

Suggested Archaeological and Architectural Examples of Tripartite Structures¹

C. J. Lynn

Environment and Heritage Service, Belfast

Introduction

This paper explores the possibility that aspects of an Indo-European (I-E) ideology may have received expression in physical form that survives in architectural remains or in the archaeological record, the point being that in the absence of better evidence it might be possible to suggest the presence of I-E speakers on the basis of their material remains. While the possibilities to be explored vary in credibility, from the perspectives of architecture and archaeology the exercise at least has the value of awareness raising, even if its specific contribution to I-E studies is arguable. Dumézil himself adduced several plausible instances of architectural and artifactual representations of the tripartite structure that he had delineated in I-E myth where a 'classificatory' impulse seems to correspond with his posited threefold hierarchical division of society of priests, warriors and cultivators, corresponding in turn with three roles or qualities (termed 'functions'), respectively the sacred, physical force and fertility (Littleton 1982: 7-10).² This perspective has been continued by some of Dumézil's followers who have shown, for example, that a hitherto somewhat puzzling monument in Rome, the *Ara Pacis Augustae*, can be better understood when the

¹This article has been developed from a paper given in Edinburgh at the conference of the Traditional Cosmology Society organized by Dean Miller and Emily Lyle on 22-23 October 2005, 'Where do we stand? Dumézil's tri-functional theory considered and reconsidered.'

²For example there is the three-roomed Regia in the Roman Forum (Dumézil 1996, 172-174), the trifunctionality of which was established on the basis of the known cult associations of each of its three rooms, and a Kassite bronze plaque from Louristan (Dumézil 1950, Mallory 1989, fig. 74-77). The recognition that the deities depicted on the plaque had I-E tri-functional qualities contributed to the conclusion that the Kassites spoke an I-E language (Littleton 1982: 103-104).

distribution of its iconography is analyzed in the light of the I-E tripartite theory (Friebergs *et al.* 1986).

Over the years scholars have tried to identify artifacts and monuments reflective of the presence of I-E speakers that might be used to trace their settlement areas in space and time and perhaps to trace the spread of the languages from an original homeland posited somewhere in eastern Europe, the steppes of western Asia or Anatolia. Kurgans, chariots, horse-riding, agriculture, corded ware pottery and other material objects have been proposed to have been used by I-E groups across significant areas at particular times (for example, Mallory 1989: 244-250). Scholars may have views, perhaps based on linguistic evidence, as to where I-E speakers were located in the past: and if in examining an area they find that a particular artifact or site type occupied roughly the same area in that time frame it is plausible to suggest that these artifacts or sites might have been characteristic of the I-E speakers in that area and time. While this may be correct, it is still difficult to argue from coterminous linguistic evidence that there is anything specifically I-E about the characteristics of the archaeological material or sites created by the I-E speakers. We note that, while the material cultures of some groups of people in prehistory who probably spoke I-E languages are reasonably well known, the problem is that it is difficult to establish links between the material cultures generated by the I-E groups that makes them seem specially related—more similar to one another than they are to material cultures of non I-E speakers. In other words, as we would expect, a generic relationship has not been adduced in I-E archaeological material similar to that between the languages.

In prehistory, archaeology alone can demonstrate what was happening in material terms of artifacts, settlements, monuments, anthropological remains, and environmental evidence—the what, the when and where. Associated DNA studies are beginning to contribute to the reconstruction of a picture of the ‘who’ as well. But can this ever be related to language, to attested I-E speakers? Might some characteristics of I-E ideology be reflected in material culture in different ways at different places and times? As Jim Mallory has pointed out (1989: 132-133) the most likely place to look is in the material evidence for religious ceremonies, particularly those related to large scale-community activities. He goes on to point

out that ‘...if one accepts the concept of tripartition, then it seems to offer unparalleled information for the archaeologist who wishes to correlate the concept of Indo-European with the archaeological record’ (*ibid.* 141). Mallory and Ó Donnabháin (1998: 59-60) note in connection with the advent of I-E speakers to Ireland that “Although Indo-Europeans... have been attributed to earlier periods, the Late Bronze Age begins to mark the earliest window of intrusion for what some linguists would be comfortable in ascribing to the Celts, i.e., the intrusion is recent enough to accommodate what we know of the reconstructed Common Celtic lexicon and account for the similarity of Celtic languages (both Insular and Continental Celtic) when we first obtain written evidence in the first centuries BC and AD.” Here a chronological element, the (theoretical) speed of language change, potentially gives a way of relating the adoption of a new language to the advent of exotic archaeological material. In other words, if a new language was introduced by invaders or by a phase of intense ‘acculturation’ (at a time that can be approximately identified), then the same foreigners or exotic influences may have brought obvious changes in material culture, either in the weapons they carried or the pots they made and traded, or the way they were buried, for example.³ That is not to say, however, that there was an ideological connection between the language and the artifacts, only that the current language and artifacts (which were perhaps culturally unrelated—either could have changed without affecting the other) of an overseas place were redeposited in Ireland (or whatever new place) at a particular point in time, where and when both were innovations.

