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Author(s): Mark Wilson Jones

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# Tripods, Triglyphs, and the Origin of the Doric Frieze

MARK WILSON JONES

## Abstract

The standard wisdom on the origins of the Doric order revolves around the doctrine of petrification, by which a previously established timber vocabulary came to be perpetuated in stone once society acquired the means to build in this material. While the petrification doctrine takes its authority from the Roman architect-writer Vitruvius, and finds support from parallel processes observable elsewhere in the world, it none the less copes inadequately with the archaeological realities of Greece in the late Geometric and early Archaic periods. In particular, the form, size, and placement of the triglyphs in the frieze are not necessarily demanded by the logic of timber construction and the configuration of early temple superstructures.

A growing number of scholars accordingly challenge the Vitruvian consensus, whether by tracing the Doric frieze back to Mycenae, Egypt, the Orient, and idioms of pattern making in Geometric art, or by arguing for symbolic modes of interpretation. After briefly reviewing these approaches, this paper presents connections between triglyphs and tripods, ritual objects of considerable significance for early Greek cultural and religious life. The formal characteristics of tripods and representations of tripods find echoes in the generic compositional structure of the triglyph. Depictions of multiple tripods alternating with decorative motifs recall the rhythmical disposition of the triglyph and metope frieze, while certain small-scale details on bronze tripod legs find counterparts in non-canonic types of triglyph. The concluding section initiates a debate over the explanation for these affinities by exploring the significance of the tripod and its many associations: as aristocratic gift with heroic overtones, as agonistic prize, as oracular instrument, as Apolline symbol, as the Greeks' ultimate votive offering. Some of these themes can strike chords with Greek temples, so there thus emerges the possibility that the triglyph frieze was invented to articulate visually the programmatic concerns of their builders.\*

Conventional wisdom sees the origin and the early development of the Doric order, and hence the Doric temple as a whole, as the fruit of constructional logic mediated by aesthetic experience. The triglyph frieze is such a paradigm of this way of thinking that merely to raise the question of symbolic content might appear to be rhetorical or polemical in intention.

The possibility for conveying meaning in Greek sacred architecture is instead seen to reside either in the way temples relate to the landscape, an idea popularized by Vincent Scully in his book *The Earth, Temple and the Gods*,<sup>1</sup> or in the sculpture associated with friezes, pediments, and acroteria.<sup>2</sup> Standing proud as they do against the backdrop of mountains, or high up on a promontory or acropolis, Greek temples lend themselves to readings that emphasize the role of structure and nature. It is well to be aware, however, just how much such perceptions are conditioned on the one hand by the loss of sculpture, paint, and miscellaneous paraphernalia, and on the other by modernist architectural theory promoting constructional rationalism as the proper basis for design.<sup>3</sup>

## THE DOCTRINE OF PETRIFICATION

Mainstream opinion on the rise of the Doric order is conditioned by the doctrine of petrification, by which the formal characteristics of a timber system came to be canonized in stone. This idea is directly attributable to a famous passage (4.2.2) by the Roman architect-writer Vitruvius:

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\*After occasional bouts of speculation related to this topic going back to 1993, I was fortunate to be awarded a grant in 1997 from the British Academy to carry out research in Greece. The British School at Athens provided invaluable hospitality and assistance on this and subsequent visits, and I am grateful to the National Museum in Athens for permission to study and photograph artifacts in its collection. Fledgling hypotheses were presented to half a dozen local chapters of the Archaeological Institute of America in the academic year 1997–1998, and over the years I have also benefited from lively discussions with many scholars and friends—often failing, it must be said, to convince them of the merit of the ideas presented here

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now with more evidence—including Barbara Barletta, Malcolm Bell, Jim Coulton, Michael Djordjevitch, Gottfried Gruben, Thomas Howe, Manolis Korres, Dieter Mertens, Margaret Miles, Catherine Morgan, and Joseph Rykwert. I would also like to thank Martin Schäfer for courtesies beyond the call of duty at the German Archaeological Institute in Athens, as well as Sophia Diamantopolou and Ida Leggio for valuable research assistance in Athens and Rome respectively.

<sup>1</sup> Scully 1969.

<sup>2</sup> For a critical review of the significance of sculptural programs, see Knell 1990.

<sup>3</sup> Howe 1985, esp. 29–50; Forster 1996.

So it was that ancient carpenters, engaged in building somewhere or other, after laying the tie-beams so that they projected from the inside to the outside of the walls, closed up the space between the beams, and above them ornamented the coronae and gables with carpentry work of beauty greater than usual; then they cut off the projecting ends of the beams, bringing them into line and flush with the face of the walls; next, as this had an ugly look to them, they fastened boards, shaped as triglyphs are now made, on the ends of the beams, where they had been cut off in front, and painted them with blue wax so that the cutting off of the ends of the beams, being concealed, would not offend the eye. Hence it was in imitation of the arrangement of the tie-beams that men began to employ, in Doric buildings, the device of triglyphs and metopes between the beams.

Vitruvius then went on to deal in a like manner with mutules, the projecting brackets in the geison course surmounting the frieze (4.2.3):

Later, others in other buildings allowed the projecting principal rafters to run out till they were flush with the triglyphs, and then formed their projections into simae. From that practice, like the triglyphs from the arrangement of the tie-beams, the system of mutules under the coronae was devised from the projections of the principal rafters. Hence generally, in buildings of stone and marble, the mutules are carved with a downward slant, in imitation of the principal rafters.

As a unique ancient testimony, this passage demands serious consideration. But it must also be remembered that the bulk of the sources on which Vitruvius based his account date from the fourth to the second centuries, that is to say well after the appearance of the Doric order in the seventh century B.C.<sup>4</sup> The text could well represent post-rationalization rather than straightforward reporting. Yet even if it may bear unkind comparison with Rudyard Kipling's "Just So" stories, Vitruvius's version of events none the less sounds believable on several counts. Unambiguous examples of petrification can be found in disparate architectural traditions, notably those of China, India, and Lycia, the latter being relatively close to the epicenter of Doric architecture in the Peloponnese. The seventh century B.C. was indeed a period of transition from predominantly timber

structures to ones in stone. Models of houses and other types of building datable to between the eighth and sixth centuries are sometimes articulated in ways that could plausibly express the ends of timber members.<sup>5</sup> Vitruvius's theory also explains the basic character of Doric forms: brittle and prismatic, very much the product of the saw, the plane, and the chisel. Indeed, the appeal of the petrification doctrine has persuaded many commentators to extend it to parts of Doric temples not explicitly treated by Vitruvius. Thus the guttae, the little conical stubs on the underside of the mutules, are the memory of timber pegs or dowels; the diminution in width toward the top of column shafts is a rationalization of the shape of tree trunks (cf. *Vitr.* 5.1.3); the concave flutes stylize the grooves made in the process of fashioning timber trunks into circular posts using an adze, and so forth. The literature on Greek architecture contains dozens of such speculations, a representative graphic summary being that by Josef Durm reproduced here (fig. 1).<sup>6</sup>

The petrification doctrine remains popular despite significant obstacles, however. On detailed inspection only the mutules convince in terms of timber construction, corresponding well with rafter-ends in terms of position, rhythm, shape, and inclination. The most characteristic component of the Doric order is unquestionably the triglyph frieze, yet paradoxically it is precisely this feature that is the most difficult to reconcile with the petrification doctrine. By contrast with mutules, the physical configuration of triglyphs positively contradicts a timber origin. Triglyphs run around both ends and flanks of rectangular buildings, whereas constructional logic anticipates beams only on one or the other, and certainly not meeting on an arris at the corner. Triglyphs from the Archaic period are far too big and too frequently spaced to mimic beam ends.<sup>7</sup> Before the adoption in the Hellenistic period of horizontal tie-beams to cope with the lateral thrust generated by more substantial spans, the timberwork of Greek temples had just two main components: primary timbers, or purlins, running parallel to the ridge of the roof, and above these, secondary rafters sloping with the pitch of the roof.<sup>8</sup>

<sup>4</sup>Wesenberg 1986, 1996, esp. 2.

<sup>5</sup>Schattner 1990, esp. 167–77, 190; Markman 1951; Schattner 1997.

<sup>6</sup>Durm 1910, fig. 233. For a review of the literature, see Howe 1985; Weickenmeier 1985, and for a recent endorsement of the beam-end theory, see Holmes 1995, 36–7; Korres 2002, 6.

<sup>7</sup>This is a frequently voiced complaint. For some comparative measurements, see Holland 1917, esp. 142–6. Large cross beams were only needed in the interior (at less frequent intervals than that implied by the rhythm of triglyphs) to trans-

fer load from the ridge beam, see Hodge 1960.

<sup>8</sup>Before the Hellenistic period tie-beams may have seen some use in Etruria as early as 500 B.C., probably in a form that as yet did not exploit the full potential of the truss principle. This advance appears to have been essentially a local development, see Turfa and Steinmayer 1996, esp. 8–18 (the dimensions of the Capitoline temple at Rome, however, are likely to be far smaller than generally thought, see Stamper 1998–1999). For the alternative possibility that the truss was pioneered in Sicily, see Klein 1998.

Early peristyles were generally so narrow as to require rafters alone (and hence mutules when petrified?). What is more, all the timberwork associated with the roof typically lay *above* the level of the frieze.<sup>9</sup>

Nor does there exist a convincing constructional rationale for the detailed resolution of the triglyph, with the canonic three chamfered verticals and horizontal capping piece. In part inspired by Vitruvius's description of composite beams (*trabes compactiles*) in Tuscan temples,<sup>10</sup> one body of opinion judges the chamfered recesses to be the legacy of the joints between three slim beams.<sup>11</sup> But where they survive, cuttings for beams are more or less square; ancient architects were evidently only vaguely or sporadically aware of the structural efficiency of beams with a rectangular section, and then only at a relatively late date, in Hellenistic or Roman times.<sup>12</sup>

For these and other reasons there have been numerous attempts to trace the origin of the triglyph by applying the concept of petrification in ways that avoid the faults of Vitruvius's specific model. Appeal has been made to remote ancestors in the shape of windows or window bars (a theory consonant with two passages by Euripides, but which Vitruvius explicitly refuted),<sup>13</sup> structural stub-piers,<sup>14</sup> and colonnettes associated with a clerestory system or even an entire second story.<sup>15</sup> Another school of thought, most clearly formulated in the mid 19th century by Viollet-le-Duc, regards the tectonic character of the Doric vocabulary as a para-evolutionary response to building not in wood but rather in stone.<sup>16</sup>

Most of the proposals just alluded to are frankly too fantastical to warrant countering in detail, and in any case this has been done in specialist literature.<sup>17</sup> Many proposals are predicated on a lengthy developmental phase involving successive mutations and improvements. But from the 11th to the 7th centuries there is unlikely to have existed the social, cultural, and economic framework capable

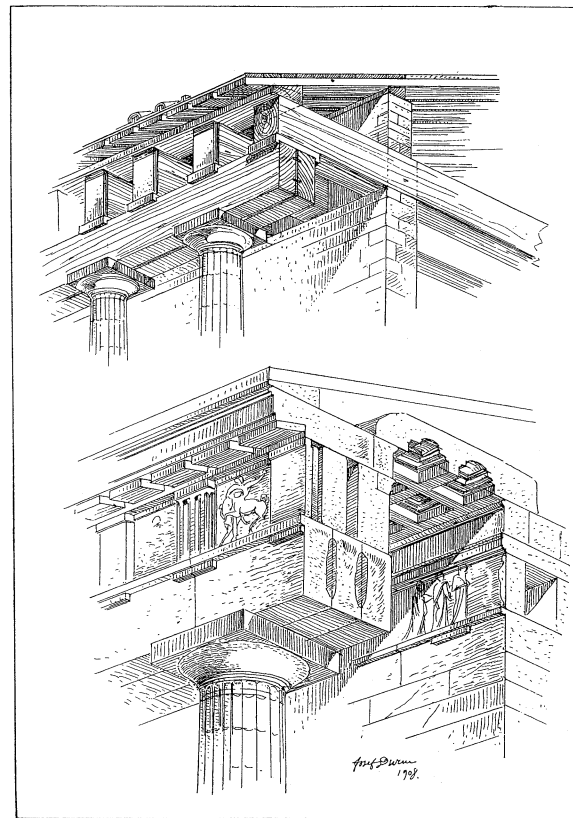


Fig. 1. Derivation of the Doric entablature according to Josef Durm. *Top*, hypothetical archetype in timber construction; *bottom*, marble temple of the classical period. (Durm 1910, fig. 233)

of sustaining the continuity that a para-evolutionary development demands. While it is true that archaeology now tends to show that the Greek “Dark Ages” were not as dark as was previously thought, it still shows that Doric emerged relatively suddenly, representing not the culmination of a gradual progression but a quantum leap. As J.J. Coulton observes, “earlier clay models of houses and temples show no more indication of the Doric order than any primitive building would,” while when they do arrive, “the forms making up the Doric order ap-

<sup>9</sup>This is another common complaint, see, e.g., Cook 1951, 51; Roux 1992, 155.

<sup>10</sup>Vitr. 4.7.4.

<sup>11</sup>De Angelis D’Ossat 1941–1942; Ferri 1968; Stucchi 1974, esp. 114–7; Rykwert 1996, 187.

<sup>12</sup>Hodge 1960, 92–3; Coulton 1988, 147. Although tripartite beams in later stone temples do exist (e.g., the architrave of the Parthenon peristyle), this responded above all to the need to reduce the weight associated with this material.

<sup>13</sup>Euripides, *Iph. Taur.* 112–114, *Orestes*, 1371–1372; Vitr. 4.2.4; Washburn 1918, 1919; Demangel 1931, 1946, 1949; Roux 1992, esp. 159; Peschken 1988, 1990. One way of reconciling both Vitruvius’s leads is to equate triglyphs as beam ends and

the metopes as openings, see von Gerkan 1948–1949. Cf. Skrabei 1990. Regarding the implications of terminology, see Hellmann 1992, 263–4; Corso and Romano 1997, 452–6.

<sup>14</sup>Guadet 1909, fig. 242; Gullini 1974.

<sup>15</sup>Zancani Montuoro 1940; Richard 1970; Beyer 1972; cf. Dakaris 1988. Mallwitz (1981, esp. 93–5) espouses a variant on this theme with his proposal that the peripteros originated as a sort of lean-to porch or veranda added on to a rectangular core.

<sup>16</sup>Viollet-le-Duc 1990, 40–65. For championship of an origin in stone, see also Bötticher 1874, 1–14, esp. 14, 204–13.

<sup>17</sup>Succeeding articles typically refute salient preceding opinion; for critical comparison of various types of theory, see Howe 1985; Weickenmeier 1985; Barletta 2001.



pear ready developed."<sup>18</sup> Triglyphs or proto-triglyphs made of wood have been attributed to the temple of Poseidon at Isthmia and that of Apollo at Thermon, yet no physical evidence exists to show that these are not simply figments of the excavators' imaginations.<sup>19</sup> On the basis of the fragmentary remains recovered below the standing Temple E at Selinunte, simple stone projections in the frieze have been reconstructed for its predecessor (Temple E1). It is tempting to interpret these as monoglyphs, as it were, precursors of triglyphs proper, but the evidence is tenuous and the date not necessarily as early as the seventh-century one proposed by Giorgio Gullini; until adequate supporting documentation is published it is impossible to draw any definite lessons.<sup>20</sup>

Given the absence of firm evidence consistent with an evolutionary development, there is growing support for the theory that, whether or not it was created in wood, the Doric order was invented or brought together in a relatively compact period of time, probably around the third quarter of the seventh century.<sup>21</sup> After a phase of invention and experimentation emerged the core of what was later to become the canonic Doric vocabulary. This vocabulary, presumably, was then consolidated in a series of temples, which include the earliest known examples in the new style, those (of Hera?) at Monrepos, of Apollo at Aegina, and of Artemis on Corfu.<sup>22</sup> The prime locus for this development is likely to have been the north-eastern Peloponnese, especially Corinth or Argos. Corinth is the favored candidate on account of its leadership in both the manufacture of roof tiles and in the technology of stone construction (easily worked soft stones are common in Corinthia). In addition, Pindar seems to attribute the city with the invention of the sculpted pediment, this being another key component of the monumental temple.<sup>23</sup>

<sup>18</sup> Coulton 1988, 30–50, esp. 38–9 (with quotes cited). For accounts of the architecture of the 10th–7th centuries, see Drerup 1969; Mazarakis Ainan 1997; Barletta 2001, 21–53.

<sup>19</sup> For Isthmia, see Broneer 1971; Gebhard and Hemans 1992; for recent research on Thermon, see Kuhn 1993; Papapostolou 1995.

<sup>20</sup> Gullini 1980, 1985, 423–35; Barletta 2001, 58, 174–5, n. 4.

<sup>21</sup> Cook 1951, 1970; Howe 1985, esp. 370–2. Barletta (2001, 54–82, esp. 79–82) argues that different components of the order could have emerged piecemeal and that this need not have been complete until two or more decades into the sixth century.

