, Meno 91D; Plato, Hippias Major 290A; Plato, Protagoras 328C; Aristotle, Nicomachean Ethics 6.7.1, 11419–12; Aristotle, Poetics 6, 1450a25–8; Aristotle, Politics 8.5.7, 134035–40.


13. Pliny, Natural History 1.34; 34.61 (Lysippos); cf. 35.79–89 (Apelles, Alexander, and Ptolemy I); see Pollitt, pp. 77–8 for sources, bibliography, and discussion.

14. See Pollitt, pp. 74–7 for sources, bibliography, and discussion.

15. For full information on these early attributions and those that follow, see Francis Haskell and Nicholas Penny, Taste and the Antique: The Lure of Classical Sculpture, 1500–1900 (New Haven: Yale University Press, 1981).

16. Stewart, figs. 300 (Diskobolos), 626 (Tyche); Boardman, Greek Sculpture: The Classical Period (London: Thames and Hudson, 1985), fig. 60 (Diskobolos); Boardman, Greek Sculpture: The Late Classical Period (London: Thames and Hudson, 1995), fig. 29 (Ganymede).


34. Jiro Dreams of Sushi, directed by David Gelb, starring Jiro Ono and Yoshikazu Ono (Magnolia Pictures, 2011).

35. Pliny, 35.76.


38. Ridgway, Severe Style, p. 12.

39. Pliny, 34.85; Pausanias 6.3.5; both misspell his name, respectively calling him Critias and Kritias; a not uncommon name, it is often misspelt this way.

40. Pausanias 5.10.2–10; Stewart, Greek Sculpture, pp. 142–6, 253–4, figs. 264–84; Boardman, Classical Period, pp. 33–50, figs. 23–6.

41. Stewart, Greek Sculpture, pp. 147–8, figs. 292–6; Boardman, Classical Period, pp. 53–4, figs. 38–9; update, Stewart, Classical Greece, pp. 88–101.


43. Pliny, 34.54.

44. For good colour photographs of these stunning discoveries, see D. Musti et al., L’Oro dei Greci (Novara: Istituto Geographico DeAgostini, 1992), figs. 96.t–9; also B. C. Petracos, Delphi (Athens: Esperos, 1971), pls. 21–33.

45. Institutio Oratoria 12.10.9.


47. Pliny, 34.96.

48. Pliny, 34.55.

49. Philo Mechanicus 4.1, 49.20; Plutarch, Moralia 86A, 616B–C.

50. Diogenes Laertius 1.33.

51. Pliny, 34.30 (Polykleitan school); 34.87; 35.54; 36.16, 17 (Phaidian school).


55. Coined by singers Justin Timberlake and Janet Jackson on 1 February 2004, to explain the former’s bodice-ripping antics during the televised United States Super Bowl XXXVIII halftime show.