Ceremonial and ritual activity, such as sacrifice, often detectable using archaeological methods, can be related to myth (Burkert 1983: 29-34), which in turn might be identifiable from surviving written accounts as I-E. There thus may be a possibility of understanding the purpose of some hitherto puzzling ritual activities as they are revealed by

³There are many unresolved problems associated with archaeology and language change. For example, if in a particular area there was archaeological ‘continuity’ in material culture evolution over a long period, does that mean that language change was unlikely in the same period? Sometimes, there appears to be archaeological uniformity in a region at a particular period when study of language indicates that diversity would be expected to be reflected in the archaeology (Mallory 1989, 92).

archaeology—using our knowledge of later I-E beliefs and mythology as a template. The possibility of using archaeological remains to identify the existence of an I-E tripartite system as delineated by Dumézil has been discussed by Mallory, who pointed out that archaeology had been little used by those interested in comparative mythology and that there is, theoretically, ample room for archaeological testing of the tripartite model. He suggests that archaeological evidence might survive for animal sacrifices like the Roman *suovetaurilia*, where the species of each victim may represent one of the social classes (or ‘functions’), which would help identify, or authenticate, the presence of speakers of an I-E language (Mallory 1989: 133). In an architectural context, Dumézil demonstrated that the plan of the Roman *Regia* (the house of the Rex in the Forum) was an expression of the tripartite operation of the building (1996: 172-4). This conclusion can be extended with caution to other royal buildings of the *megaron* plan in the eastern Mediterranean area (Dean Miller, pers. comm.). In testing the tri-functional model we must be conscious of the criticism of those would-be ‘Dumézilians’ who “are supposed to be looking for these three functions and indeed finding them by hook or crook under every bed or rock” (Puhvel 1996: 149-150).⁴ The difficulty for the archaeologist is that many of the themes of mythology that could have had a ritual expression (or rituals that had a mythological expression) are unlikely to be explicitly preserved in aniconic physical remains and, therefore, remain impervious to recognition and study. On the other hand, varied symbolic representations of a tripartite ideology (as expressed for example in ceremonial structures and remains of sacrificial activities) are more likely to be recognisable in archaeological and architectural remains. They might survive and be recognised as three separate, but linked groups of artifacts or as three distinct components making a whole edifice. Not every structure that seems to have been built in three distinct parts, of course, will have been composed that way as an evocation of I-E tripartition—artifacts or structures could be divided into three segments for entirely practical, non-ideological reasons. And we must leave open the

⁴As Puhvel points out, however, the work of Dumézil on the ideology of the Indo-Europeans far transcended the ‘three functions,’ which have become an inappropriate summation of a great lifetime’s work.

possibility that a tripartite structure or work of art may have been designed to evoke a tripartition that was not I-E. Attempts to identify instances where an aspect of I-E ideology may be reflected in physical remains have, however, a value greater than merely adding to a catalogue of possibilities for a number of reasons. Firstly, they may help in discussing the interpretation of otherwise mute and inexplicable archaeological remains. Secondly, they add to the number and type of (possible) manifestations of the ideology and, therefore, an overall appreciation of its ramifications. Thirdly, and most usefully in this context, the identification of tripartite structures, where there is evidence that their individual parts might each equate with a different one of the three Dumézilian functions, could allow archaeology to suggest the presence or influence of I-E speakers when other sources are silent on the issue.⁵

Navan Fort, Mound

I first heard of the theories and conclusions of Georges Dumézil in the early 1990s when casting around to find possible explanations for the design of the intriguing ceremonial mound, dating from 95 BC,⁶ that had been excavated in Navan Fort, County Armagh in the 1960s by D. M. Waterman (Waterman 1997). On the death of the excavator, I had been tasked with publishing the report on the excavation and thus with the need to offer some interpretation. Navan Fort of course is *Emain Macha* ('the twins of Macha'), a site known to Dumézil who compared the apparent simplicity of its visible earthworks with the time its druidic designers would have had to spend learning their profession. He also pointed out the tri-functional nature of the goddess, Macha, after whom the site is named (Dumézil 1954).

The hill-top mound (surrounded by a contemporary earthwork enclosure 900 meters in circumference), was built in a sequence beginning with the construction of a large

⁵The possible examples of tripartition are given below in the order in which the possibilities were recognised. Since they are isolated and independent, there seems to be no particular advantage in presenting them in a chronological or geographical sequence.

⁶The felling date of the central post of the wooden building encased in the mound (Baillie 1988).

wooden building formed of four rings of substantial oak posts with a much larger one at the centre (Figure 1). This was then filled with boulders to a height of three meters to form a cairn 40 meters in diameter. The exposed parts of the wooden building were then set on fire around the cairn. Finally the remains were covered by a thick layer of turves to form the

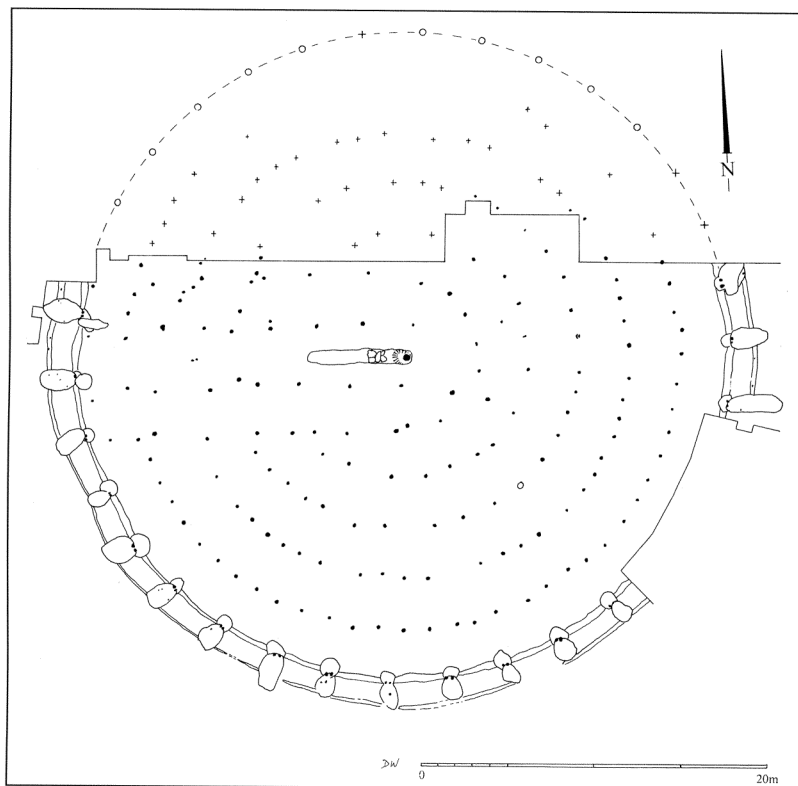


Figure 1: Plan of the Iron Age multi-ring timber structure encased in the mound in Navan Fort, Co. Armagh, N Ireland.