<sup>22</sup> For Monrepos documentation is still limited, see Schleif et al. 1939–1940, 75; Bookidis 1967, 4–5; Strøm 1988, 187–9; Mertens 1989, 434–5. For Aegina, see Hoffelner 1999, esp. 15–45. These two temples precede better known Doric buildings, including the Artemision at Corfu, the Apollonion at Syracuse, and the old tholos and the monopteros at Delphi,

Alternatively, Vitruvius gives reason to identify the first Doric building as the Temple of Hera at her sanctuary near Argos,<sup>24</sup> although seventh-century Doric elements have yet to turn up in excavations there, except for a capital from another structure, the so-called north portico.<sup>25</sup>

#### THEORIES OF INFLUENCE

If the objections cited undermine the petrification doctrine, at least in its most literal manifestations, the challenge is to find a better explanation for the “ready developed” Doric forms. One intriguing proposal sees in the scansion of triglyphs and metopes an offshoot of one of the most basic formulas of Geometric art: horizontal friezes punctuated by bands of vertical stripes framing decorative and perhaps figural or narrative scenes.<sup>26</sup> In fact pottery experts often call these bands “triglyphs” and the fields they contain “metopes.” In my assessment a predisposition to conceive of friezes as a series of orthogonal repetitive elements is indeed likely to have been inherited from Geometric practice, but by itself this seems insufficient to account for the particular configuration of the triglyph.

Other theories of influence presume that early Greek architects must have adapted already established architectural vocabularies. The chief candidates are the advanced building cultures of Mycenae, the Near East, or Egypt, which the Greeks of the eighth and seventh centuries could either have rediscovered on their own soil, or have known from their now more extensive contacts abroad.<sup>27</sup> The Doric capital can convincingly be traced back to Mycenae,<sup>28</sup> as can fluted shafts. The Orient was the probable source for motifs such as the palmette and the gorgon (which appear in some early metopes), the Aeolic capital,<sup>29</sup> and perhaps certain masonry techniques too.<sup>30</sup> On another tack, there is undeni-

the older temple of Aphaia at Aegina and the so-called H-architecture on the Athenian Acropolis.

<sup>23</sup> Pindar, *Ol.* 13.21–22; cf. Pliny, *HN* 35.151–152. In support of a decisive Corinthian contribution, see Cook 1951, 52; 1970, 19; Lawrence 1983, 125; Rhodes 1987; Østby 1997. For the possibility of a west Greek origin, see Howe 1985, 367–8.

<sup>24</sup> *Vitr.* 4.1.3; for qualified recent support, see Østby 2000; Barletta 2001, 154. This option implies a slightly earlier date, the second quarter of the seventh century.

<sup>25</sup> Amandry 1952, 229–31. For the sanctuary and its temple, see Waldstein 1902–1905; Strøm 1988; Pfaff 1990; Billot 1997.

<sup>26</sup> Laum 1912; Cook 1951, 1970. For general accounts of this idiom, see Coldstream 1968, 1977; Schweitzer 1971.

<sup>27</sup> On Greek interest in Mycenaean monuments, see Coldstream 1976; Morris 1988; Antonaccio 1995.

<sup>28</sup> Wesenberg 1971, esp. 49–62; Karageorghis 1971.

<sup>29</sup> Wesenberg 1971, 63–86; Shiloh 1979; Betancourt 1977.

<sup>30</sup> Sharon 1987; Ratté 1993.

ably something in common between the massing of early Doric peristyles and those of pharaonic buildings such as the funerary temples at Luxor, and although shafts with convex flutes were more typical, some Egyptian examples have concave “Doric” ones. Having had champions as early as the 18th century,<sup>31</sup> in recent years the Egyptian cause has been taken up again.<sup>32</sup> In his overview of the problem, however, Erik Østby cogently concludes that the Greeks acquired from Egypt chiefly the aspiration to monumentality using stone, along with the certain consequences of a proportional and technical nature.<sup>33</sup> But whatever the impact of pre- or non-Greek influence, once again the triglyph frieze is the hardest part of the Doric order to account for. Only the split-rosette Mycenaean frieze, as exemplified by that from the Treasury of Atreus, offers a compelling potential predecessor.<sup>34</sup>

This is not the place to evaluate the extensive arguments in favor of petrification on the one hand and theories of influence on the other.<sup>35</sup> Perhaps the solution lies not in any single theory, but rather a sort of melting pot into which went multiple ingredients—including petrification, constructive logic, pattern and influence, as well as other concerns—and out of which came a new synthesis. Yet the nature of this synthesis, which was of such importance for the future development of Western architecture, eludes us without some fresh insight. I suggest here that the tripod, an object of considerable symbolic importance for Greek religious and civic life, is the key to the specific configuration of the triglyph.

#### THE ORDERS AS SYMBOLIC FORM

The interpretation of the classical orders as symbolic form is hardly new; the idiosyncratic ideas penned by John Wood the Elder, the architect of so

many fine set-pieces in Georgian Bath, are an early example.<sup>36</sup> In spite of warnings to the contrary by specialists of antiquity,<sup>37</sup> a recent wave of interest is manifest in several books by established architectural historians including John Onians, George Hersey, and Joseph Rykwert.<sup>38</sup> As regards the triglyph, however, none of these authorities have much to say. Onians keeps silent on the subject and Rykwert accepts a variation of the beam-end theory;<sup>39</sup> Hersey alone embraces this element within his central thesis, one based on the idea that etymology holds the key to meanings the orders acquired in antiquity.<sup>40</sup> He sees this acquired meaning as rooted in the act of sacrifice, temples being assemblages of sacrificial victims and related paraphernalia. In particular Hersey reads the glyphs of the triglyph, which Vitruvius says the Greeks called *meroi* or thighs, as the thighbones of goats and oxen, or rather thrice-cloven thighbones since *triglyphos* can mean thrice-recessed, thrice-sculpted, thrice-cut.<sup>41</sup> It is true that thighbones figure prominently in Homeric sacrifice,<sup>42</sup> a fact that earlier had led Sandro Stucchi to propose that the triglyph friezes found on some altars might be interpreted as stylized bands of bunched thighbones.<sup>43</sup> But would Greek architects and artists have transformed organic anatomy in such a geometrical fashion? Without some ancient representation of triglyph-like thighbones to bridge the gap, the idea fails to take on substance.

The only scholar to invoke visual material bearing on a symbolic interpretation of the triglyph was Robert Demangel in his series of eight articles on the origins of Doric published between 1931 and 1949 (mostly in the *Bulletin du Correspondance Hellénique*). He developed a dual interpretation of the triglyph, one that overlaid the window theory discarded by Vitruvius with a symbolic intention.<sup>44</sup> Demangel traced the triglyph back to Minoan, Egyptian, and Oriental images of portals and windows

<sup>31</sup> Caylus 1756, esp. 308. The theory gained ground in the 1820s, when both Champollion and Sir Charles Barry drew Egyptian “proto-Doric” to the attention of a wider audience, the former apparently coining the term; see Howe 1985, 45; Barletta 2001, 18.

<sup>32</sup> Hölb 1984, 1–18; Howe 1985, 299–334.

<sup>33</sup> Østby 2001; I thank Erik Østby for giving me this in manuscript form. On the indigenous character of the Greek temple, see also Ginouvès 1989.

<sup>34</sup> For another split-rosette frieze from Tiryns, see Dörpfeld 1935, 1, Abb. 52, and Holland 1917, 126 for a list of examples. Cf. Bowen 1950; Ditlefsen 1985.

<sup>35</sup> I will be tackling this debate in greater depth elsewhere. For previous discussion, see Howe 1985; Weickenmeier 1985; and now Barletta 2001.

<sup>36</sup> Wood 1741.

<sup>37</sup> Burkert 1988, 34.

<sup>38</sup> Onians 1988, 1999, esp. 9–43; Hersey 1988; Rykwert 1996. Another book offering a symbolic reading of Greek architecture, Wujewski 1995, only came to my attention as this article went to press.

<sup>39</sup> Rykwert 1996, 182.

<sup>40</sup> Hersey 1988, 3.

<sup>41</sup> Hersey 1988, 30–1.

<sup>42</sup> See *Iliad*, 1.36–42. Cf. Burkert 1966, esp. 104–5; 1983, 1985, 55–9; van Straten 1995, esp. 122–7, 141–4.

<sup>43</sup> Stucchi 1974, 115, n. 150. Stucchi’s thinking is curiously selective, for he pursued a structural/evolutional reading of triglyphs on temples. For triglyph altars, see Orsi 1919, 687–715; Schleif et al. 1939–1940, 63–9; Yavis 1949, 138–9; Roux 1953, 117–23; Rupp 1975, 274; Mertens 1991, esp. 190–1.

<sup>44</sup> Demangel 1931, 1937, 1946, 1949.

framing sacred trees and/or sacred pillars (fig. 2). But none of the illustrations Demangel supplied presents a striking parallel with triglyphs.<sup>45</sup>

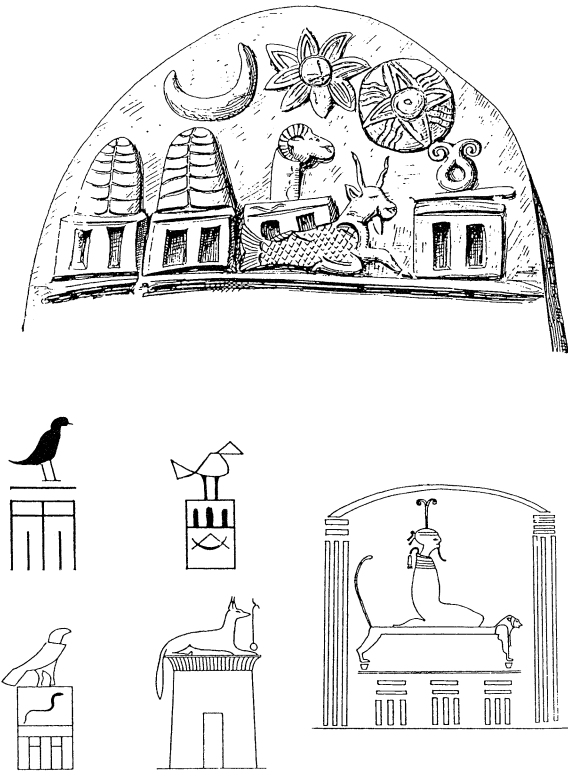


Fig. 2. Precursors of the triglyph according to Robert Demangel. *Top*, Mesopotamian symbolic motifs; *bottom*, Egyptian hieroglyphics. (Demangel 1937, figs. 1–2)

My own interpretation also rests on visual images, but ones that, unlike Demangel's, are both copious and thoroughly Greek. These images present analogies between triglyphs, some types of tripods, and representations of tripods. Before discussing these connections in detail, I begin with a brief review of the physical characteristics of the source objects themselves.

Tripods divide into two main types: the so-called tripod-stand, comprising a three-legged support

and a separate removable bowl or cauldron on top, and the so-called tripod-cauldron in which the three legs were integral with the vessel, usually being bonded to its perimeter using a variety of techniques, depending on the materials used. These included stone, terracotta, wood, and metal, of which bronze and gilded bronze (and sometimes solid silver or gold) were the most prestigious; composite materials were used too, notably stone or timber tripods covered with decorative bronze sheets.<sup>46</sup> Tripod-stands were widespread in the Mediterranean from the Bronze Age down to Roman imperial times.<sup>47</sup> Squat stone tripod-cauldrons datable as far back as the third millennium are known from the Near East.<sup>48</sup> In Greece, however, metal was the material of choice for large-scale use—in terms of both number and size—of the cauldron form from the Geometric to the Hellenistic periods. These tripod-cauldrons are the prime focus of the present inquiry and are the intended subject when the word *tripod* is used by itself.<sup>49</sup> An example from the Geometric period is illustrated in figure 3.

#### TRIPOD FRIEZES

Analogies between tripods and triglyphs appear in various guises; the most convenient starting point is the conception of regular friezes. Immediate connections are made by two architectural friezes of Hellenistic date, the first from the Monument of Lysicrates in Athens, and the second from a villa on the island of Samos. The very function of the first building was to display aloft on the crowning finial a (lost) bronze tripod prize awarded at one of the choregic competitions in Athens, which explains the presence of a run of stylized tripods disposed in pairs between the Corinthian capitals (fig. 4).<sup>50</sup> These tripods have no chamfered elements as do triglyphs, and instead bear many features absent on triglyphs: the bowed cauldron, the disc-like handles on top of the cauldron, the lower horizontal bar and the lion-paw feet. There is yet considerable common ground, however: the straight, vertical, and regular arrangement of the legs of the individual

<sup>45</sup> There is, however, a tantalizing bridge in the shape of a seventh-century stone frieze from Chania, Crete, which features a tripartite vertical motif created by a standing female divinity framed by a temple portal. See Beyer 1976, Taf. 44.2; Felten 1984, 19, no. 1, Taf. 1.1. For portals framing betel motifs, see Di Vita 1998.

<sup>46</sup> Stevens 1951; Touloupa 1991.

<sup>47</sup> For Bronze Age tripod-stands, see Catling 1964, 1984; Matthäus 1985. For Archaic and Classical examples, see Riis 1998.

<sup>48</sup> Buchholz 1963. For a pair of stone tripod-mortars in the museum at Thebes probably from the seventh century, see Pharaklas 1970.

<sup>49</sup> The following is a selected bibliography on the bronze tripod-cauldron of the Geometric and Archaic periods: Daremberg and Saglio 1877, 474–82; Furtwängler 1890, the section “Die grossen Dreifüsse,” 75–93; Benton 1934–1935; Riemann 1956, col. 861–88; Willemsen 1957; Schweitzer 1971, 164–85; Weber 1971; Rolley 1977, with a useful summary of preceding research on 15–23; Maass 1977, 1978, 1981; Strøm 1995. For tripods (mostly) from later periods, see Amandry and Ducat 1973; Amandry 1987, 1997; Wilson 2000, 198–235. For further references, see Sakowski 1997.

<sup>50</sup> The chief study of the building is Bauer 1977.



Fig. 3. Bronze tripod-cauldron of the Geometric period from Olympia, ninth–eighth centuries B.C., ht. 65 cm. (Olympia, Archaeological Museum, B 1240; neg. DAI Athens, no. 74/1108)

tripods, and their subordination to a decorative frieze at high level. By contrast, the frieze from Samos (fig. 5) consciously exploits the affinity between tripods and triglyphs;<sup>51</sup> it is hard to be sure whether the objects in question are more one or the other. Is this essentially a Doric frieze, with the triglyphs rendered like tripods, or is it a tripod frieze infused with Doric qualities?

These examples are not valid guides to the rationale behind the invention of the Doric frieze around three centuries earlier. There are, after all,

<sup>51</sup> Tölle-Kastenbein 1974, Abb. 75–6; Rumscheid 1994, Taf. 55.

<sup>52</sup> For the range of Doric expression in this period, see Pensabene 1993; Ortolani 1997. Famous examples are the triglyphs with bull protomes belonging to the Stoa of Antigones at Delos, dating probably to the third quarter of the third century B.C. (see Webb 1996, 22), and those with applied ritual objects belonging to the propylon of Claudius Appius Pulcher at Eleusis (mid first century B.C.). A triglyph with a bouquet of poppies and crossed batons of myrtle, and another with a ceremonial vessel (plemachoe) have been built, along with accompanying metopes, into the 13th-century Little Metropolitan Church (Panayia Gorgoepikoos) in Athens. For their attribution to the inner propylon to the Eleusinion, see Miles 1998, 89–91. Although these may be Hadrianic in date, they probably echo Hellenistic models. In addition the frieze of the Proskenion of the theater at Delos has tripod motifs used decoratively in the metopes of a Doric frieze, that is, in a position

late Hellenistic triglyphs with a variety of superimposed motifs, so the Samos example might testify merely to the desire to relax and enrich established canons by means of such devices.<sup>52</sup> The present task is to assemble parallels between triglyphs, tripods, and representations of tripods not too distant in time from the consolidation of the Doric order in the second half of the seventh century. In order to facilitate this task, as well as to address issues discussed in the conclusion, 100 different tripod representations are catalogued in the appendix.

Consider now the ancestor of the friezes just cited in an artistic topos disposing multiple tripod images, beginning with examples from the eighth century.<sup>53</sup> Some show rows of tripods next to one another, without intervening elements, as in a frieze painted on the neck of an amphora in the Athens National Museum.<sup>54</sup> Some show rows of tripods divided by groups of vertical bands or stripes, as in the case of a cup (fig. 6) and a kantharos from the same museum.<sup>55</sup> A krater in Paris intermixes these two conditions.<sup>56</sup> Then there are several vase fragments with two tripods placed side by side, as on part of a pithos found at Tenos.<sup>57</sup> Since many later complete vases exist that depict two tripods (figs. 7–8),<sup>58</sup> three (fig. 9),<sup>59</sup> or even five as either closed groups or as parts of larger scenes,<sup>60</sup> such pairs may have been self-sufficient. However, a longer run of tripods and a frieze-like treatment is probable for at least some earlier fragments.

The parallelism between triglyphs and the groups of vertical stripes so commonly used as frieze dividers in the Geometric period suggests that anything placed in between such stripes, such as the tripods illustrated in figure 6, must equate with metopal decoration.<sup>61</sup> It might seem that tripods cannot have had connections to both metopes and triglyphs at the same time, but it is important to

where they would seem to contradict a triglyph-tripod association. However, it is also possible that the architect knew of some sort of link (perhaps via a treatise?), and either misinterpreted it, or wished in some way to “play” with it. For a reconstruction of this frieze and its setting, see Fraisse and Moretti 1998. For a photograph, see Webb 1996, fig. 116.