end-product of the process, a monumental green mound (section, Figure 2). It seemed that one possible explanation for the three components of the mound (timber building, stone cairn, earth mound) — taking into account the tri-functional nature of the goddess after which the site is named, and the possibility that the mound may have been designed for royal inauguration—could be that each component

represented a particular Dumézilian function.⁷ In this case the timber building, especially as destroyed by fire, could have represented a royal hostel or was a druidic structure (F1), the cairn could have represented warriors and the storing up of military strength (F2) and the mound of turves, the physical landscape of the area, could have represented fertility (F3).

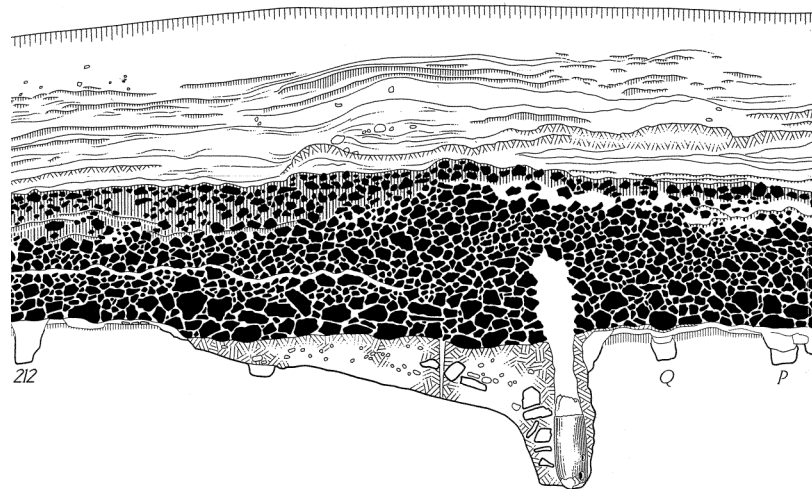


Figure 2: Part of the west-east cross section through the mound at Navan Fort showing the cairn of stones (black), the post-socket for the central post and the covering layers of turves. Height of mound, 5 metres (Waterman 1997, fig. 17).

The inclusion of the suggested F2 component with the F1 part, and the apparent offering of the two together in a fire ceremonial with the suggested F3 material being added separately at the end, accords with a pattern adduced by Emily Lyle (1990a: 8-12 and fig 2.8). She notes that in ideological structures, for example the cosmological division of the four provinces of Ireland, F1 and F2 are sometimes combined in opposition to F3, which in such a context is often linked with a (territorial) goddess, which she sees as a fourth component. This is a possible example of a monument that was constructed in the light of the tripartite ideology. We know that the site was probably constructed by I-E speakers and it traditionally had tripartite associations, for example, in the person of the goddess its early name commemorates. The Navan mound

⁷The interpretation of the mound in Navan Fort has been discussed at some length in earlier papers, see for example Lynn 1992.

could be taken as an example of the (potential) feasibility of identifying tri-functional prehistoric structures. It is to be doubted, however, if the same connections would be made if the site did not have appropriate mythological associations and was located in place and time when the presence of I-E speakers was in doubt.

Bronze Age Hoards

In the Late Bronze Age groups of metal artifacts were often deliberately deposited as hoards, arguably in a form of religious offering.⁸ If the people depositing the material were I-E speakers (see Mallory and Ó Donnabháin quoted above) or the process of deposition was subject to the influence of an I-E ideology, we would hope to find that the objects could be classified into three groups—those associated with the sacred (prestige ritual objects), with warfare (weapons) and with the means or outcome of production (tools or implements or containers for storing products). Not only should the object types be so classifiable, but in some cases so might the overall contents of the hoards themselves. It is, therefore, interesting to find in George Eogan's work on Late Bronze Age hoards (1983) that in his 'Dowris Phase' (9th – 7th centuries BC) the broad classification and distribution of metal artifact types appear to show resonances with the groupings that might be expected in an I-E context. Eogan recognised five types of metal objects: weapons, tools, ornaments, rings and horns, each of which he used to characterize a particular hoard of the Dowris Phase (*ibid.* 10-11). Some of the hoards, however, are so mixed in terms of the types of objects represented that the hoard is difficult to assign to a single preponderant artifact type and could be included in two classes, for example 'ornaments with one other type' and 'rings with one other type'. Eogan's main groupings of hoards are as follows:

Weapons (mainly swords and spearheads)

34 hoards, average 2.5 objects per hoard. Weapons only, 14 hoards, weapons with one other type 10. The

⁸Several broad polarities have been distinguished in hoard contents: perfect objects v miscast ones; hoards with a single type of object v those with many types; differences in the types deposited, for example ornaments v tools v weapons; industrial v votive; objects with male associations v female. Generally hoards may be classified as founders', traders', personal or votive hoards or as equipment for the afterlife (Harding 2000: 354).

	one other type tends to be a tool (5 cases) and could be an ax, gouge, knife, chisel or sickle.
<i>Tools</i> (mainly axheads, gouges, knives and chisels)	47 hoards, average 2.5 objects per hoard. Tools only, 9 hoards.
<i>Ornaments</i> (mainly amber beads, bracelets, armlets, sleeve and dress fasteners and pins)	58 hoards, average 5 objects per hoard. Ornaments only, 27 hoards.
<i>Bronze rings</i>	37 hoards, average nearly 10 per hoard. Rings only, 6 hoards.
<i>Horns</i>	13 hoards. Horns only, 11 hoards.

Eogan notes that a majority of the Dowris phase hoards were found in wet contexts, mainly rivers, lakes and bogs, and that a majority could have been the personal property of individuals, rather than an accumulation of objects deposited on behalf of a community. “For the Dowris Phase it is possible that ritual was an important factor. Indeed, there is other evidence for it or for ceremony. Items such as gorgets, horns and the buckets and cauldrons were hardly used solely for mundane purposes. It could very well be that to a large extent hoards in some way represent the spiritual tradition of the Later Bronze Age” (*ibid.* 12).

In Britain, until recently the most common reason given for hoard deposition was economic, while European writers have tended in general to suggest that religious belief underlay the practice. The unusual phenomenon of depositing hoards of valuable bronze objects was widespread in Europe in the Bronze Age. Harding points out that in terms of archaeological remains, hoarding was “...the most characteristic Bronze Age activity in much of Europe” (2000: 365) and that the deposition of hoards of bronze is “...one of the most discussed, though least understood, aspects of the Bronze Age...” (*ibid.* 352). It is possible that there was one ideological explanation for the phenomenon (that is, what was to be achieved by the deposition), or a uniform bundle of explanations of equally widespread applicability, perhaps with different emphasis in different areas—in other words, the indications of a pan-European belief system?⁹ We need to be

⁹Harding notes that while there are great variations in the size and content of hoards, in every region of Europe the hoards seem to fall into the same categories. Thus the large founders’ hoards of southern England differ only

able to conclude, preferably by relying on the authority of those who study hoards, that there were two (and possibly more) separate classes of persons represented by the deposited material (which I regard as of generally high prestige) —those who mainly used weapons and those who mainly used tools (or who controlled or supplied those who did).

The phenomenon of hoard deposition in Late Bronze Age Ireland cannot be compared with evidence for social differentiation that might be evident in the grave-goods from contemporary burials because as yet we have no Late Bronze Age grave-goods from Ireland. The material remains left to us seldom tell the whole story. In discussing the Iron Age, Mallory pointed out the lack of correlation between the material culture of the Celtic speakers revealed in a La Tène type cemetery and their social organization as revealed by myth and the observations of early ethnographers, “Squeezing priest burials out of the archaeological record of most I-E peoples, for example, has been a near impossible task” (Mallory 1989: 142). It could be suggested, however, that priests had a different burial rite, such as cremation or excarnation—dispersal to their particular realm, the heavens—which has left no traces in the ground. Harding draws attention to scenes in Bronze Age ‘rock art’ (carvings on inclined natural rock surfaces) in southern Alpine valleys, apparently depicting officiating figures, wearing elaborate headdresses, who have been interpreted as priests. Regarding the earlier Bronze Age of the British Isles he says that although the idea of ‘astronomer priests’ may have been overstated “...it must certainly have been the case that the rites associated with standing stones and circles could have been the special preserve of a priestly class whose position was maintained by their access to specialist knowledge” (Harding 2000: 348).

In order to admit for consideration the hypothesis that Bronze Age objects in hoards might represent two or even three social classes, it should be established that three distinct, appropriate and coherent classes of objects are present in the deposited material and that there are no others.¹⁰ Some ‘extra’

in detail from those of Transylvania and a hoard of perfect objects from southern Ireland is no different in kind than a hoard of perfect objects from Scandinavia (Harding 2000, 364).

¹⁰The picture could be complicated or refined further by postulating that

components, however, might now be assigned to 'F4', a type of mythological construct that is associated with, but 'outside,' the tripartite structure (Allen 1996). This thinking might be applied to Late Bronze objects generally, whether they are in hoards or not. But the contents of hoards and their tendency to include mainly objects of one type, 'weapons' or 'tools', suggests an element of classificatory thinking by the persons who deposited the material or a socially imposed variation in the availability of the different types. When considering the innovations in Late Bronze Age metalwork of the Dowris phase, Mallory and McNeill, rather than discussing individual object types, confined their survey to "...the weapons of the warrior, the ornaments of the wealthy, and the tools of the craftsman..." probably for reasons of brevity (Mallory and McNeill 1991: 131), but at the same time leaving open the possibility that the object types were associated with particular classes of people. To complete the case for the presence of an I-E speaking society we would need to demonstrate the existence of a third social category, the priest/lawyers. Unfortunately, their presence can scarcely be proved from the bronze material alone since their activities did not necessarily require the use of special metal objects, except perhaps as symbols, although apparently mundane objects could have been used in ceremonies (spears, sickles, horns, cauldrons, etc). Can the existence, however, of a priestly class reasonably be inferred at this time, independently of the types of metal objects deposited in hoards or as single finds? Is the very fact that hoards and single objects were deposited in a fairly consistent manner over a large area and a long time in the Late Bronze Age, sufficient evidence in itself to suggest the existence of a group who maintained orthodox belief and who presided over such offerings on behalf of the scattered communities?