<sup>53</sup> Benton 1934–1935, 74–130, esp. 102–8; Sakowski 1997, 265–6.

<sup>54</sup> Cat. no. 4; cf. Sakowski 1997, FR-3.

<sup>55</sup> Cat. nos. 6, 7.

<sup>56</sup> Cat. no. 1.

<sup>57</sup> Cat. no. 22; cf. cat. no. 2.

<sup>58</sup> Cat. no. 71, 70; cf. cat. nos. 27, 29, 34, 52, 53, 67, 71.

<sup>59</sup> Cat. no. 31; cf. cat. no. 29, 35, 36.

<sup>60</sup> Cat. no. 33.

<sup>61</sup> See n. 52 for comments about the Delos proskenion frieze.



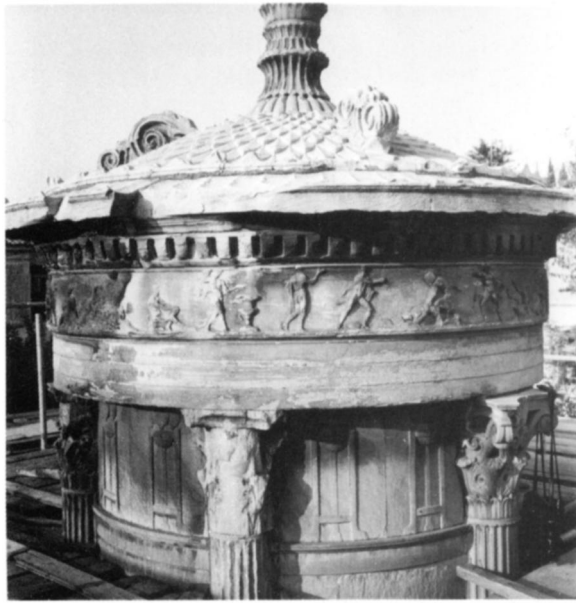


Fig. 4. Monument of Lysicrates, Athens (ca. 330 B.C.), detail. Note the frieze of tripods running as if in a continuous loop behind the capitals. (Neg. DAI Athens, no. 75/1878)

realize that eighth-century examples occur in non- or pre-architectural contexts. At this early stage the key innovation was the use of representations with in patterns that previously had been predominantly abstract. As prestige objects with heroic associa-

tions, tripods were probably first chosen as metopal subjects. When rendered in two dimensions, and flattened out in keeping with prevailing modes of abstraction, the individual legs became vertical stripes, whereupon it may be presumed that some artists grasped the idea of using the tripods themselves as scene dividers.<sup>62</sup>

Indeed, the number of tripod representations that divide, frame, or beat out a rhythm increases in the seventh century. This can be seen on a pitcher (*oinochoe*) from Kerameikos, which is datable to around the first quarter of the century (fig. 10). Three robust tripods of the same size and design take up the entire height of the main register. In between them are motifs of varied character: a horse head, a geometrical design, and a composition of whorls and spirals. The notion of a triglyph-metope alternation is apparent despite the distortions associated with the curving profile of the vase.

More compelling architectural parallels are provided by three intriguing examples of tripod friezes, the first of which dates from the second half of the seventh century. This frieze ran around the belly of a large relief vase (*pithos*) that now stands reconstructed in the Archaeological Museum of Heraklion, Crete (fig. 11). The frieze shows riders on horseback and chariots, along with subordinate figures and motifs, punctuated by stylized tripods fill-

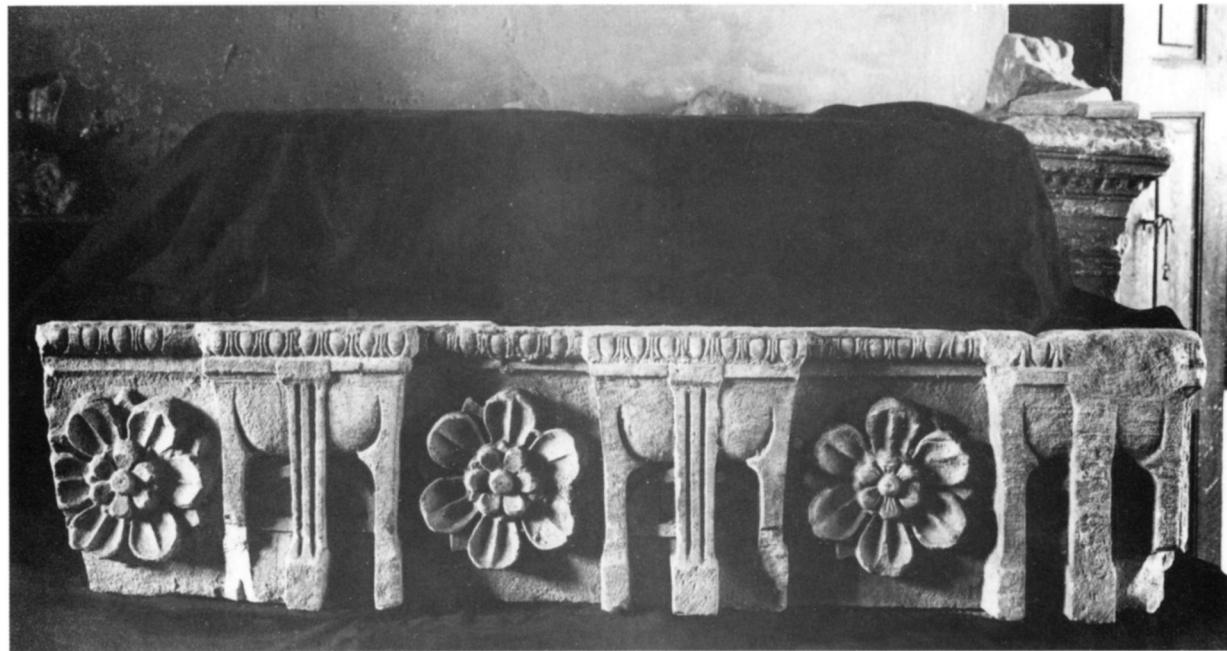


Fig. 5. Frieze from Samos, ca. third century B.C. with "triglyphs" that take the form of stylized tripods. (Neg. DAI Athens, no. Samos 852)

<sup>62</sup>For discussions of approaches to abstraction and framing in this period, see Hurwit 1977; Benson 1982.



Fig. 6. Cat. no. 6. Geometric cup with frieze of tripods alternating with groups of vertical stripes. (Athens, National Museum, 3632 [874]. Neg. by the author)

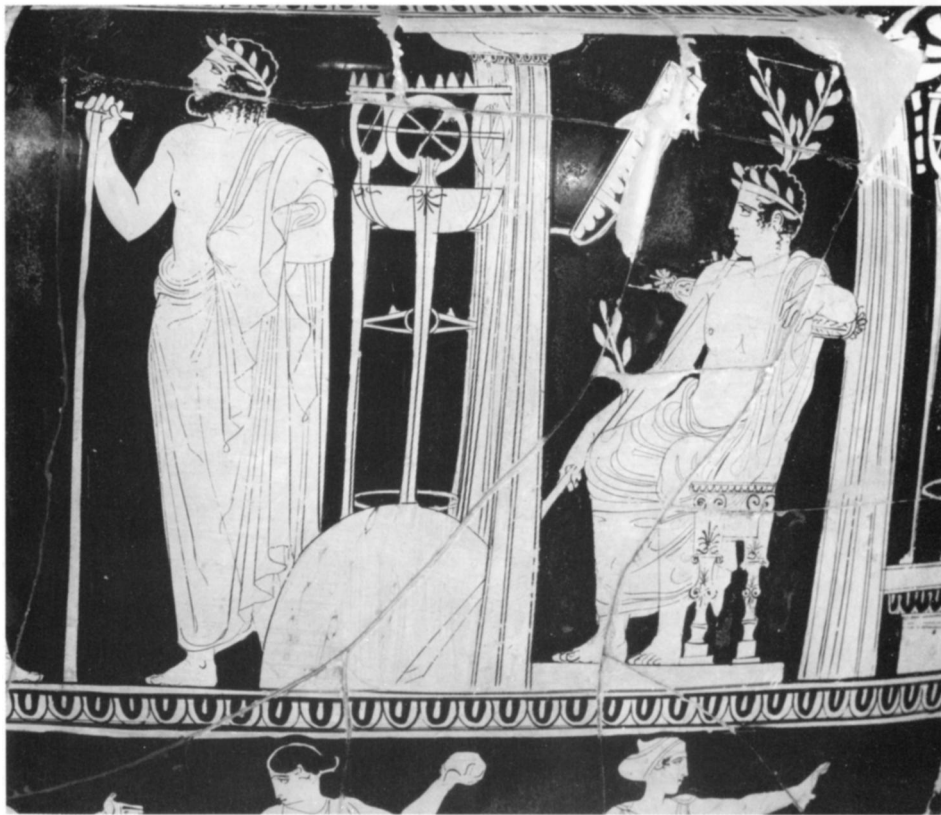


Fig. 7. Cat. no. 71. Apollo in the Delphic shrine flanked by two tripods, one on the omphalos; the other on top of a pedestal or column. Attic red figure volute krater. (Ferrara, Museo Civico Archeologico, inv. no. 44894; museum neg.)



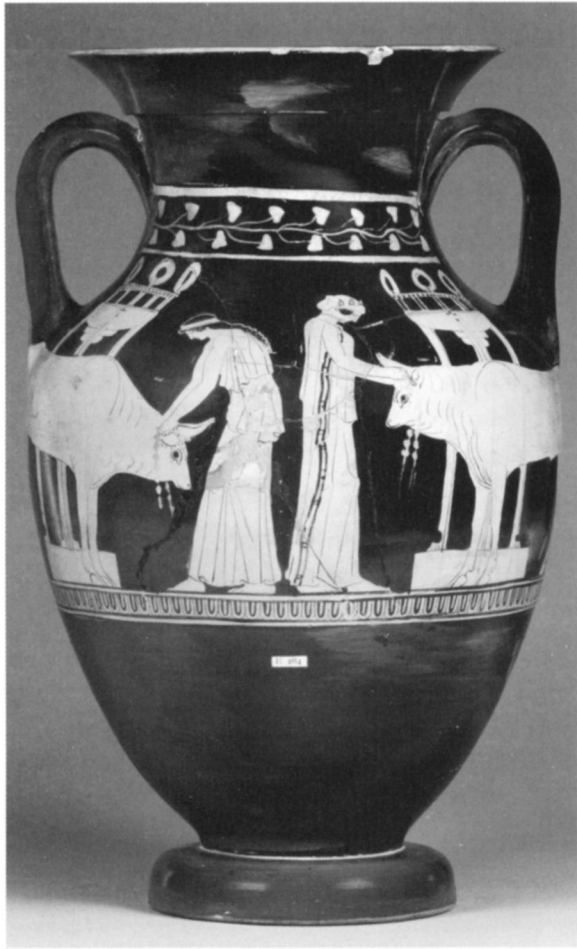


Fig. 8. Cat. no. 70. Two bulls are prepared for a sacrifice to celebrate the dedication of the pair of tripods shown in the background. Attic red figure amphora. (British Museum, inv. no. E 284 [1816.1–28.1]; museum neg.)

ing the whole height of the frieze. The possibility of cross-fertilization with architecture is raised by not just the formal analogy with the Doric frieze, but also the common ground between workshops producing pithoi and architectural decoration.<sup>63</sup> Although the rather slack interval between the tripods in this example contrasts with the tight rhythm of the Doric frieze, the next examples display a notable convergence in this respect. A curious cylindrical vessel from Thasos dating probably to the first quarter of the sixth century shows stiff and robust tripods (fig. 12).<sup>64</sup> These were created by the conceit of adding pillar-legs in between the wider legs—so here at the same time is a tripod-like object and a ring of three tripods framing figurative representations: a sphinx, a triton, and a hippoc-

<sup>63</sup> Simantoni-Bournia 1990.

<sup>64</sup> For comparable artifacts, see Carlié 2000, 106 (no. 4), 137 (no. 7A).

ampus. As the projected elevation of this frieze shows (fig. 12), this time the proportions directly recall the Doric frieze. The same may be said of a terracotta slab from the island of Kythnos, now in the Louvre, which may be dated to the middle of the sixth century, or perhaps earlier (fig. 13).<sup>65</sup> Its upper register depicts a single horseman as the contents of a “metope” framed by tripods. Its proportions are longer than the norm for architectural metopes, while those of the tripods are taller than the norm for triglyphs, but the differences are not so great as to undermine the obvious analogy. It is true that only one of the tripods and one of the riders is complete, but the adjacent incomplete but potentially identical elements hint at a repetitive frieze, as does the linear character of the moldings



Fig. 9. Cat. no. 31. Black figure dinos with the middle register showing a horse race, with riders framed by a referee at the start and a column at the finish, between which alternate men with multiple tripod and cauldron prizes. (Paris, Louvre, inv. no. E 875; museum photo by M. and P. Chuzeville)

<sup>65</sup> Cat. no. 32. Mollard-Besques, however, proposed the second half of the century.

top and bottom. Just conceivably it may have belonged to a scheme of wall decoration given that the slab in question is flat. Even if it was a votive there is still a latent architectural analogy, for flat votive plaques were commonly fixed to the walls of the temples where they were dedicated.

The content of the metopal motifs on these artifacts bears distinct parallels with architectural schemes. The stylized mythological creatures on the Thasos kothon recall those of panels from Thermon, Olympia, and Kalydon, panels that probably functioned in a similar manner to metopes—whether or not they were in reality accompanied by triglyphs or proto-triglyphs.<sup>66</sup> There is also a familial resemblance with early stone metopes, including ones that are datable to around the third decade of the sixth century from Temple “Y” at Selinunte.<sup>67</sup> One shows a sphinx, as does the Thasos kothon; another shows Europa riding the bull, that is, a rider in profile not unlike the riders of the frieze from Kythnos.

The coming of the sixth century marks a decline in modular friezes in Greek art, as artists shifted toward freer compositions and progressively more realistic treatments of both inanimate and animate forms. In keeping with this general trend, multiple tripods in the same register begin to act less as scene dividers and more as integral parts of the scenes themselves. The beginning of the shift in this direction can be seen in an early black figure vase fragment from the Athenian Acropolis, which shows two tripods alternating with two piles of bowls and a freestanding column (fig. 14). It is possible that there was originally a longer sequence of tripods and bowls, but more likely it gave way to a foot, horse, or chariot race, in the manner of several later vases showing tripod prizes awaiting the victor.<sup>68</sup> In the middle register of a dinos now in the Louvre (fig. 9) tripods alternate with standing men, but now in a looser distribution, for the tripods appear both singly and in a group of three.<sup>69</sup> In a slightly later vase from Munich, datable to around the middle of the sixth century, a single tripod and a group of three tripods mark the beginning and end of a scene featuring a group of running warriors.<sup>70</sup> Significantly, the tripods no longer occupy the full

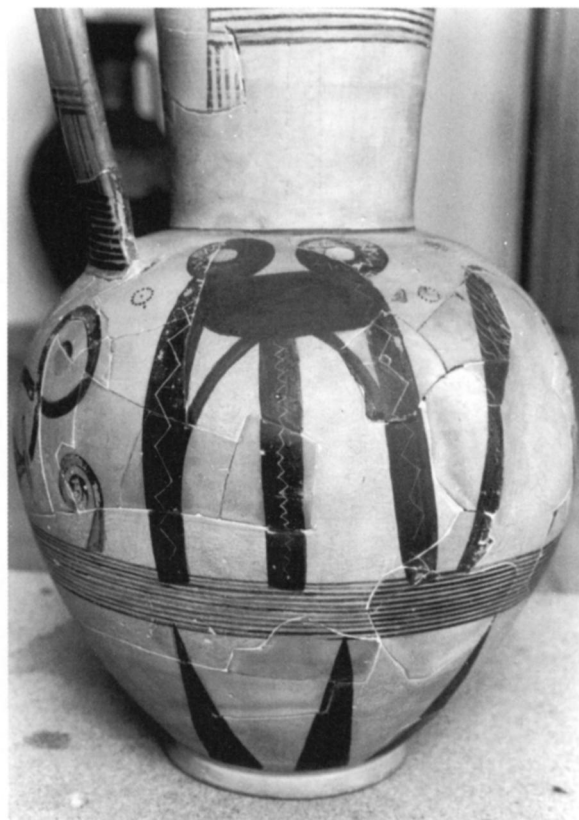


Fig. 10. Cat. no. 17. Proto-Corinthian pitcher (oinochoe), detail of one of three tripods that alternate with decorative motifs. (Kerameikos inv. no. 1267. Neg. by the author)

height of the register, signaling the fact that they have become objects in space, like the runners. With time artists make increasing use of receding planes to render spatial relationships, so that it becomes common for tripods to be shown in the background of activity taking place nearer to the observer, as in the case of the race shown on the lost krater formerly from Berlin depicting the funeral games of Pelias.<sup>71</sup> Alternatively, pairs or groups of tripods came to be used not only to terminate race scenes, but also to fill up awkward spaces, as in a set of five of assorted heights that sit under the handle of a vase fragment from Taranto.<sup>72</sup>

In sum, representations of multiple tripods in painted or relief friezes pass from abstract and reg-

<sup>66</sup> Despite much speculation about their likely existence, triglyphs have not in fact been recovered from the temple of Apollo at Thermon or the Heraion at Olympia, nor indeed the temple of Poseidon at Isthmia. For the pinakes at Thermon, see Payne 1925–1926; Bookidis 1967, 166–76; for the bronze griffin panel from the Heraion, see Philipp 1994, 494–5; for the pinakes at Kalydon, see Dyggve 1948, 149–64, 236–9; Bookidis 1967, 162–5.