Other types of objects were increasingly deposited in hoards towards the end of the Bronze Age and occur also as single finds—horns, buckets and cauldrons. They fit the social structure regarded as typical of I-E speakers, but don't prove their presence. Horns produce loud noises normally connected with war or military ceremonial. If they were used in hunting

hoards containing objects of every type, ceremonial objects, weapons, tools (and smithing debris) were deposited on behalf of kings or trifunctional goddesses.

or warfare, they would be second function, and if their sound was to accompany rituals, tribal gatherings or kingly inaugurations they would be first function. Similarly, cauldrons are associated with wealth and hospitality and would normally be third function objects, but containers of various kinds and sizes could have been involved in rituals (sacrificial for example) and would thus be first function symbols.¹¹

This section must be ended somewhat lamely by concluding that I have not produced enough evidence from the record of Late Bronze Age hoards to prove that the deposition and content of the hoards (and metal equipment generally) indicate that the society responsible was directly influenced by I-E ideology. The skeptic would argue that too much special pleading is required and there are too many gaps. There is a possibility, however, that hoard deposition and other aspects of ceremonial behavior in the Late Bronze Age (and Early Iron Age) represent a segment of widespread religious beliefs. The possibility that these beliefs were influenced by I-E ideology remains worthy of further exploration because I-E languages were certainly spoken in areas of Europe where (and at the same time as) hoarding was taking place in the Bronze Age.¹² The issue warrants the detailed study and comparison of Bronze Age hoard contents (and votive deposits of single artifacts) in adjacent areas of Europe, whether or not thought to have been occupied by I-E speakers at the time. Changes in the pattern of deposition from region to region and with time, may be significant.¹³

¹¹Manifestations of ritual actions that related to arguably I-E myth need not only be tri-functional. Here one thinks of the great numbers of single finds of bronze swords apparently deliberately deposited in rivers and lakes in Ireland, Britain and many regions of Europe, an archaeological phenomenon that resonates with mythic actions from later sources.

¹²There is an argued consensus that (the predecessors of) Slavic, Baltic, Greek and Germanic I-E languages occupied approximately the same areas of Europe from about the Middle Bronze Age as they did when contemporary history dawns (Mallory 1989, *passim*). The issue for this section of the paper is the date of the adoption of I-E languages in Britain and Ireland.

¹³There are regional and chronological trends in the deposition of hoards in Europe. For example, a connection has been suggested between hoard deposition and hill-fort construction in the Urnfield period in southern Germany (Harding 2000, 355) and in mainland Greece in the Late Bronze Age nearly all of the hoards are of tools and smithing debris (*ibid.* 365). It would be instructive to compare patterns of hoard contents (and votive depositions of single objects) in areas where I-E languages were probably

Finally, on the structure of European Bronze Age society, Harding suggests that the chiefdom concept derived from the 'band-tribe-chiefdom-state' model is probably most useful for analysis of Bronze Age peoples (2000: 393). Quoting from Mann (1986) he suggests the existence of four sources and organizations of power which transform groups of humans pursuing goals into organizations with power structures. The suggested sources of power are "ideological, economic, military and political" (Harding 2000: 392-393). These 'power organizations' sound similar in terminology to the 'functions' delineated by Dumézil (especially if we pair the first and last), but are apparently considered to have wider applicability. Whether their (suggested) presence was a manifestation of the I-E ideology would depend on the extent to which the society of the time was structured, or classified itself or its deities, in those terms and this is an issue the study of deposited bronze metalwork may throw some light on.

The Colosseum

We might begin by noting Emily Lyle's exploration of a number of accounts of Roman circuses and hippodromes of the eastern empire in an "attempt to understand the circus as an expression of the cosmic plan" (1990b: 35). The works of contemporary commentators contain valuable references to the symbolism of circuses, which can be interpreted in the light of the design of the actual circuses and vice versa. She concluded that the layout of the ideal circus reflected a spatio-temporal system corresponding to the four seasons and that the colors of the four racing factions—red, white, blue and green—were distributed in the four quadrants of the circus corresponding with the seasons. This pattern could be extended to include Dumézil's three functions, white F1, red F2, blue F3, while green represented the goddess (Lyle 1990b: 9-12).

If cosmic symbolism can be adduced for the circuses, could a parallel review of the evidence from amphitheatres, especially (in this context) their architecture, produce corresponding results? For this essay we will briefly review aspects of the design of the Flavian Amphitheatre in Rome, completed in AD 80, as an example. Since I am primarily concerned with the possibility of using material remains to

spoken in the Late Bronze Age against those where they were probably not.

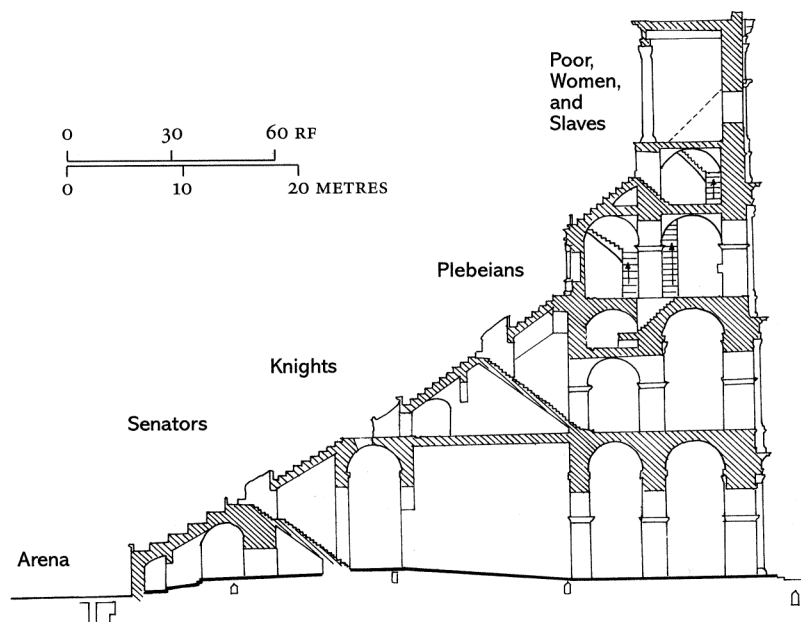


Figure 3: Reconstructed cross-section of the seating zones in the Flavian Amphitheatre (Claridge 1998, fig. 133).