<sup>67</sup> Kähler 1949; Tusa 1969; Giuliani 1979, 37–66; Rizza 1996;

Fuchs 1993, 397–423. For a reconstruction of Temple Y, see Mertens 1996, 31–3.

<sup>68</sup> Cat nos. 26, 27, 29, 35, 36, 37.

<sup>69</sup> Cat. no. 31. For comparanda, see Maul-Manderlartz 1990.

<sup>70</sup> Cat. no. 35.

<sup>71</sup> Cat. no. 36.

<sup>72</sup> Cat. no. 33. Single tripods were also used to decorate the handles themselves, e.g., cat. no. 63.



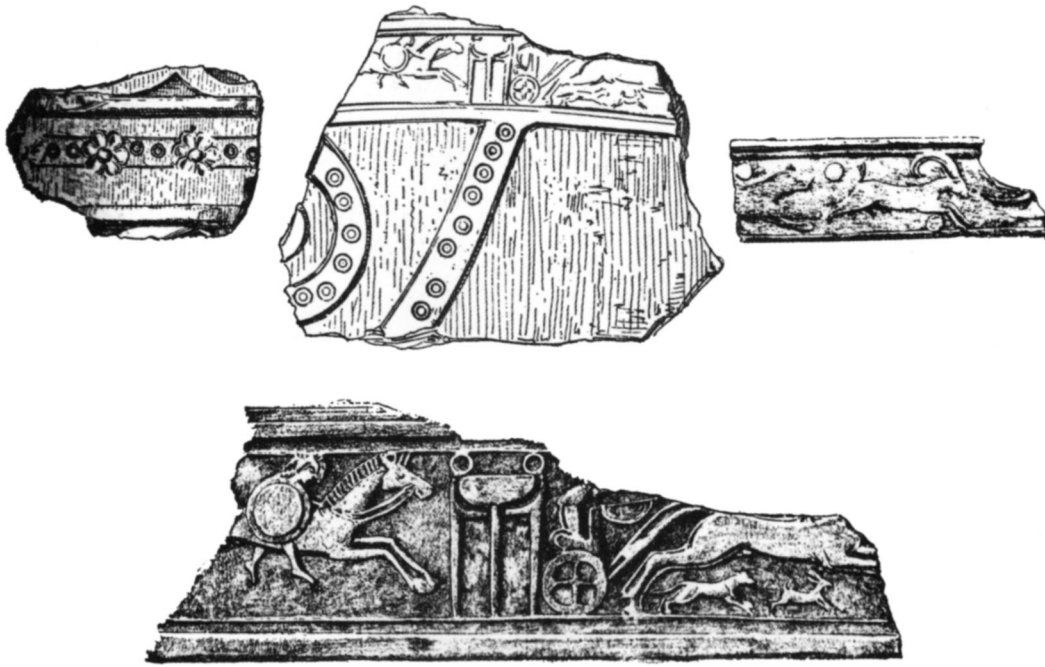


Fig. 11. Cat. no. 23. Fragments of frieze running around the body of a pithos from Prinias, Crete, now in the National Museum, Heraklion. (*AJA* 5 [1901] pl. 14)



Fig. 12. Cat. no. 28. Terracotta tripod kothon from Thasos, with stylized tripods alternating with representations of fabulous beasts. (Athens, National Museum, inv. no. 17874; ht. 28 cm. Line drawing by the author; photo, museum neg.)

ular patterns in the eighth century to a looser treatment in the sixth century, as interest grew in spatial and figural representation. In the seventh century tripods begin to be used in ways that are arguably analogous to the “triglyphs” of linear friezes, and from the second half of this century to the early part of the sixth century—the period in which the monumental Doric vocabulary first appears—tripod and metope friezes are characterized by robust, structural tripods punctuating decorative fields or “metopes” that included mythological beasts and human riders.

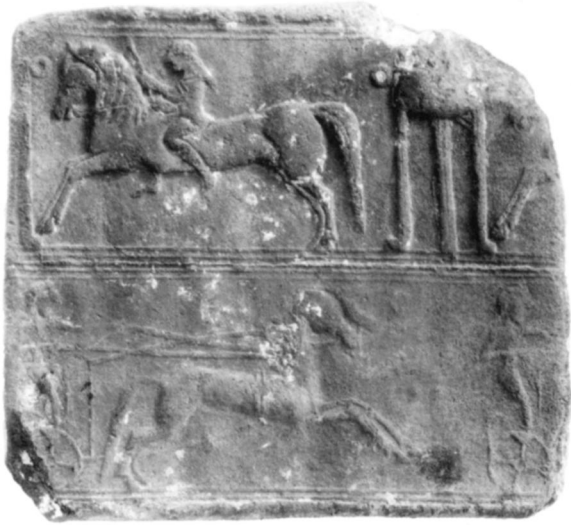


Fig. 13. Cat. no. 32. Terracotta plaque from the island of Kythnos; riders and tripods alternate in the upper register. (Paris, Louvre, inv. no. MNB 579; museum neg. by M. and P. Chuzeville)

#### THE REPRESENTATION OF INDIVIDUAL TRIPODS

A complementary development affected the ways individual tripods were rendered. The late seventh century was a time particularly sympathetic to experiments with abstraction, but thereafter, as in Greek art in general, abstraction and simplification give way to an increasing desire for realism. In keeping with this trend, first come flat, two-dimensional representations of tripods, then ones that create the illusion of three dimensions, as is already apparent in the preceding images. The tripods on the Acropolis fragment (fig. 14) mark a period of transition. No longer are they simple silhouettes; different colors differentiate

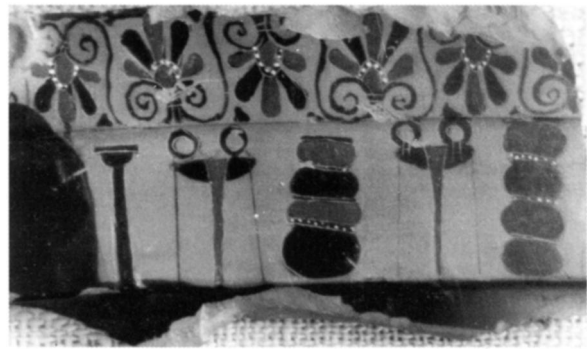


Fig. 14. Cat. no. 30. Scene alluding to competition in the context of funeral games; tripods alternate with piles of cauldrons and a columnar turning post. Fragment of black figure krater. (Athens National Museum, Acropolis Collection inv. no. 654b. Neg. by the author)

between the tripod legs and its cauldron; the central leg is brought up to the top of the rim.<sup>73</sup> The two side legs are rendered thinner, by virtue of being seen from an oblique angle, while the cauldron masks their tops, just as would be the case when viewing a real tripod. In the Louvre dinos a similar distinction is achieved by the use of inscribed lines (fig. 9). And although all the legs are shown similar in width, the turning outward of the lion paws distinguishes the lateral legs from the central one. A mixture of these devices was used for the vases just mentioned from Munich and Berlin, and many other sixth-century tripod representations.<sup>74</sup> A greater sense of volume and realism came with supplementary details, including short-hand allusions to fixings, relief decoration, and variations in the angle at which the ring handles meet the rim of the cauldron (figs. 7, 8, 15, 16k).<sup>75</sup> On occasions Classical, Hellenistic, and Roman artists employed perspectival recession of the secondary bracing rings (figs. 7, 17),<sup>76</sup> or even an entire tripod, as a way of enhancing the three-dimensional effect.<sup>77</sup>

Returning to review the characteristics of physical bronze tripods, it is clear that their shape could vary extensively. Cauldrons could be deep or shallow; legs could be squat or slender, straight or tapering, with lion-paw feet or not. Also variable was the relationship between the size of the legs and that of the cauldron. There are capacious cauldrons supported on spindly legs (fig. 3), and compact cauldrons supported on fat legs bunched relative-

<sup>73</sup> Cat. no. 30; cf. cat. no. 40.

<sup>74</sup> Cat. nos. 35, 36.

<sup>75</sup> Cat. nos. 71, 70, 99, 39; cf. cat. nos. 73, 77, 80.

<sup>76</sup> Cat. nos. 71, 85; cf. cat. nos. 73, 88, 89, 94.

<sup>77</sup> Cat. nos. 74, 82, 86, 98.



Fig. 15. Cat. no. 99. Herakles attempts to steal the Delphic tripod from Apollo (whose arm holds one of the ring handles); note the equality in width between the middle and the side legs of the tripod. Marble relief, detail. (Piraeus Archaeological Museum, inv. no. 2118. Neg. by the author)

ly close together. Representations of tripods vary even more since the physical range in shape is exaggerated by the effect of artistic interpretation, style, and technique (fig. 16). What is significant for the present argument is that the gamut of possibilities includes many that recall aspects of triglyph design. The primary components of tripod representations in the seventh and sixth centuries that invite specific comparisons with triglyphs are isolated below.

First, tripod representations almost invariably show one leg on the central axis, with the other two disposed symmetrically on either side.<sup>78</sup>

<sup>78</sup> Occasionally tripods were shown with two legs, the third being omitted because it lay in a recessive plane further from the viewer, see cat. nos. 8, 57.

<sup>79</sup> Cat. no. 3. Cf. cat. nos. 16, 21, 27.

<sup>80</sup> Cat. nos. 45, 59; cf. cat. nos. 31, 72, 79, 91.

<sup>81</sup> Cat. nos. 14, 12, 39, 45. Cf. cat. no. 44.

<sup>82</sup> For Monrepos, see *supra* n. 22. For Foce del Sele, see Zan-

Second, this symmetry is not maintained in the vertical sense. In representations of tripods, as with triglyphs, the three vertical elements are joined together at the top but not at the bottom, where they rest either on a line or band equivalent to the ground or a platform (in the case of tripods) or on the architrave (in the case of triglyphs).

Third, tripod legs are sometimes shown with a bowed silhouette (fig. 16b)<sup>79</sup> or tapered toward the ground (fig. 16m, o),<sup>80</sup> but the majority are straight and vertical (as in the case of triglyphs). There are also a minority of representations with straight legs inclined inward toward the cauldron (fig. 16f, g, k, m),<sup>81</sup> and indeed a few sets of early triglyphs display a comparable inward inclination, with the overall shape of the blocks being in effect trapezoidal rather than rectangular. Examples include what are probably the earliest known triglyphs, those from the Temple of Hera(?) at Monrepos on Corfu (fig. 18), and ones from Foce del Sele in Campania dating to around the middle of the sixth century.<sup>82</sup> In addition, the sides of the Monrepos triglyphs are slightly bowed, rather like the tripod representation just mentioned (fig. 16b).

Fourth, in representations of tripods lion-paw feet become progressively more common over time, reflecting the same trend in their physical counterparts as well as a greater desire for realism (figs. 4, 8, 15, 16m, o, p, 17, 19). But most tripod representations up to the early sixth century show the legs terminating abruptly without any form of foot or molding (figs. 6, 10, 12, 14, 16a, c, f, g, h, l, n, 20), just as is the case for triglyphs.<sup>83</sup>

Fifth, realistic tripod representations call for a different treatment of the central leg (which is viewed frontally) and the lateral ones (which are viewed obliquely). As discussed earlier, this solution appears from the early sixth century onward (fig. 14), becoming the norm in the Classical and Hellenistic periods. It is not uncommon, however, for the legs to be rendered equal in width. This is especially true of relatively early representations (figs. 6, 10, 16a, c, e, g, h, j, o, 21),<sup>84</sup> but is also seen in late ones, such as a Roman marble “copy” of a classical relief now in the Archaeological Museum

cani Montuoro et al. 1954. The proposed disposition of the accompanying metopes is disputed, see most recently Junker 1993; Conti 1994. For references and comment, see Barletta 1990, 63.

<sup>83</sup> Cf. cat. nos. 5, 18.

<sup>84</sup> Cf. cat. nos. 1, 4, 9, 19.



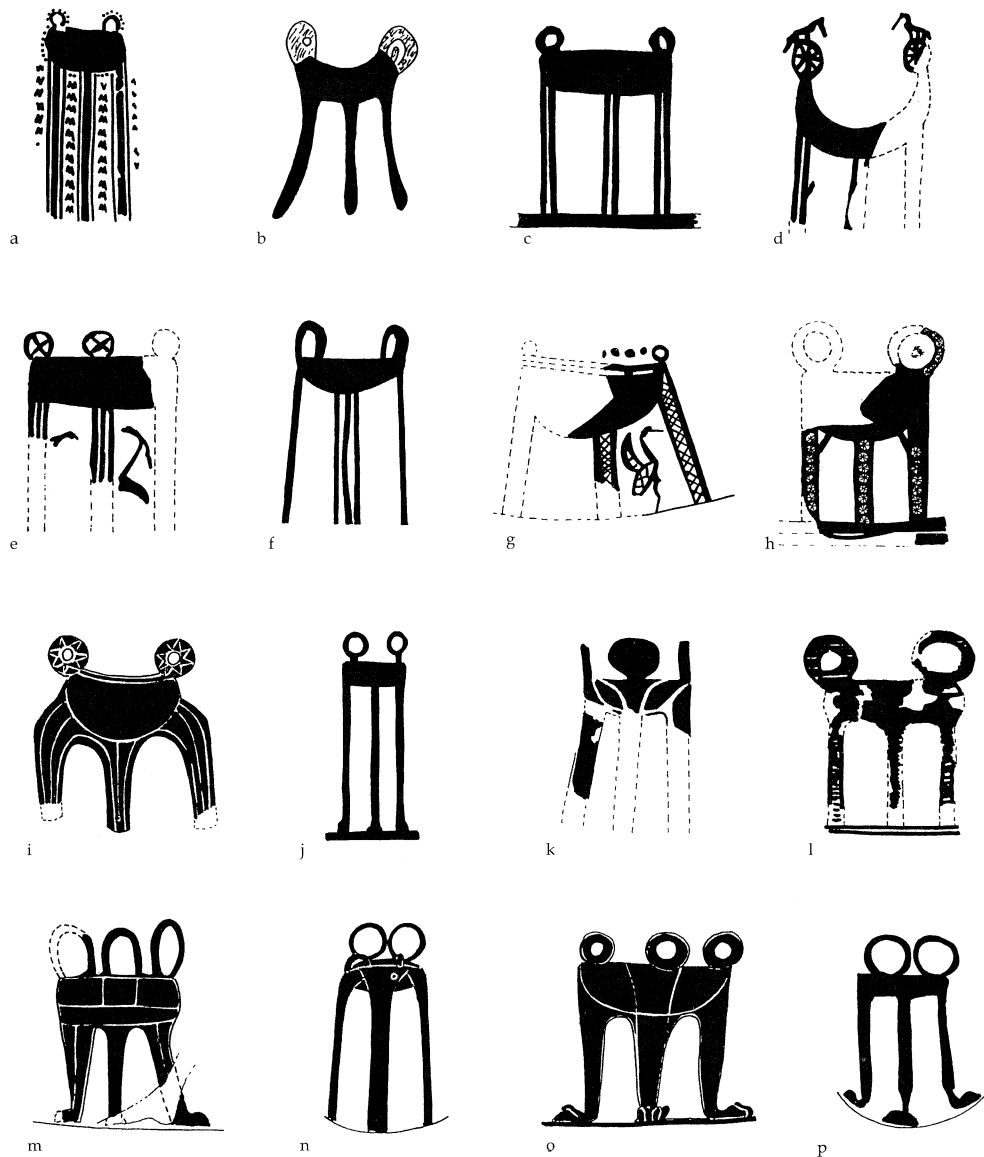


Fig. 16. Selection of tripod silhouettes dating from the mid eighth century to the late sixth century B.C., in roughly chronological order from top to bottom and left to right: *a*, cat. no. 2, fragment of krater; *b*, cat. no. 3, fragment of krater; *c*, cat. no. 7, fragment of cup; *d*, cat. no. 10, fragment of pyxis; *e*, cat. no. 11, fragment of amphora; *f*, cat. no. 14, votive terracotta plaque; *g*, cat. no. 12, fragment of amphora; *h*, cat. no. 22, fragment of pithos; *i*, cat. no. 27, votive bronze sheet; *j*, cat. no. 41, black figure tripod pyxis; *k*, cat. no. 39, black figure cup; *l*, cat. no. 42, black figure kantharos; *m*, cat. no. 45, black figure pinax fragment; *n*, cat. no. 46, Panathenaic amphora; *o*, cat. no. 59, black figure skyphos; *p*, cat. no. 51, black figure fragment. (Drawing by the author)

at Piraeus depicting the struggle for the tripod between Apollo and Herakles (fig. 15). Despite the lack of realism, artists presumably judged the effect of an equal spacing to be preferable in formal terms. In addition, in some examples the legs are spaced significantly closer than would be the case

in reality.<sup>85</sup> This is especially evident in architectural contexts, as in the friezes from the Monument of Lysicrates (fig. 4). The struggle for the tripod between Apollo and Hercules shown on the Siphnian treasury pediment displays not only all these features, but chamfered legs too (figs. 21–22),<sup>86</sup> just

<sup>85</sup> E.g., cat. nos. 2, 6, 96, 99.