identify the presence of I-E speakers where there is no other evidence, this example serves as a ‘control experiment’ because Latin was an I-E language and a good deal of what has been written about I-E religion and mythology has come from Roman sources. And examples of structures (such as the Circus and the Regia), inspired by an I-E ideology have already been identified in Rome. By comparison with the circuses, the religious background to the other activities held in the amphitheatres may be stressed, so we have a potential for finding religious symbolism in their design. An aura or echo of religious sacrifice, for example, surrounded gladiatorial combats, the *munera*, which were rites carried out in recollection of sacred ceremonies and ancient writers continued to be aware that gladiators had originated out of ceremonials in honor of the dead.¹⁴

¹⁴The literature on the amphitheatres is extensive and detailed, but there are also surprising gaps in the evidence for their operation and management. Some of the works consulted in preparation for this note include Bomgardner (2000), Brown (1995), Coleman (1990), Grant (2000) and Gunderson (1996). I mainly give references to Connolly’s recent well-

The Flavian Amphitheatre (later called the Colosseum) was oval in plan, 187 by 155 meters overall and held some 50,000 spectators. It had eighty entrances, two of which were for the emperor and vestal virgins and two more for gladiatorial processions. These reserved accesses were on the main axes of the oval. The emperor's platform was at the middle of one of the long sides. There were places nearby for priests, senators, kings and delegates of foreign peoples (Figure 3). Sand filled the elliptical arena, giving us the name. Sometimes different colored dusts were scattered—white, and greenish-blue (copper) and red *minium*.¹⁵ The amphitheatre was 48 meters high and had 4 storeys, the lower three each formed of eighty superimposed arches, framed on the outside in ascending order by attached Doric, Ionic and Corinthian columns. The topmost storey, which supported masts for the awning to shelter the crowd from the sun, was not arcaded, but had pilasters with Corinthian capitals. The *cavea* where the spectators sat was divided into four superimposed sections by three concentric oval walls called *baltei* after the gladiators' belts, perhaps suggesting analogy between the divisions of the gladiator's body and the ranks of the seated populace.

The eighty arches of the lower storey, except the four at the ends of the main axes, were numbered at the top and formed the entrances for the spectators. They gave access to concentric corridors at ground floor level and then to radial staircases, which brought the spectators to their allotted seats in the *cavea*. Each arched entrance gave access to a particular staircase that led to one zone of seating in the *cavea*. Tickets were provided, and in addition the arched entrances were color-coded depending on which level of the *cavea* they gave access to.¹⁶ The spectators were directed into horizontal tiers of seats depending on their class and they were also organized vertically into wedge-shaped seating zones around the amphitheatre, defined in part by the radial access ramps. The amphitheatre functioned like a huge sorting machine, designed to allow Roman society to organize itself quickly and

illustrated book (2003).

¹⁵While the choice of colour was unlikely to be arbitrary, I can find no evidence that they symbolically aligned with, for example, the use of the arena on particular festivals or for specific reenactments.

¹⁶Unfortunately we don't know which colours were associated with which particular zone.

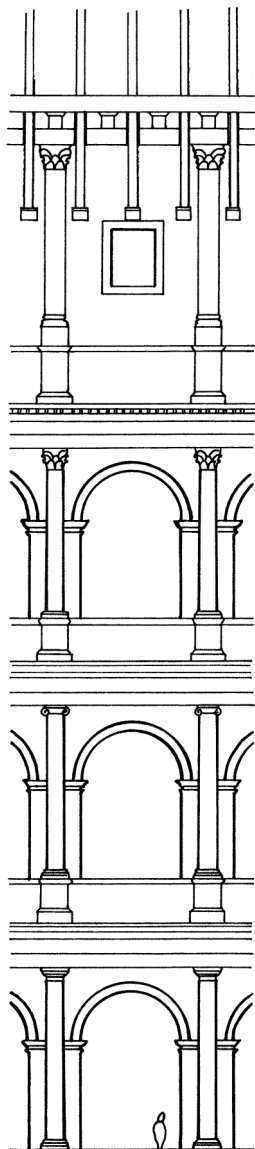


Figure 4: One bay of the exterior elevation of the Flavian Amphitheatre (Claridge 1998, fig. 135).

hierarchically into its superimposed social strata, with their internal groups in defined lateral relationships. On one side of the arena the emperor, and on the other the vestals, sat at the 'sacral' foci of that societal structure, which was arranged in

front of each as a series of rising and expanding concentric semicircles.

The curved external façade of the amphitheatre was composed of three tiers of arcades of arches, separated by entablatures.¹⁷ This conveys the impression of three superimposed temple peristyles or of a single temple divided into three horizontal layers, leaving aside for now the contrasting fourth attic storey or wall (Figure 4). The possibility that the external finish of the amphitheatre was meant to represent a religious purpose is supported by the fact that the arches of the upper two arcades appear to have framed large statues of the gods, as shown on a coin commemorating its opening in AD 80 (Connolly 2003: 49). A bas-relief from Rome shows a four horse chariot over the imperial entrance, statues of eagles in the topmost arcade with statues of the gods (Hercules, Apollo and Aesculapius) in the middle arcade (*ibid*, 60). The engaged columns used on the piers of the arches are of different architectural orders in each tier, similar to the combination in ascending order of Doric (or Tuscan), Ionic and Corinthian styles in the famous temple of Fortuna at Praeneste, built in the late second century BC (Bomgardner 2000, 8-9) suggesting that they had a symbolic significance beyond simple decoration. The Doric order used in the ground floor arcade is the simplest and oldest style in which, following Vitruvius, Book IV, chapter 1, the columns were thicker in proportion to their height than in the other orders. Vitruvius said that the first temple of the Doric style was dedicated to Apollo Panionios and was called after the region where it was first seen (Rowland and Howe 1999). The second storey has Ionic columns. Vitruvius remarked that the Ionians next decided to build a temple dedicated to Diana with Ionic columns and for this they used the female figure as a standard for the columns. They put a base under it and added volutes to the capital to resemble hair hanging down. The shafts were fluted to resemble the folds of a garment.