<sup>86</sup> Cat. no. 56. For the building, see Daux and Hansen 1987.





Fig. 17. Cat. no. 85. Triton (far left) presents Theseus to Amphitrite and Poseidon (reclining, with trident) in the depths of the sea. Note the tripod on a column with a volute capital at low level to the left of Poseidon, while above his head “floats” a tripod on the upper part of a Doric column (there is also another truncated Doric column supporting a tripod on the other side of vase). Red figure calyx krater. (Bologna, Museo Civico Archeologico, inv. no. 303; museum neg. no. M 279 [2062])

like the verticals of triglyphs. That this should occur in a stone relief—the typical medium for triglyphs—is a telling coincidence.

Sixth, in most tripod representations the cauldron had a curved underside, while a minority artistic convention showed the top of the cauldron bowed too in sympathy (fig. 16b, d).<sup>87</sup> The cauldron, however, can be suppressed to a more or less straight capping piece. This is particularly noticeable in miniature work, as in the case of coins,<sup>88</sup> and representations of representations, as when shield devices are depicted on vases (fig. 16n, p).<sup>89</sup> Simplified cauldrons of this kind were fairly common in eighth-, seventh-, and sixth-century representations, and occasionally occur later.<sup>90</sup> It is therefore possible to liken the flat capping piece of the typical triglyph to an abbreviated or heavily stylized cauldron.

Seventh, another feature of lifelike tripod representations is the depiction of the lateral legs partially concealed by the cauldron (figs. 7, 8, 14, 15, 17).<sup>91</sup> But once again it was not uncommon to flatten reality, by showing the legs all in one plane. The cauldron might occupy the same plane as either the two outer legs (fig. 23) or all three (fig. 20),<sup>92</sup> and even on occasions be placed behind all three legs, despite the fact that this contradicted reality (fig. 16n).<sup>93</sup> In this process the cauldron,

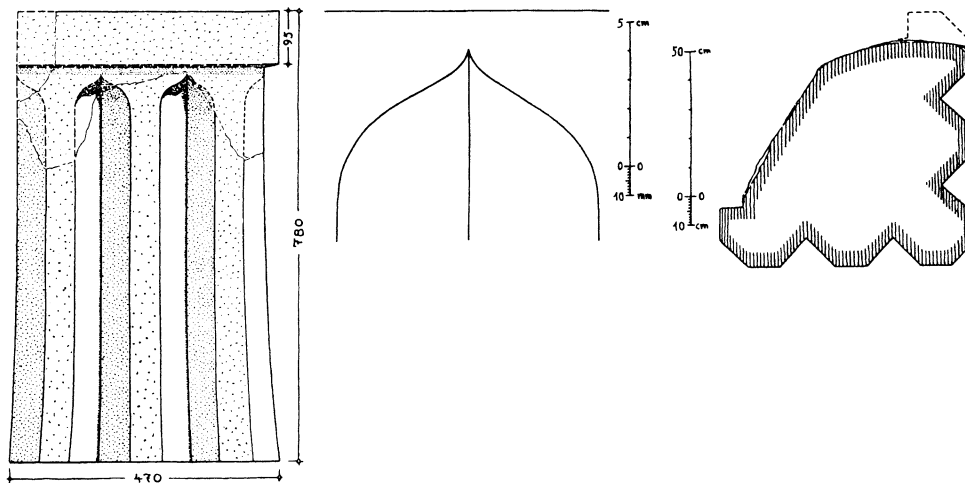


Fig. 18. Elevation and details of a stone triglyph from the temple (of Hera?) at Monrepos, Corfu, 620–610 B.C. Note the flare outward toward the bottom. (Schief et al. 1939–1940, Abb. 59)

<sup>87</sup> Cat. nos. 3, 10. For further examples, see cat. no. 8; Sakowski 1997, PF-1, PF-2, PF-7, PF-16, PF-20, SP-2, SP-3.

<sup>88</sup> Cat. nos. 79, 80. For tripods on coins, see Anson 1911, I, pl. 17–25; Kraay 1976, pls. 33, 35, 36; Stazio 1987, 151–72, esp. 156–60.

<sup>89</sup> Cat. nos. 46, 51; cf. cat. nos. 47, 49. For a list of tripod

shield devices, see Sakowski 1997, 335–47.

<sup>90</sup> Cat. nos. 4, 7, 11, 18, 21, 41, 45, 76.

<sup>91</sup> Cat. nos. 71, 70, 30, 99, 85; cf. cat. nos. 31, 36, 64, 81.

<sup>92</sup> Cat. nos. 76, 19; cf. cat. nos. 5, 8, 18, 45, 57, 49, 93, 96.

<sup>93</sup> Cat. no. 46; cf. cat. nos. 60, 93.



Fig. 19. Cat. no. 43. A victorious rider followed by an assistant bearing off the tripod prize. Black figure amphora. (British Museum, inv. no. B 144 [1849.11–22.1]; museum neg.)

prominent as it may be in actual tripods, is played down. Looking at a bronze sheet votive from the Heraion on Samos (fig. 16i) and a black-figure skyphos in the National Museum at Naples (fig. 16o), the silhouette of the whole strikes the eye—that is to say, a silhouette that is noticeably triglyph-like. In both cases the cauldron has been reduced to an incised line.<sup>94</sup>

Eighth, in tripod images the curved flares at the top of the legs can be pronounced, to the extent of meeting up and forming a positive arch, either at the top of the cauldron (fig. 16n)<sup>95</sup> or underneath it (fig. 16i, l, m, o).<sup>96</sup> This last arrangement goes against the logic of two-dimensional projection, since in real tripods the top of the legs aligns with the top of the cauldron. Once again, artists must

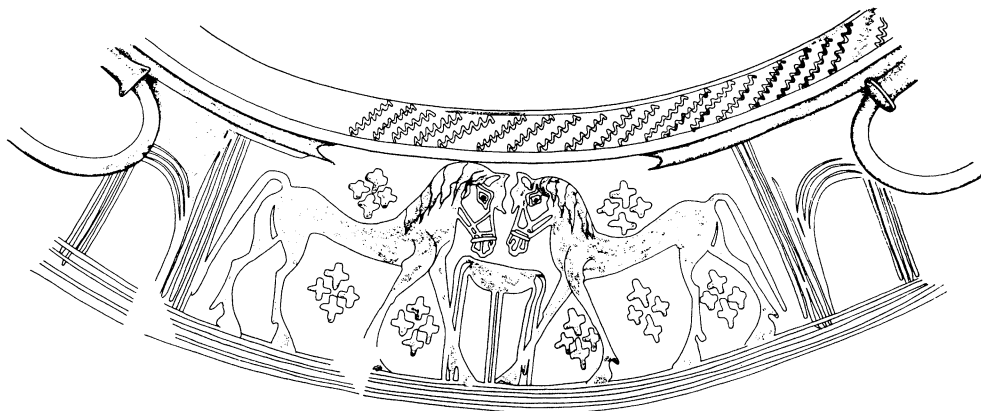


Fig. 20. Cat. no. 19. Tripod flanked by horses, detail of the main register of a dinos from Siris. (Adamesteanu 1980, pl. 2.1)

<sup>94</sup> Cat. nos. 25, 59.

<sup>95</sup> Cat. nos. 46.

<sup>96</sup> Cat. nos. 25, 42, 45, 59. Cf. cat. nos. 13, 76.



Fig. 21. The struggle for the tripod represented on the pediment of the Syphnian treasury at Delphi (ca. 520), showing Herakles, right, Athena and Apollo's forearm on the left. (Delphi, Archaeological Museum, neg. École Française d'Athènes, no. 22.370)

have been attracted by the formal qualities of this arrangement, and possibly by a feeling that in this way the cauldron did not appear to fall between the legs. It was both better supported visually and an uninterrupted whole. The effect is once again reminiscent of early triglyphs. Furthermore, it seems highly significant that each of the various types of arches that can be found on archaic triglyphs, semi-circular (fig. 24),<sup>97</sup> pointed,<sup>98</sup> and ogive (fig. 18),<sup>99</sup> all find correspondences in such tripod representations.<sup>100</sup> Perhaps because it would have been relatively difficult to depict at small scales, the ogive form is the least common and the least obvious. Figure 19 shows a clear example, however: a tripod with a leg terminating at the top with reverse curves, each side being equivalent to one half of an ogive arch. On occasions too the overall proportions are not dissimilar, so that the visual effect of some early

triglyphs with pronounced arches is broadly comparable with tripod representations like those illustrated in figure 16.

It is next possible to identify details shared by triglyphs and actual bronze tripods, and in particular their legs. In cross-section these take up a variety of shapes, which experts have broken down into a series of types and sought to distinguish chronologically, primarily based on style.<sup>101</sup> The great majority of profiles presented to the viewer a flat or nearly flat front face. This is true of both the solid-cast polygonal types (which tend to be relatively early) and the technically more advanced hollow-cast ones, principally "U," "Π," and related shapes open at the back, and with the front often enriched by decoration.<sup>102</sup> Solid-cast cross-sections are often roughly hexagonal, which is significant in that chamfered or beveled faces run away either side of the

<sup>97</sup>For other triglyphs with semicircular arches, see Mertens 1993, Taf. 47.1, 72.3, 72.6, 73.1, 73.6, 74.7, 75.2.

<sup>98</sup>Triglyphs with pointed arches belong to the Artemision at Corfu and the Monopteros at Delphi; for other examples, see Mertens 1993, Taf. 74.2, 74.6, 74.8, 85.4.

<sup>99</sup>Another set of triglyphs with ogive arches is known from Tegea, see Mertens 1993, 159, Taf. 75.5. While the recesses of the triglyphs of Temple C at Selinunte take up a pointed form, an ogive shape is nonetheless present in the outline of the borders.

<sup>100</sup>For representations of tripod legs ending in semicircular arcs, see cat. nos. 25, 42, 45, 59; for ones ending in pointed arcs: cat. nos. 38, 46, 60.

<sup>101</sup>For appreciation of the problems of dating, see Rolley 1975, 1986, 60; Hurwit 1985, 281–5; Strøm 1995, 49–50.

<sup>102</sup>For drawings of the main profiles at Delphi, Olympia, and other sites, see Benton 1934–1935, fig. 7; Rolley 1977, pls. 1–6; Maass 1977, Abb. 1. For an overview of the main categories, see Strøm 1995, 40–50.



front, as in the case of triglyph uprights. To judge by the largest collections of Geometric and Archaic tripods, those in the excavators' storerooms at Olympia and Delphi (fig. 25), the hexagonal form was the most popular option for solid-cast tripods.<sup>103</sup> Solid-cast tripods with chamfered legs were outmoded by the end of the eighth century, so the choice of this particular form by the sculptor of the Siphnian treasury pediment (530–520 B.C.) suggests that it conveyed a venerable or heroic character. Perhaps this type of profile was applied to triglyphs in part for similar reasons, in part out of appreciation of the consequent play of light and shadow.

The beveled faces just mentioned are often slightly concave, just as they are in different sets of early triglyphs from Metapontum (fig. 24).<sup>104</sup> What is more, the front face of tripod legs sometimes have a central rib, and this too is a feature of more than one set of triglyphs from Metapontum, as well as a set from Sybaris.<sup>105</sup> These central ribs typically terminate in a small cross-rib where the arches of the uprights begin, and precisely this detail may be found on several bronze tripod legs where they flare out at the top (e.g., fig. 26).<sup>106</sup> In short, wherever early triglyphs present quirks that eventually were expunged from the Doric canon, these arguably respond to the detailing of bronze tripods.

Taken together, I contend that these various correspondences bear witness to a connection between triglyphs and tripods.

#### PROCESSES OF TRANSFORMATION

This claim provokes the following question: If a connection was indeed intended, why was it not made more obvious? What explains the absence on triglyphs of other features associated with tripods apart from those covered so far? In answering these points, it is vital to grasp the nature of artistic transformation that characterized the representation of objects in early Greek art. The transformations introduced into the representation of tripods in two dimensions have been discussed already, but their extent tended to be more pronounced when three dimensions came into play, especially where a change of materials was involved. For our present purposes the most relevant clues come from three-

<sup>103</sup> This I estimate on the basis of personal inspection; I am grateful to the respective Greek, German, and French authorities for permission to handle this material.

<sup>104</sup> For another photograph, see Barletta 1990, fig. 16; for other examples, see Mertens 1993, Taf. 72.7, 74.7, 85.4; Barletta 1990, 63.

<sup>105</sup> Mertens 1993, Abb. 79.

<sup>106</sup> Vertical center ribs also appear on representations of tripods, see cat. nos. 34, 61, 41, 65, 66, 71, 90, 93. Some tripod legs are decorated by geometric patterns in light relief (Rolley



Fig. 22. Detail of group shown in fig. 21. (Neg. by the author)

dimensional objects made of stone, terracotta, or of composite construction, which are either themselves tripods or related types of vessels, namely *exaleiptra* or tripod-kothons. Bronze tripods undoubtedly provided the direct or indirect source of inspiration for kothons,<sup>107</sup> so it is significant that they too can lack the selfsame details that triglyphs lack.

Perhaps the most striking difference between triglyphs and bronze tripods or their representations is that the ring handles are absent on the former and almost invariably present on the latter. This omission can be imputed to a recognition of the structural feebleness of handles made of terracotta or stone. Terracotta tripods, whether tripod-stands or kothons, hardly ever have handles standing upright;<sup>108</sup> in rare examples they are folded

1977, Pls. 29–34; Maass 1977, Abb. 1, 4; Touloupa 1991, figs. 13, 16, 17), including running wave patterns that appear on the capping piece of the triglyphs from the temple at Akrai. For this building, see Orsi 1933; Bernabò Brea 1986.

<sup>107</sup> Kilinski 1990, 56.

<sup>108</sup> A notable exception, a terracotta tripod-cauldron from a Protogeometric grave at Kerameikos, Athens, is both an early and a particularly literal copy of the bronze form, see Kübler 1959, 95, Taf. 63; Hurwit 1985, fig. 100.



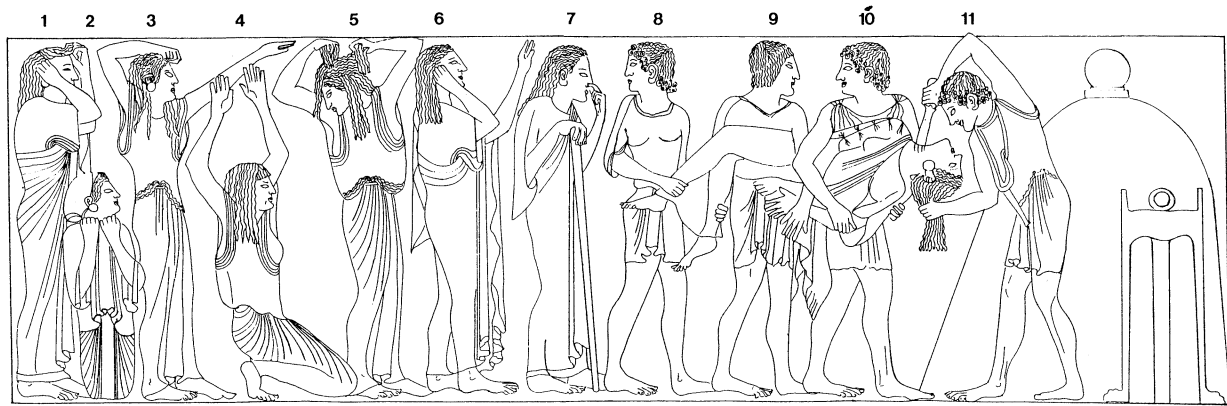


Fig. 23. Cat. no. 76. The murder of Polyxena by Neoptolemos and his accomplices, with mourners, left, and tripod, right. Marble sarcophagus, from Gümüşçay, Turkey. (Sevinç 1996, fig. 9)

down onto the top of the vessel (fig. 27),<sup>109</sup> but usually they have no handles at all (figs. 12, 28, 29). These would have been prone to breakage, and for the same reason handles do not appear on stone tripods, including examples that probably date to the seventh century.<sup>110</sup> This omission therefore testifies to an appreciation of the practicalities of using specific materials, a consideration that affected the process of transforming the bronze models from which these classes of object descended.<sup>111</sup> Even where practicality was not directly pertinent, as in the case of the tripod-triglyph relief frieze from Samos (fig. 5), handles may have been judged antithetical to the sense of structural allusion that suited its architectural function.

Other characteristics of seventh- and sixth-century tripod-kothons are also of interest. Their proportions are dramatically different with respect to bronze tripods; kothons usually have broad legs, often to the extent that little or no light can be seen between them. Kothons typically have a strongly geometrical composition that declares a certain empathy with triglyph design. Their tops are typically flat, discounting any lid,<sup>112</sup> sometimes rounded (fig. 27), and sometimes chamfered, as in the case of examples of contrasting overall shape: one now in Dresden (fig. 29),<sup>113</sup> one now in Athens (fig. 28),<sup>114</sup> and the one from Thasos already mentioned (fig. 12). In some examples the legs terminate in lion-paw feet as do bronze models, but this is only true of relatively late examples in both classes of object. The great majority of kothon legs end in

simple fillets not unlike the fillets capping Doric architraves. Such transformations can be so radical as to make the connection with bronze tripods rather oblique, a case in point being the kothon from Thasos (fig. 12). Perhaps it was for this reason that explicit tripod representations were created from the device of the additional central pillars.



Fig. 24. Triglyph from the so-called Tavole Palatine, Metapontum, third quarter of the sixth century; note the rib on the front face of the glyph, the concave profile of the sides of the glyph and the slight gap between the glyphs. (Mertens 1993, Taf. 73.2)

<sup>109</sup> Athens, NM 12037; Kilinski 1990, pl. 10.1–2; cf. Scheibler 1964.

<sup>110</sup> Touloupa 1991; for small-scale stone tripods, see Pharaklas 1970.

<sup>111</sup> Catling 1964, 213–7; Kilinski 1990, 56; Langdon 1993, 163–4; Pharaklas 1970, 176–8.

<sup>112</sup> For ones with their original lids, see Kilinski 1990, pls. 9.1, 31.3.

<sup>113</sup> Dresden Kunstsammlungen, inv. no. ZV 2775. Knoll 1999, no. 17, 52–3, gives the date as the first quarter of the sixth century.

<sup>114</sup> Athens NM 12685; Kilinski 1990, 17.2.

The other major difference between triglyphs and tripods is the absence in the former of gaps between the legs. There *are*, in fact, small gaps or recesses between the legs of some triglyphs from Magna Graecia, including those from Metapontum illustrated in figure 24.<sup>115</sup> In effect, then, the profile of such triglyphs is similar in terms of morphology to the tripod shown in relief on the Siphnian treasury (fig. 22). The proportions may be fairly different (the chamfers of the latter are far from meeting one another), but this is arguably less significant than the morphological similarity. In both cases the reduction or absence of gaps responds to the adaptation of the three-dimensional bronze model into two-dimensional versions made of stone. Consider, too, the transformations involved in the fabrication of freestanding stone tripods. The use of this material called for relatively robust legs and stocky proportions, as can be seen in a variety of stone tripods, whether ones from the eastern Mediterranean dating to the Bronze Age, the Geometric period,<sup>116</sup> the Hellenistic period (fig. 30), as well as examples of imperial Roman manufacture and related pieces of furniture like candelabra. Most instructive of all in the present context are a set of monumental tripods from the Athenian Acropolis, which may be dated to the seventh century.<sup>117</sup> Not only are these made of poros, but their construction featured timber inserts and bronze sheathing, precisely the sort of amalgam that, with the addition of terracotta and mud-brick, characterized the construction of contemporary temples. It is significant that solidity, both in structural and visual terms, was obtained by *the filling in of the gaps between the legs*. What is more, the infill is created by broad chamfers between the frontal faces, as was done in the Hellenistic example illustrated in figure 30. So if indeed an architect of the seventh century had aimed to incorporate tripod-like features into the entablature, the chamfered recesses of the triglyph could plausibly have been created in the process. It might also be imagined that once the legs started to expand or fuse, the underside of the cauldron would start to diminish in its visual impact, as is apparent in tripod kothons (figs. 27, 28), or even disappear, as it almost seems to do on some tripod representations (figs. 16, 23).

To sum up, a series of direct parallels between tripods and early triglyphs have been identified: the three legs; the horizontal, but not vertical, symmetry; the capping piece; the chamfers of the legs,

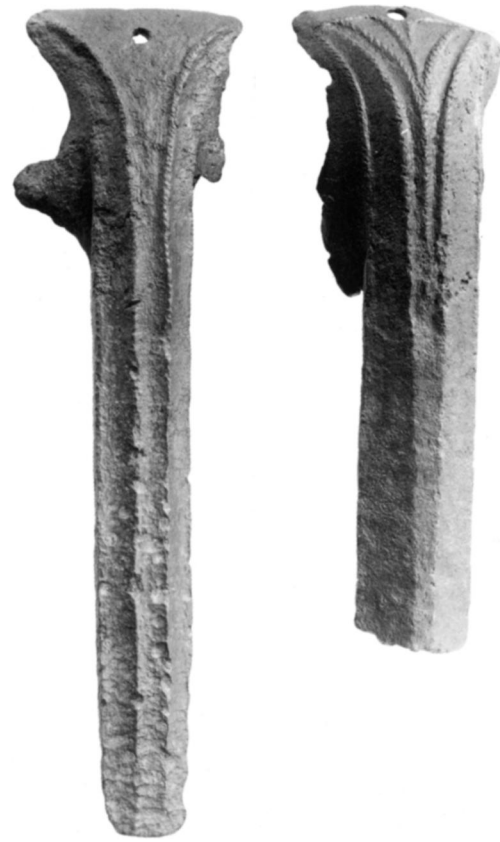


Fig. 25. Bronze tripod legs of the Geometric period from Olympia. Note that the legs, roughly hexagonal in section, present three faces toward the front and that these can be concave in profile, as in the one on the left. (Olympia, Archaeological Museum; neg. DAI Athens, no. 72/3725)

and the occasional concavity of the same; the connecting arches; the occasional ribs on the front of the legs; and the occasional stop-bars where the arches spring. Meanwhile, the presence on triglyphs of a strong capping band, together with the absence of ring handles and the almost complete lack of gaps between the legs, may be attributed to transformations that seventh-century designers judged necessary for architectural reliefs in stone, terracotta, or bronze sheet.

Should such affinities between tripods and triglyphs be admitted, this leads on to the question of explanation. Were architects and masons inspired primarily by the aesthetic effect of prestigious bronzework, or did they appropriate form with deliberate symbolic intent? To answer this question, the meaning of tripod imagery and its potential relevance for temple building are explored in the next section.

<sup>115</sup> For further examples, see Mertens 1993, Taf. 73.1, 73.3, 73.6, 74.4

<sup>116</sup> See Pharaklas 1970.

<sup>117</sup> Stevens 1951; Touloupa 1991. Comparable examples of Hellenistic date surmounted the scaenae frons of the theater at Delos.



Fig. 26. Fragments of the upper parts of a pair of tripod legs from Olympia. Note the presence of ribs, and their termination in a horizontal bar where the flare begins at the top of the leg. (Olympia, Archaeological Museum; neg. DAI Athens, no. 72/3751)

#### THE FUNCTION AND MEANING OF TRIPODS

Not forgetting similar objects as far afield as Britain and China, in the eastern Mediterranean tripods date back to the third millennium B.C., becoming widespread before the collapse of the Mycenaean world in the 12th century. Their root function was as mortars or cooking receptacles; unlike ones with a single central pillar or four legs, three-legged vessels find a stable purchase on uneven surfaces. Homer cites tripod-cauldrons for heating bathwater for Achilles, Hektor, and Odysseus,<sup>118</sup> and for washing Patroclus's corpse.<sup>119</sup>

Already in the Bronze Age a proportion of tripods began to transcend utilitarian roles, coming to be produced for ceremonial or ritual functions, and fabricated out of expensive materials, chiefly bronze. By the Geometric period evidence of tripods in a practical context is relatively scarce, not only in archaeological traces but also in textual ref-

erences<sup>120</sup> and artistic representations.<sup>121</sup> The explanation for this mutation is elusive, but it may reflect an association with collective sacrificial meals, festivities, and games; iron spits (*obeliskoi*) were popular as dedicatory and funeral offerings for similar motives. The other reason probably had to do with the elevated value of bronze; large tripods were one of the main non-military consumers of the metal, and as such inherently precious objects.<sup>122</sup> The early Greeks valued objects in terms of oxen, and sometimes iron spits, cauldrons, or tripods,<sup>123</sup> although this is not to say that objects as big as the latter changed hands in the manner of coin.<sup>124</sup> Yet in pre-monetary Greece tripods were certainly foremost among prestigious gifts that the aristocracy exchanged to register contracts of friendship, obligation, and alliance.<sup>125</sup> Homer records tripods in such circumstances, while his and later references to tripods "untouched by fire" seem to confirm their rit-

<sup>118</sup> *Iliad*, 22.443 (Hektor); 23.40 (Achilles); *Odyssey*, 8.434–7, 10.359–361 (Odysseus). Another passage, *Iliad*, 23.702, cites "a tripod to stand upon the fire" offered as a prize for wrestling (between Aias and Idomeneus), which could imply either heating water or cooking. For selected references to tripods in literary sources, see Sakowski 1997, 21–7.

<sup>119</sup> *Iliad*, 18.344–8.

<sup>120</sup> See, e.g., Antiphanes, frag. 114.1; 249.2; 36.1; *Orphica Lithica*, 724.

<sup>121</sup> Cat. nos. 57, 69. The so-called Northampton Amphora shows a Dionysian scene with satyrs, one of whom draws wine out of a bowl supported on a braced tripod stand, see Simon 1976, color pl. 17; Marangou et al. 1995, no. 17, 114–9.

<sup>122</sup> Apart from the literature cited above in n. 49, see Rolley 1986, 61.

<sup>123</sup> For the debate on the origin of this practice, see Parisi 1988, 253–65.

<sup>124</sup> Kraay 1976, 314–5.

<sup>125</sup> Finley 1977, esp. 64–6. Essays on this theme are collected in the volume *Gifts to the Gods* (*Boreas* 15); three contributions are especially relevant: Burkert 1987; Hägg 1987; Langdon 1987. See also Seaford 1994, esp. 195–6; Burkert 1996b, ch. 6, "The Reciprocity of Giving"; Sakowski 1997, 22–4. For the broader anthropological context, see Mauss 1990; Godelier 1996.



ual significance, even if the phrase could have signified “(as yet) unused” or “new”.<sup>126</sup>

On several occasions Homer tells of tripods offered as prizes for the winners of athletic, equestrian, or martial competition, in which the donor and the contestants include major protagonists in the Trojan wars (Achilles, Aias, Idomeneus, Odysseus).<sup>127</sup> A popular motif in late Geometric and early Archaic art was a tripod flanked by two horses or riders (fig. 20),<sup>128</sup> another was a tripod accompanied by a single horse or rider.<sup>129</sup> Besides evoking a princely lifestyle by association, such images allude to the contesting and/or the winning of horse races.<sup>130</sup> Boxers or wrestlers competing for possession of a tripod is another staple of Greek art at this time (fig. 27),<sup>131</sup> while the popular struggle for the tripod between Apollo and Hercules took the same theme to a divine plane (figs. 15, 21).<sup>132</sup> As already noted, tripod prizes are frequently shown at the finish or in the background of foot, horse, or chariot races (fig. 9).<sup>133</sup>

For the same reason tripods are associated with the events following such a victory. Victors and/or their stewards are shown carrying off tripod prizes (fig. 19),<sup>134</sup> or these are shown flanked by winged personifications of victory (*nikai*).<sup>135</sup> Another type of image depicts ritual preparatory to the consecration of tripods when their victors offered them up as gifts to the gods in sanctuaries, usually, but not always, those where the relevant contests were held (fig. 8).<sup>136</sup>

There is abundant complementary archaeological evidence at Olympia, Delphi, and other sites where games were celebrated, and tripods won and subsequently dedicated. As Susan Langdon wrote, at sites like Olympia “bronze tripods bridge the two worlds of Homeric poetry and archaeological reality.”<sup>137</sup> Indeed, so many tripods have been found at Olympia that there cannot have been enough victors to go around, especially since the prizes for some events were crowns of laurel and other things apart from tripods. Many of them possibly were dedicated by individuals and political entities concerned to vaunt status and piety before an “international” audience.<sup>138</sup>

<sup>126</sup> *Iliad*, 9.122; Pausanias, 4.32.1.4.

<sup>127</sup> *Iliad*, 9.407; 11.700; 23.259–264; 23.485; 23.513; 23.702–718. Cf. Laser 1987; Sakowski 1997, 22, 43–5, 82–106.

<sup>128</sup> Cat. no. 19; cf. cat. nos. 9, 13, 20, 24.

<sup>129</sup> Cat. nos. 15, 41; cf. cat. nos. 32, 84.

<sup>130</sup> Rombos 1988; Maul-Manderlartz 1990.

<sup>131</sup> Cat. nos. 5, 18, 21, 34, 38, 42, 54, 60, 61.

<sup>132</sup> Cat. nos. 59, 99; cf. 68, 92, 96, 97. For discussion, see von Bothmer 1977; Schefold 1992, 153–8; Sakowski 1997, 26, 113–63.

<sup>133</sup> *Supra* ns. 68, 69.

<sup>134</sup> Cat. no. 43; cf. cat. nos. 39, 40, 50, 55, 58. For further



Fig. 27. Painted terracotta tripod kothon showing two wrestlers on one of the supports, and with ring handles folded down on top of the vessel; second quarter of the sixth century B.C. (National Museum, Athens, inv. no. 12037; museum neg.)



Fig. 28. Painted terracotta tripod kothon showing facing sphinxes decorating one of the supports; second quarter of the sixth century B.C. (National Museum, Athens, inv. no. 12685; museum neg.)

discussion, see Scheibler 1988; Wilson Jones 2001a.

<sup>135</sup> Cat. nos. 94, 95; cf. cat. no. 16.

<sup>136</sup> Cat. no. 70; cf. cat. nos. 73, 77, 81. A scene showing celebrants advancing up the steps to an altar, one of them leading an animal victim, another carrying a tripod (cat. no. 62), may depict an earlier stage in the preparations for its dedication. On the various types of prizes for Greek contests, and the practice of offering them as votives, see Rouse 1902.

<sup>137</sup> Langdon 1987, 109.

<sup>138</sup> Morgan 1990, 43–7. For parallel conclusions, see de Pognac 1994, esp. 11–2; 1996, esp. 63–5, in relation to the Argive Heraion.





Fig. 29. Painted terracotta tripod kothon from Boeotia; first quarter of the sixth century B.C. (Dresden, Staatliche Kunstsammlungen, inv. no. ZV 2775; museum photo)

Tripods were also offered as prizes for musical, choregic, poetry, and theatrical competitions,<sup>139</sup> and Hesiod makes proud mention of the time when he won a tripod at Chalcis and then dedicated it at the sanctuary of the Muses at Helicon.<sup>140</sup> In Athens monumental tripod dedications eventually became so numerous that they overflowed the confines of sacred precincts, creating the “Street of Tripods” (*Odos Tripodon* today); the choregic Monument of Lysicrates (fig. 4) is only the most imposing survivor of what must have been a spectacular accumulation.<sup>141</sup>

The tripod was one of Apollo’s principal symbols, especially of his Delphic manifestation (fig. 7), and it was on a tripod that Pythia and later Themis sat when uttering oracular pronouncements.<sup>142</sup> Tripods also played a role in the oracle of Zeus at

Dodona, and this similarly helps account for the quantities of them found at this remote but venerable sanctuary.<sup>143</sup>

As noted earlier, tripods made of metal, ever a limited resource, were valuable. Metal tripods thus were frequently the vehicle that civic and military leaders chose for absorbing the “gods’ 10%,” the tithe due to them following a victory in war, or when some other prayer was answered that resulted in a surplus.<sup>144</sup> Dedications of this sort were typically made by poleis and other collective bodies, or by kings and tyrants. Following victory at the battle of Himera in 480 B.C., the Sicilian tyrants Hiero and Gelon commissioned gold tripods to be set up at Delphi.<sup>145</sup> It was in the form of an extraordinary tripod offering again at Delphi—a gold one supported by three gilded bronze serpents twisted into a tall column—that the Greeks elected to show their gratitude to the gods after they defeated the Persians at Plataea.<sup>146</sup>

While bronze tripods were associated primarily with aristocracy, prestige, and wealth, at the other end of the economic scale may be found two-dimensional cutouts made from bronze sheets, like the example from Samos mentioned earlier (fig. 16i), and humble terracotta votive plaques with painted tripods, such as the one from Eleusis illustrated in figure 16f.<sup>147</sup> Since the tripod spanned the whole spectrum of dedications, and particularly the top end, with good reason it has been called the Greeks’ dedication “par excellence,”<sup>148</sup> or “the ultimate (dedicatory) gift.”<sup>149</sup>

On account in part of the frequency with which they were dedicated in religious contexts, and in part of Homer’s mention of them in descriptions of Mount Olympus, tripods became identified with the divine sphere and the homes of the gods. Vase painters employed tripods to indicate sacred space in views of sanctuaries, often, but not always, those sacred to Apollo.<sup>150</sup> Interestingly enough, tripods on columns sometimes appear in this role, or alter-

<sup>139</sup> Textual references to this function are copious, see, e.g., Aristides, *Rhet. Aelius*, 331.28; Plato, *Phil. Gorgias* 472.6; Plutarchus *Biogr.*, *Aristides*, 1.3–6; *id.*, *Biogr.*, *De gloria Atheniensium*, 6.11; *id.*, *Biogr.*, *Nicias*, 3.3.3. Cf. Rouse 1902, 156–8; Pickard-Cambridge 1968, 77–8.