The piers of the third tier of the amphitheatre were ornamented with Corinthian columns. These were of the same

¹⁷Until the invention of the concrete arch a freestanding structure on this scale could not have been built. Earlier amphitheatres were not as high as the Colosseum or made use of natural or artificial hollows and embankments. The arcading of the Flavian amphitheatre was in part a logical reaction to the engineering challenges inherent in building a stone and concrete structure on that scale.

proportions as the Ionic with the extra height of the ornate capital equal to the diameter of the lower part of the column. The column should represent the elegant appearance of a young woman. Vitruvius' account explained the origin of the style saying that a girl died and her effects were placed in her tomb in a basket covered by a tile. An acanthus plant grew through the basket and the square tile gave it the symmetry, which provided Callimachus with the inspiration for the proportions and decoration of the columns, first used around Corinth (the elements of this design can be interpreted as interjecting the idea of growth and the organic, life and death—a complex mixture). Thus the exterior of the Colosseum has three tiers of arches decorated with attached shafts in accordance with the following table of attributes outlined by Vitruvius:

Position	Style	Age	Thickness	Person	First use
TOP	Corinthian	Youngest	Slenderest	Virgin	Sage
MIDDLE	Ionic	Middle	Medium	Female	Diana
BASE	Doric	Oldest	Robust	Male	Apollo

Table 1: The origin of the architectural orders as explained by Vitruvius.

On the premise that the external design of the amphitheatre purported to convey religious meaning, as would a temple, it is perhaps worth examining the architectural decoration of the façade from the perspective of Dumézil's three functions. The distribution of the functions in Table 1 is inconsistent to the extent that the possibility that they influenced the designers is not supported by Vitruvius. If the three superimposed arcades in different architectural styles represented a standard tri-functional pattern, in the 'age' column the youngest should be at the bottom and the oldest at the top. In the 'person' column the female and male should change places while in the 'first use' column alone, the Sage, Diana (huntress) and Apollo arguably align themselves in a tri-functional hierarchy. Vitruvius also suggested which architectural styles are appropriate on temples dedicated to particular deities, summarized in Table 2. This could be translated from a functional standpoint as: open to the sky = sovereign, F1 or F4 +, Corinthian = F3, Doric = F2 and Ionic = F2/F3, which if added to Table 1 would confuse the mix of functional

distribution even further.

Style	Appropriate dedication	Qualities
Open	Jupiter, Coelus, Sun	Continually known in the sky
Corinthian	Venus, Flora, Nymphs	Elegance and grace
Ionic	Juno, Diana, Baccus	Intermediate
Doric	Minerva, Mars, Hercules	Valor

Table 2: Dedications appropriate to the architectural orders (Vitruvius Bk 1, Ch 2.5).

While their style of decoration is not helpful to this analysis, the tiers of arches in the exterior arcades approximately correspond horizontally with the different layers of seating in the *cavea* (Figure 3).¹⁸ The seating zones were reserved in concentric tiers for persons of prescribed social classes, apparently representing a definitive arrangement of the people in accordance with the I-E social classes. The vestals, senators and magistrates sat on individual chairs on the podium, the four ring closest to the arena (F1). Around and above them were the knights (*equites*, F2) and above and beyond that again were the ordinary Roman citizens (*plebs*, F3). Thus the Doric order in the lowest of the external arcades equated laterally with the podium and some of the knights' seats. The Ionic middle arcade equated to some of the knights' and some of the citizens' seating and the Corinthian corresponded inwardly with the plebs' seats. Despite the lack of absolute correspondence, the hierarchical division of the seating into defined (tri)functional layers is an indication that a tri-functional ideology may have influenced Augustus' decisions as to who should sit where in amphitheatres, if not the design of the Colosseum (Connolly 2003: 56).

The layering of the social divisions in the *cavea* is the reverse of what would be expected in an I-E social pyramid. The priests, senators and magistrates should be at the top, beneath them should be a greater number of knights and below them again should be a greater number of free citizens forming a tripartite social pyramid. This social structure could

¹⁸This may be because the depths of the seating areas had to be related structurally to the size of the vaulted corridors coming inwards from the entrances.

be further augmented by the addition of two further 'classes': in normal configuration there could be an F4+ layer of sovereignty at the top and an F4-zone of slaves, poor and outcasts at the bottom (if one interprets Allen 1996 correctly). Clearly, the reason for the inverted arrangement in the amphitheatre is the ease of viewing the spectacle (and the importance of being closer to the ritual site and focus), which is directly related to the distance of the viewer from the arena. It is also possible, if the proceedings in the arena were seen as a form of sacrifice, that proximity to the religious enactments brought greater spiritual dividends. The upper gallery of the amphitheatre was indeed a narrow gallery reserved for slaves, the poor and women, perhaps to be identified with F4-. Extending this perspective in the opposite direction could identify an F1+ component at the bottom, perhaps the deified emperor himself and the vestals or the arena and its occupants. While the zones of seating in the *cavea* appear to represent a tri-functional pattern in reversed order, it is possible (in order to demonstrate a process of social inversion as one moves from the exterior to the seats in the interior), that the architecture of the three tiers of arcading on the outside of the amphitheatre represents a tri-functional arrangement in a normal vertical relationship? In this case the solid plain Doric order would represent the plebs, the Ionic order the knights and topmost, the complex and graceful Corinthian order should represent priests and magistrates? The building would externally represent the normal relationship of the functions from ground to sky, whereas internally it was an upside-down macrocosm, with the most prestigious part at the bottom.¹⁹ As we have seen from Vitruvius, however, it is difficult to point to independent evidence that the architectural orders should be interpreted in this way.