<sup>140</sup> Hesiod, *Works and Days*, I.657; cf. Pausanias 9.31.3.1.

<sup>141</sup> Chorémi-Spetsiéri and Kazamiakis 1994; Schnurr 1995, esp. 146–8; Amandry 1997; Wilson 2000, 198–235.

<sup>142</sup> Cat. no. 71; cf. cat. nos. 52, 53, 65, 66, 79, 90, 91, 93. For further images of tripods in relation to Apollo, see *LIMC* s.v. Apollon; Sakowski 1997, 299–317. For Themis on the Delphic tripod, see cat. no. 72.

<sup>143</sup> Carapanos 1878; Dakaris 1971; Gartzou-Tatti 1990; Vokotopoulou 1995.

<sup>144</sup> Literary sources attesting to this practice include Hero-

dotos, 5.59–60; Pausanias, 3.18.7–8; cf. Rouse 1902, 145–8; Snodgrass 1989–1990.

<sup>145</sup> Athenaeus, *Deip.* 6, 232.a–b; Diodorus Siculus 11.26.7; Bacchylides, *Pythian* 3, 17–22. The relationship between literary references and the physical traces near the Temple of Apollo are debated, see Amandry 1987; Morris 1992, 40–1; Krumeich 1991.

<sup>146</sup> Herodotos, 9.80–1; Pausanias, 10.13.9; Thucydides, 1.132.2. For alternative reconstructions for this and related monuments, see Ridgway 1977; Laroche 1989; Jacquemin and Laroche 1990.

<sup>147</sup> Eleusis: cat. no. 14; Samos: cat. 25.

<sup>148</sup> Maass 1981, 19.

<sup>149</sup> Morris 1997, 37.

<sup>150</sup> Cat. nos. 52, 53, 64, 66, 67, 91.

natively in the background of scenes with multiple divinities, a symbol of their home on Olympus or at the bottom of the sea (fig. 17).<sup>151</sup>

#### TEMPLES AND TRIPODS

Greek temples had a variety of functions apart from that of being the conceptual house of a divinity, and the physical home of his or her cult statue. Their location and very purpose often answered to a venerated natural feature; they could be places for enacting ritual, for meeting or dining, or the seats of oracles and treasuries; they could be dedicated as thanksgiving, as atonement, or as the commemoration of a special event or a miracle.<sup>152</sup>

Let us put to one side existing interpretations of the triglyph in terms of construction or influence, and suppose for a moment that patrons and architects in the seventh century were concerned to find a fitting iconography for adorning temples. It is clear that the associations of tripod imagery accord with many aspects of temple function and meaning. As noted, tripods were identified with the celestial homes of the gods; temples, of course, were homes for the gods on earth. Tripods could be mementos of victory and equivalent to the god's share of war booty; temples likewise could be just as much the fruit of war. There would have been an obvious logic in adopting tripod imagery for temples of Apollo, since it was one of his symbols. And since tripods were connected with oracles, it could make a fitting embellishment for buildings sheltering oracles. A further potential justification for tripod imagery would be on the outside of any structure that protected votives (which in so many sanctuaries included valuable bronze tripods). As sanctuaries burgeoned, special safe buildings—treasuries—were introduced to fulfill this purpose, one that was earlier served by temples.<sup>153</sup> In his exhaustive study of Greek Iron Age architecture, Alexander Mazarakis Ainan explains the very emergence of autonomous temples in sanctuaries in part as a response to the need “to house (the most precious) votive offerings . . . in order to protect from being stolen, worn, or destroyed by natural causes.”<sup>154</sup> A tripod frieze on early temples could have advertised their treasury function, since tripods were typically among the most valuable votives. But temple-treasuries were not just containers for votives—they were themselves votives. Walter Burkert argues co-



Fig. 30. Stone tripod from the *proskenion* of the theater at Delos (third century). Note how the gaps between the legs of the tripod have been filled in. (Neg. by the author)

gently that, above and in conjunction with the various functions mentioned previously, all temples were dedications to the gods. Typically they were the most visible and expensive offerings made by city-states, tyrants seeking to be identified with the same, and miscellaneous political or religious institutions.<sup>155</sup> As the Greeks' votive “par excellence,” the tripod presented itself as an ideal candidate for delivering such a message had it ever been intended, and a high level frieze is of course a paradigmatic locus for communicative display in classical architecture.

But while it may be instructive to contemplate the specific motivations that could have given rise to a tripod frieze, it is surely vain to privilege any one scenario at the expense of others on account of the very multivalency of tripod iconography.<sup>156</sup> The tripod carried such a universal and diffuse sacred charge that it potentially suited virtually *any* Greek temple.

<sup>151</sup> Cat. nos. 75, 78, 82, 83, 85, 86, 87, 88, 89, 100.

<sup>152</sup> Coldstream 1985; Mazarakis Ainan 1988; Burkert 1988, 1996a; Fehr 1996; Hollinshead 1999.

<sup>153</sup> Rups 1986; Behrens-du Maire 1993; Svenson-Evers 1997, esp. 133, 148.

<sup>154</sup> Mazarakis Ainan 1997, 383.

<sup>155</sup> Burkert 1988, esp. 43–4; 1996a, esp. 24–5. Note also for parallel conclusions regarding treasuries, Rups 1986, 255.

<sup>156</sup> For an appreciation of the multiple overlapping connotations of the tripod, see Durand 1987, n. 8.

The iconographical parallels outlined above do not individually demonstrate a triglyph-tripod connection; they only potentially explain a connection established by the visual evidence presented in this article. The ramifications, however, are certainly intriguing. The possibility that the Doric frieze initially conveyed an intelligible and appropriate message helps answer two of the greatest puzzles surrounding the origin and early development of the Doric order: its sudden appearance in a “ready developed” form, and its remarkably rapid diffusion. Since it could well have been the fruit of a spontaneous invention, a tripod frieze would conflict less than does the petrification doctrine with the evidence contradicting an evolutionary development. It also sits better with another scenario evoked by Vitruvius’s statement that Doros, the mythical progenitor of the Dorians, “chanced” to use what was later called the Doric order at Hera’s temple in her sanctuary near Argos, and then in other temples in Achaea.<sup>157</sup> The tripod imagery resolves the arbitrariness Vitruvius describes here, giving us the reason firstly for the choice of the Doric frieze over alternative solutions, and secondly its adoption by later temple builders. The fact that the triglyph derived from a real model helps explain why its form did not fluctuate more than it did. (Tetraglyphs and pentaglyphs do exist in Magna Graecia, but are very rare.<sup>158</sup>) Moreover, the associations of tripods as prizes seems almost prophetic of the competitive character of temple building, as each sanctuary or polis sought to outdo each other in displaying the most effective showpieces. Moreover, the possibility that the form and shape of triglyphs referred back to an original model could explain why Greek architects resisted modifying them to overcome the vexatious corner problem. The conceptual and symbolic importance that the tripod connection conferred on the triglyph might even explain why its width was adopted as the basic module for designing Doric temples in the Classical period.<sup>159</sup> The symbolic origins of the triglyph, however, appear to have been quickly forgotten (or ignored); the pentaglyphs from Locri point to a loss of meaning by the middle of the sixth century, while Vitruvius’s testimony shows that the whole issue had become a mystery probably by the fourth century and certainly by the second.

<sup>157</sup> Vitr. 4.1.3.

<sup>158</sup> For terracotta tetraglyphs from Crotona, see Mertens 1993, Abb. 74; for limestone pentaglyphs from Locri, see Costamagna and Sabbione 1990, 230.

In presenting this hypothesis I do not champion symbolic interpretations of the orders as a question of principle; the proposed derivation of the triglyph lends no justification for symbolic readings for the rest of the Doric order. Nor do I offer this as the only possible reading of the triglyph. The available evidence, with its extensive lacunae, warns against being overly dogmatic. Instead, it is important to consider how this new interpretation can intersect with preceding ones. Perhaps—despite the objections noted earlier—triglyphs do echo beam-ends as Vitruvius suggested; the new hypothesis can be overlaid on the traditional one, explaining why beam-ends took the specific triglyph form. Likewise the tripod connection does not contradict the possibility that the Doric frieze was inspired by the genre of “triglyph and metope” friezes so common in Geometric art; once again, such a hypothesis is only elaborated and enriched. Furthermore, the tripod connection negates neither the possibility of a secondary Mycenaean influence for the conception of the frieze, nor a primary one for elements such as the Doric capital. Egyptian influence, too, remains plausible in terms of the overall ambitions and proportions of the stone Doric temple.

This article aims not to provide answers, but rather to raise questions. Is the tripod-triglyph connection a secondary and partly fortuitous phenomenon, the result of grafting artistic conventions borrowed from tripods onto proto-triglyphs that had acquired a tripartite form for other reasons? Or is its symbolic form the *raison d’être* for the very existence of the Doric frieze? Is it possible that an early temple had proto-triglyphs that resembled tripods more closely than do the triglyphs that happen to survive, a resemblance that ceded to later improvements in the aesthetic and tectonic aspects of design? What are the implications of all this for our understanding of the formative stages of Greek architecture and sacred space?

The evaluation of these questions, and the extent to which the tripod-triglyph connection can supplant or cohabit with other explanations for the Doric frieze, hangs on a detailed review of related aspects of seventh-century architecture on the one hand, and the spatial disposition of tripods in sanctuaries on the other. These are tasks to be confronted elsewhere,<sup>160</sup> but here I conclude just with some brief observations that bear on the ideas broached in this article.

<sup>159</sup> Wilson Jones 2001b.

<sup>160</sup> Such questions are discussed in more depth in my forthcoming book on the origins of the orders, scheduled for publication by Yale University Press in 2003.

In the middle of the seventh century temple architecture was only beginning to make its mark, in the form of substantial, symmetrical structures built partly of stone, notably those at Argos, Corinth, Delphi, Isthmia, and Tegea.<sup>161</sup> All these temples rise in sanctuaries; indeed, as Georges Roux has remarked, "l'architecture grecque est née dans les sanctuaires et pour les sanctuaires."<sup>162</sup> Before the arrival of a temple, the chief constituents of sacred space were typically a boundary marking it off from its profane surroundings, a natural feature (spring, stream, rock, cave, or tree), an altar, and votives. By the eighth or seventh century, tripods were the most imposing and costly class of votive in many sanctuaries (large stone statuary appeared not much before the end of the seventh century, around the time of the stone temples themselves), which suggests that they could have offered lessons to architects and patrons looking for ways to instill temples with monumental and symbolic presence. It should be remembered that tripods were often set up on high and/or according to a clear compositional order: in rows and rings, as well as in matching pairs or groups of

three, four, five, and—if myths are to be believed—in groups of 100.<sup>163</sup>

It is against such a background that the specific correspondences highlighted here among triglyphs, tripods, and temples begin to make sense. The communicative potential of classical architecture is typically concentrated in the device of a frieze, and it seems that in this the Doric temple is no exception. The iconography of the triglyph proclaimed perhaps the very nature of the Greek temple, a precious and enduring gift to the gods imbued with the spirit of competition, excellence, victory, and veneration. This new interpretation may not rule out other readings, but it does offer a better key to some of the more baffling aspects associated with the creation of the Doric frieze and its rapid attainment of canonic status.

DEPARTMENT OF ARCHITECTURE  
AND CIVIL ENGINEERING  
UNIVERSITY OF BATH  
BATH BA2 7AY  
UNITED KINGDOM  
M.W.JONES@BATH.AC.UK

#### Appendix: Catalogue of Tripod Representations Cited

Cat No.	Fig. No.	Identification <sup>a</sup>	Medium /shape <sup>b</sup>	Sakowski 1997	Other References <sup>c</sup>	Context and Character of Tripod Representation	Guide Date
1	–	Paris, Musée Rodin	gKRA	PR-1	CVA 2, pl. 9.4; RMB, pl. 59b	Prothesis with ca. 40 T. alternating with stripes	750
2	16a	Paris, Louvre A 547	gKRA (frag.)	PR-2	CVA 11, pl. 14.8; RMB, pl. 59a	Prothesis with 2 T. or more	
3	16b	London, private coll.	gKRA?	GE-1	BTN 104, 7, fig. 11b; Laser 1987, T80	2 T. and Dipylon shields; T. has bowed legs and cauldron	
4	–	Athens, NM 18130 ex. Empedocles coll.	gAMP	FR-4	BTN 105, 9, pl. 25.1; Laser 1987, fig. 31a	Frieze of 8 T.	730
5	–	Olympia, B 1730 Tripod leg	brRel	KR-2	<i>Olforsch</i> 3, pls. 62–63; Rolley 1986, fig. 31	Combatants grasp T.	
6	6	Athens, NM 874 (3632)	gCUP	FR-1	CVA 2, pl. 10.11; Borell 1978, pl. 14; BTN 103, 5; RMB 352	Frieze of 8T. alternating with stripes	720
7	16c	Athens, NM 18140	gKAN	FR-2	BTN 105,10, pl. 26.3	Frieze of 6 T. alternating with stripes	
8	–	Fortetsa	gPIT lid	GÖ-1	BTN 107, 19; AA 1933, figs. 20–21; Simon 1980, fig. 14	T. with bird and man; T. has 2 legs, bowed cauldron	710

<sup>161</sup> Bergquist 1967; Tomlinson 1976. For a review of the subsequent bibliography for these and other sites, see Østby 1993.

<sup>162</sup> Roux 1984, 153.

<sup>163</sup> Pausanias 4.12.7–10.



Catalogue of Tripod Representations Cited (*Continued*)

Cat No.	Fig. No.	Identification <sup>a</sup>	Medium /shape <sup>b</sup>	Sakowski 1997	Other References <sup>c</sup>	Context and Character of Tripod Representation	Guide Date
9	–	Athens, NM 18135 (Empedocles coll.)	gAMP	PF-10	BTN 103, 2, pl. 25.2; AA.VV. 1989a, no. 195	T. between 2 horses	
10	16d	Athens, NM (from Argive Heraion)	gPYX (frag.)	GE-2	BTN, pl. 26.2; Laurent 1901, fig. 4	T. has bowed cauldron	
11	16e	Athens, Acrop. 286	gAMP? (frag.)	TI-1	G&L 1, pl. 10; BTN, fig. 13b; RMB, pl. 59e	T. with birds	700
12	16g	Athens (from Eretria)	gAMP (frag.)	PF-24	BTN 107, 23, fig. 13a; RMB 268	T. with bird; T. has inclined legs	
13	–	Berlin, StaatlMus 31005	gAMP	PF-9	BTN 106, 14; RMB 327; Coldstream 1968, pl. 14c	T. between 2 horses	
14	16f	Eleusis, AM votive plaques	–	OZ-2	<i>ASAtene</i> 1983, fig. 16	Single T. on its own; 1 per plaque	
15	–	Munich fibula	–	PF-22	<i>Jdl</i> 1916, fig. 3; BTN, no. 21	T. with horse and birds; T. has long tapered legs	680
16	–	Xomburgo, Tenos	gPIT	GÖ-2	Morris 1992, figs. 13–14	T. with kneeling winged figure; T. has bowed legs	
17	10	Athens, Kerameikos 1267	cOIN	PF-25	Kübler 1959, pls. 57–58; Benson 1989, pl. 13.2	Frieze of 3 T. alternating with decorative motifs	
18	–	Brauron, AM 1305 seal	–	–	<i>BCH</i> 1962, 679, fig. 14; Boardman 1970, fig. 162	Combatants with T.; T. has stocky legs	670
19	20	Policoro, NM	gDIN	PF-17	Adamesteanu 1980, pl. 2.1	T. between 2 horses; T. has no handles	
20	–	Paris, Louvre CA 2999	gOIN	–	RMB, pl. 60a	T. between 2 horses; T. has thin legs, flat cauldron	650
21	–	Oxford, Ashm. Goldsmith's mold	brMld	SP-7	BTN, no. 5; <i>JHS</i> 1896, figs. 1–5	Combatants with T.	
22	16h	Xoburgo, Tenos	gPIT? (frag.)	FR-7	<i>JHS</i> 1954, 164; <i>BCH</i> 1954, 145	2 T., probably part of frieze	630
23	11	Heraklion, AM 7652 ex Prinias, Temple A	PIT	PF-58	<i>ASAtene</i> 1914, figs. 36–39; M-Man, RA8, pl. 24	T. alternating with chariots and riders	
24	–	Philadelphia, University M. 552	cALA	PF-51	Payne 1931, pl. 20; BTN no. 8; M-Man, K5, pl. 5	T. between 2 horses	620
25	16i	Samos	brRel	–	Kyrieleis 1988, fig. 4	Plaque in shape of T. pronounced arches	
26	–	Syracuse AM; from the Athenaion	cARY	PF-26	Friis Johansen 1923, pl. 34.1; BTN, no. 3; <i>LIMC</i> Achilleus 494	T. terminating chariot race	
27	–	Athens, Politis coll. ΣΠ89	cAMP	PF-32	Amyx 1988, 42; <i>ArchDelt</i> Suppl. 40, fig. 86, pl. 14	Pair of T., with riders	
28	12	Athens, NM 17874 tripod-kothon from Thasos	KOT	TI-3	Haspels 1946; Carlié 2000, 105–6, fig. 5	Frieze of 3 T. alternating with mythological beasts	

Catalogue of Tripod Representations Cited (*Continued*)

Cat No.	Fig. No.	Identification <sup>a</sup>	Medium /shape <sup>b</sup>	Sakowski 1997	Other References <sup>c</sup>	Context and Character of Tripod Representation	Guide Date
29	–	Geneva, MoA, MF 156	bfAMP	SP-37	<i>CVA</i> 2, pl. 43	Runners, elders, and T.; trio of T. under handles	580
30	14	Athens, NM	bfKRA? (frag.)	–	G&L, 654 b–c; <i>AJA</i> 1995, 627	Pair or more T. alternating with piles of bowls	
31	9	Paris, Louvre E 875	bfDIN	PF-45	<i>CVA</i> 4, pl. 18.2; M-Man, A20, pls. 13, 15	Elders and riders alternating with T. (singles and trios)	570
32	13	Paris, Louvre MNB 579 placque (Kythnos)	teRel	PF-59	Mollard-Besques 1954, pl. 20; M-Man, pl. 25	Tripod with horse and rider part of frieze?	
33	–	Taranto (now lost)	bfKRA (frag.)	PF-46	Homann-Wedeking 1938, fig. 7; <i>GVJPGM</i> 4, 53, fig. 8	Five horses race toward five T. under handle	
34	–	London, BM B 124 1888.2–8.102	bfDIN (frag.)	SP-38	<i>CVA</i> 8 pl. 99.5; <i>LIMC</i> Peliou Athla 12	Combatants compete for T. (single and pair)	560
35	–	Munich, AntSlg 1471	bfAMP	–	Gerhard 1840–1858, pl. 257.3; <i>CVA</i> 7, pls. 346–347	Running warriors and elders framed by T. (single and trio)	
36	–	Berlin, StaatMus F 1655 (lost)	cKVO	PF-27	<i>FRGV</i> , pl. 121; <i>AJA</i> 1981, pl. 19.1; Amyx 1983, 38–41, fig. 3.2b	Trio of T. terminating chariot race; one of them under handle	
37	–	Florence, AM 4209 (“François vase”)	bfKVO	PF-28	<i>FRGV</i> , pls. 3–5; Simon 1976, pl. 53; <i>ABFV</i> , 46; Shapiro 1994, fig. 19	Chariot race, with 2 T. alternating with bowls	
38	–	Olympia, B 972 shieldband	brRel	SP-11	<i>OlForsch</i> 2, xlii, pl. 66; Laser 1987, fig. 11f	Boxers compete for T.	
39	16k	Heidelberg, Univ. S.1	bfCUP	SP-44	<i>ABV</i> , 51.1; <i>CVA</i> 4, pl. 152.1; <i>DevABF</i> pl. 17.4	T. held aloft by bearer; T. has squat tapering legs	
40	–	Athens, Kerameikos 1682	bfLTR	SP-47	<i>JdI</i> 1946–1947, pls. 18–19; Wilson Jones 2001b, fig. 5	Frieze of tripod bearers on two tiers	550
41	16j	Athens, NM 289 Tripod pyxis	bfPYX	PF-54	Laurent 1901, fig. 7	T. with rider and bird; T. has straight cauldron	
42	16l	Athens, NM 1119 (two sides similar)	bfKAN	SP-18	Laurent 1901, figs. 5–6	Combatants with T.; T. has arches between the legs	
43	19	London, BM B 1441849.11–22.1	bfAMP	PF-57	<i>CVA</i> 1, III He pl. 6.2.b; M-Man, PS3, pl. 32	Steward bearing T.; flare of T. like half ogive	
44	–	Gela, Commune (Borgo, grave no. 71)	cLEK	TL-1	<i>MonAnt</i> 1906, 54–5, fig. 27	Artisans fabricating T. with long inclined legs	540
45	16m	Berlin, StaatMus F 797	bf pinax (frag.)	SP-70	<i>AntDenk</i> 2, pls. 23, 19a; Amyx 1944, 185	T. at feet of warrior; T. has deep and straight cauldron	
46	16n	London, BM B 145	bfPAN	p. 346	<i>ABV</i> , 139.1; no. 196; <i>CVA</i> , III He pl. 5.1a	Athena between columns; T. shield device	
47	–	Munich, AntSlg 1379 (J 81)	bfAMP	–	<i>LIMC</i> Kyknos I 47; Schiebler 1988, Taf. 90.1	Warriors in combat; T. shield device	
48	–	Paris, Bib. Nat. 243	bfPAN	p. 346	AA.VV. 1989b, fig. 155a, no. 189; M-Man, KA1, pl. 41	Athena between columns; T. shield device	

Catalogue of Tripod Representations Cited (*Continued*)

Cat No.	Fig. No.	Identification <sup>a</sup>	Medium /shape <sup>b</sup>	Sakowski 1997	Other References <sup>c</sup>	Context and Character of Tripod Representation	Guide Date
49	–	Rome, Villa Giulia 74957	bfPAN	p. 346	<i>MNEVG</i> , fig. 141, no. 193; Wilson Jones 2001b, fig. 4.1.	Athena between columns; T. shield device	
50	–	Munich, AntSlg 1378	bfAMP	SP-54	ABFV, fig. 139; Schiebler 1988, Taf. 89.4	Herakles bears off massive T. watched by gods	
51	16p	Athens, NM Akropolis Coll. 607	bfDIN (frag.)	–	<i>BCH</i> Suppl. 4 (1977), fig. 3; <i>LIMC</i> Ge 4	Warriors in combat; T. shield device	
52	–	London, BM B 49 1856.5–12.10	bfAMP	AP-195	Gerhard 1840–1858, pl. 241; <i>CVA</i> 3, pl. 35.2	2 T. flanking Apollo in shrine with Aeolic columns	530
53	–	Munich, AntSlg, 1395	bfAMP	AP-196	<i>CVA</i> 1, pl. 28; Gerhard 1840–1858, pl. 257.1	Pair of T. flanking palm tree sacred to Apollo	
54	–	Berlin, StaatlMus 1837	bfAMP	–	<i>LIMC</i> Atalante 71; ABV 509	Boxers (Atalante and Peleus) between 2 massive T.	
55	–	Copenhagen, NM 109	bfAMP	SP-50	<i>CVA</i> 3, pl. 101.2; Amyx 1944, pl. 27e; Scheibler 1988, Taf. 89.1	T. bearer laden with massive T.	
56	21	Delphi, pediment of Siphnian treasury	stRel	AP-10	Daux and Hansen 1987; Knell 1990, fig. 52	Struggle for the T.	
57	–	Rome, Villa Giulia, 80983 “Ricci hydria”	bfHYD	–	<i>ASAtene</i> 1946, 47 ff.; AA.VV. 1989a, fig. 74	Preparation of sacrificial feast; T. shown with 2 legs,	
58	–	Rome, Villa Giulia 8340 [by Exekias]	bfAMP	SP-52	Amyx 1944, pls. 27 ff; Schiebler 1988, pl. 88.2–3	T. bearers, two on one face one on the other	520
59	16o	Naples, Santangelo 120	bfSKY	AP-28	Rumpf 1927, pls. 171–174; Schefold 1992, fig. 154	Struggle for the T.; T. has semicircular arches	
60	–	Olympia, B 983 shieldband	brRel	AP-26	<i>OlForsch</i> 2, xviii, pl. 47; Laser 1987, fig. 11; <i>LIMC</i> Herakles 134	Combatants with T.	
61	–	Tessin, private collection	rfHYD	–	<i>LIMC</i> Peliou Athla 18	Wrestlers competing by side of T. with large handles	510
62	–	Athens, NM 12531	bfCUP	–	<i>AntK</i> 1985, pl. 19	Preparation for sacrifice; man carrying T. up to an altar	
63	–	Vatican, 362 (526.1)	bfAMP	SP-23	Albizzati 1924, no. 362, pl. 48	T. as decoration of handle	
64	–	Paris, Louvre G 152	rfCUP	GÖ-8	<i>FRGV</i> , pl. 25; ARFV1, fig. 245.2; <i>LIMC</i> Priamos 124	Murder of Priam; massive T. in background	
65	–	Vatican, MGE 16568 [by Berlin painter]	rfHYD	AP194	Beazley 1930, pls. 25–26; Wilson Jones 2001b, fig. 4.4c	Apollo seated on winged T.	
66	–	Perugia, NM 1170 (89) [by Onesimos]	rfCUP	AP-199	Harrison and McColl 1894, pl. 17; Gerhard 1840–1858, pl. 224; ARFV1, fig. 232	Achilles and Troilos by altar of Apollo; massive T. behind	490
67	–	Rome, Villa Giulia ex Getty [by Onesimos]	rfCUP	–	<i>GVJPGM</i> 5, 49–60; <i>LIMC</i> Kassandra I 104	Rape of Kassandra; pair of large T. in background	
68	–	Tarquinius, RC 6843 [by Phintias]	rfAMP	–	<i>FRGV</i> , pl. 91; Schefold 1992, fig. 192	Struggle for T.	

Catalogue of Tripod Representations Cited (*Continued*)

Cat No.	Fig. No.	Identification <sup>a</sup>	Medium /shape <sup>b</sup>	Sakowski 1997	Other References <sup>c</sup>	Context and Character of Tripod Representation	Guide Date
69	–	London, BM E 163	rfHYD	–	<i>LIMC</i> Iason 62; ARFV, fig. 200	Medea cooks ram in T.; T. has bulky cauldron	
70	8	London, BM E 284 1846.1–28.1	rfAMP	–	FRO, 17–8; <i>LIMC</i> Phylai 1	Women prepare 2 bulls for sacrifice	450
71	7	Ferrara, AM 44894 (T.57) from Spina	rfKVO	–	<i>LIMC</i> Apollon 303; ARFV2, fig. 171	Apollo at Delphi shrine, flanked by 2 T. and omphalos	
72	–	Berlin, StaatlMus 538 [Themisschale]	rfCUP	–	<i>FRGV</i> , pl. 140; Gerhard 1849, pl. 328; <i>LIMC</i> Aigeus 1	Themis seated on Delphic T.	440
73	–	Munich, AntSlg 2412	rfSTA	–	<i>FRGV</i> , pl. 19; <i>LIMC</i> Nike 337; Wilson Jones 2001b, fig. 4.4d	Consecration of T.; Nikai prepare bull for sacrifice	
74	–	Arezzo, AM 1413	rfKCO	–	AA.VV. 1987, 129	Chariot team in front of T. on Doric column	
75	–	Agrigento, AM 4688	rfKBL	–	BAD, 30321; FRO, pl. 16; van Straten 1995, fig. 30	Sacrifice to Apollo in front of T. on Doric column	
76	23	Gümüşçay, Turkey sarcophagus	mbRel	–	Sevinç 1996, fig. 9	Neoptolemos kills Polyxena; arches of T. merge with cauldron	
77	–	Bologna, AM 286	–	–	Pellegrini 1900, 46	Consecration of T. to Dionysos; Nikai prepare bull for sacrifice	
78	–	Leiden, private coll.	rfPLA	–	BAD, 4615; <i>LIMC</i> Asklepios 1; ARFV2, fig. 305	Presentation of Asklepios in front of T. on Ionic column	
79	–	Croton, silver stater	–	–	Kraay 1976, pl. 36, 629; Carpenter 1991, fig. 104	Apollo shoots at Python between legs of massive T.	420
80	–	Kos, silver stater	–	–	AA.VV. 1989a, no. 207	Victorious discus thrower and T. prize	
81	–	Athens, NM 16260	rfPEL	–	A&D, fig. 24; <i>LIMC</i> Nike 338	Consecration of T.; Nikai prepare bull for sacrifice	
82	–	London, BM 1978.4.11.1 (E 498)	rfKBL	–	BAD, 217477; FRO, pl. 11; <i>LIMC</i> Peirithoos 94	Herakles, Athena, and Peirithoos before T. on Doric column	410
83	–	San Antonio, MoA 85.102.2	rfKCA	–	Shapiro 1995, 188–9	Sacrifice to Apollo, in front of pair of T. on columns	
84	–	Athens, NM 1733 [base by Bryaxis]	mbRel	–	AA.VV. 1989a, 205	Rider advances toward T. repeated on all four sides	
85	17	Bologna, m 279 [Pellegrini 303]	rfKCA	–	Robertson 1992, pl. 52; Shapiro 1994, fig. 86	Amphitrite and Poseidon with Theseus; Tripods on columns	
86	–	Naples, NM 81673 (Heydemann 3240)	rfKVO	–	<i>FRGV</i> , pl. 141; Green and Handley 1995, no. 5	Actors in company of Dionysos; T. on column	
87	–	Athens, NM 12254	rfKBL	–	BAD, 260094; <i>Jdl</i> 1917, 50, fig. 21; <i>LIMC</i> Apollon 768d	Bacchanalia with Dionysos; satyr in front of T. on Ionic column	
88	–	Athens, NM 12253	rfKBL	–	BAD, 7954; <i>LIMC</i> Apollon 769	Apollo and Dionysos recline in front of T. on foliate column	
89	–	St. Petersburg, 33	rfKVO	–	FRO, 15.1; Durand 1987, fig. 44; Wilson Jones 2001b, fig. 4.4e	Herakles and attendants prepare for sacrifice; T. on column	400



Catalogue of Tripod Representations Cited (*Continued*)

Cat No.	Fig. No.	Identification <sup>a</sup>	Medium /shape <sup>b</sup>	Sakowski 1997	Other References <sup>c</sup>	Context and Character of Tripod Representation	Guide Date
90	–	Athens, NM 1389	mbRel	–	<i>LIMC</i> Apollon 657	Apollo seated on T.; T. leg has central rib	
91	–	Amsterdam, 2579	rfKCA	–	<i>FRGV</i> , pl. 174; Trendall 1989, fig. 52	Temple of Apollo at Delphi, with cult statue and giant T.	
92	–	Naples, MN	KRA	–	Pugliese Carratelli 1990, fig. 110; Heydemann 1872	Struggle for the T., satirical scene, woman looks from window	
93	–	Miletus	mbRel	–	<i>LIMC</i> Apollon 66	Apollo seated on omphalos, with bow, palm, and T.	
94	–	Athens, NM 13900	rfKCA	–	A&D, fig. 29; <i>LIMC</i> Nike 116	Nikai decorating T.	
95	–	Athens, Agora 23896	rfOIN	–	FRO, 96	Nikai at T.	
96	–	Athens, NM 84 corselet flap	brRel	–	Carapanos 1878, pl. 16.1; <i>LIMC</i> Herakles 2956	Struggle for the T.	5th c.? 1st c.?
97	–	Rome, Palatine Mus.	teRel	–	Strazzulla 1990, fig. 1	Struggle for the T.; T. has several bracing rings	30
98	–	Oplontis, room 15 east wall	fresco	–	Erhardt 1991, fig. 7	Architectural fantasy centered on a T. on pedestal	
99	15	Pireaus, AM 2118 [copy of Greek work]	mbRel	–	Fuchs 1959, 187, no. 4, pl. 28b; <i>LIMC</i> Apollon 1030	Struggle for the T.	2nd c. A.D.
100	–	Dresden, Staat. Kunsts. 27 [copy of Greek work]	mbRel	–	Cain 1985, pl. 21.3; <i>LIMC</i> Apollon 39n	Dionysos and priestess at T. on pillar	

<sup>a</sup>Museum abbreviations: AM, Archaeological Museum (generic); AntSgl, AntikenSammlungen; Ashm, Ashmolean Museum, Oxford; BM, British Museum, London; MFA, Museum of Fine Arts (generic); MGE, Museo Gregoriano Etrusco (Vatican); MoA, Museum of Art (generic); NM, National Museum (generic); StaatMus, Staatliche Museen.

<sup>b</sup>Vases: g, Geometric period; c, Corinthian; bf, black-figure; rf, red-figure; ALA, Alabastron; AMP, Amphora; ARY, Aryballos; CUP, Cup or Kylix; DIN, Dinos; HYD, Hydria; KAN, Kantharos; KBL, Bell krater; KCA, Calyx krater; KCO, Column krater; KRA, Krater; KOT, Tripod kothon; KVO, Volute krater; LEK, Lekythos; LTR, Loutrophoros; OIN, Oinochoe; PAN, Panathenaic amphora; PEL, Pelike; PIT, Pithos; PYX, Pyxis; SKY, Skyphos; STA, Stamnos (e.g., gAMP stands for a Geometric amphora, cARY for a Corinthian aryballos, and bfLEK a black-figure lekythos). Other types: brMld, Bronze mold; brRel, Bronze relief; mbRel, Marble relief; stRel, Stone relief; teRel, Terracotta relief.

<sup>c</sup>A&D, Amandry & Ducat 1973; BAD, Beazley Archive Database; ABFV, Boardman 1974; ARV<sup>2</sup>, Beazley 1963; ARFV1, Boardman 1975; ARFV2, Boardman 1989; BTN, Benton 1934–1935; CVA, *Corpus Vasorum Antiquorum*; FRGV, Furtwängler and Reichhold 1904–1932; FRO, Froning 1971; G&L, Graefe and Langlotz 1925–1932; *LIMC*, *Lexicon Iconographicum Mythologiae Classicae*; M-Man, Maul-Manderlartz 1990; RMB, Rombos 1988.

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