If we admit that the architecture of the amphitheatre suggests that it was designed as a religious building we could also move on to debate what it was intended for in a religious sense.²⁰ The *munera*, first held around Saturnalia, were

¹⁹It could be suggested that the fourth, top, storey with its many poles, flags and awnings represented an F1+ component, while a hidden set of arcades, below ground in the deep concrete foundations, could represent F4 - (see Connolly 2003, figure on page 43).

²⁰"Tertullian, who was particularly outspoken on the subject, called the Colosseum "a temple sacred to demons." (Connolly 2003: 157). The activities in the arena tended to be organized in three batches preceded by a

offerings to the dead, but by the middle of the first century BC the funeral games had been taken over by the ruling elite for political (and propaganda) purposes (Connolly 2003: 68-69). The frequency of the games was increased at times of threat to the Roman state and there is some evidence that the bodies of dead gladiators were symbolically mutilated by a man dressed as Charon wielding a sledgehammer and a hook to drag them from the arena via a special gate.²¹ Were the spectacles in the arenas (in origin) large-scale sacrifices on behalf of the state with press-ganged participants fighting to save their lives, lives that were already forfeit? Caesar himself was responsible for encouraging the expansion of gladiatorial combats (and it was he who reported on the arguably analogous large-scale Gaulish human sacrifices (*De Bello Gallico* 6:16)). The gladiatorial contests meet some of criteria by which I-E sacrifices might be identified—use of prisoners of war and criminals, more frequent at times of state crisis, mutilation (token dismemberment), and the association with Saturnalia (Lincoln 1986: 59-64). First century AD Roman commentators, however, who railed against druidic human sacrifice in the Celtic lands, clearly did not see them in this way (Lincoln 1991: 184, n 2).²² There is a possibility, however, that the Roman gladiatorial contests derive from an I-E ideology of sacrifice cognate with that of the Celts, which in

procession: in the morning were animal hunts, around midday executions of criminals and in the afternoon the gladiator contests. It is possible that in a context of legal retribution or religious sacrifice there is a tri-functional coloration and upward progression: large-scale animal hunts = F3, criminal execution, a martial function or one frequently carried out mainly on prisoners of war = F2, and finally, gladiatorial combats in a repetition of a form of the cosmogonic sacrifice = F1?

²¹The mass execution of criminals in the arena was always greatest in times of war, because anyone involved in a revolt against Rome was considered to be guilty of a capital offence...The treatment of corpses of people executed in the arena is well attested. They were invariably mutilated, the face smashed in. Bodies were collected from the arena by a man dressed as Charon, carrying a sledge hammer and a dagger. He would beat the man's head in with his hammer, stab him and then summon the attendants, who were traditionally dressed in red and carried bells, to drag the body off with a giant hook.' Connolly 2003: 121-122).

²²The fact that the Celtic sacrifices sometimes took place in woven structures termed *colossi* and the Flavian Amphitheatre was later called the Colosseum (it is said from a giant statue nearby), is surely a coincidence. Nevertheless, the idea of large size is important in sacrificial contexts, which transfer microcosmic materials to a macrocosmic scale.

Rome had moved from religion into civic rituals, fuelled by a propensity for organizing public activities and military and economic processes on a large scale. Bomgardner (2000: 196) notes the possibility that in North Africa, human sacrifice to Ba'al (syncretised later with Saturn) and Tanit may have taken place "...under the subterfuge of amphitheatral spectacles" and that the cult of Nemesis, perhaps accompanied by human sacrifices, was practiced in the amphitheatres of the Danubian provinces. It is not a major step from this to suggest that a similar ideology underlay the slaughter in the amphitheatre in Rome itself, despite the ban on human sacrifice. Tertullian (AD c. 160-c. 240) recognized that a practice that was originally a solemn funeral rite gradually became more of an entertainment to accompany feasting: "What was offered to appease the dead was counted as a funeral rite...It is called *munus* (service) from being a service due...The ancients thought that by this sort of spectacle they rendered a service to the dead, after they had tempered it with a more cultured form of cruelty. For of old, in the belief that the souls of the dead are propitiated with human blood, they used to sacrifice captives or slaves of poor quality. Afterwards it seemed good to obscure their impiety by making it a pleasure" (Grant 2000: 16).

In conclusion it must be said that in strictly archaeological terms the Flavian amphitheatre does not have in its surviving structure or architectural detail any overt or obvious sign that it was designed by I-E speakers (though we know that it was). We could work out that it was designed to accommodate a large number of people to witness some sort of spectacle, probably at repeated intervals over a long period of time. What that spectacle was could only be guessed at from the discovery of exotic animal bones in the drains, even the identification of lift mechanisms would not get us beyond the category of theatre, extravagant show or circus. As with the circuses, the *Regia* and the *Ara Pacis*²³ we need documentary sources to get us into the regions of possible I-E interpretations.

Anemospilia, Crete

A small masonry building, apparently isolated within a

²³While the design of the *Ara Pacis* has been interpreted as reflecting an I-E tri-functional template on the basis of the distribution of its iconography, the latter is only interpretable (as Venus, Amazons, Augustus, etc) because of relevant documentation.

temenos, is located at the north end of Mt Iuktas overlooking the fertile coastal plain of Crete around Heraklion some 7 km north of Knossos and was excavated in 1979 (Sakellarakis and Sakellaraki 1991: 137-156). It has been interpreted as a temple, comprising three adjoining, but not connected rectangular rooms in a row. The separate doors in one of their narrow ends were linked by a corridor or antechamber running along the north side of the structure. It is so far unique in Crete in the Minoan-Mycenean periods. It was destroyed in the 17th century BC, perhaps in the same cataclysm that destroyed the palaces at Knossos and Phaistos.

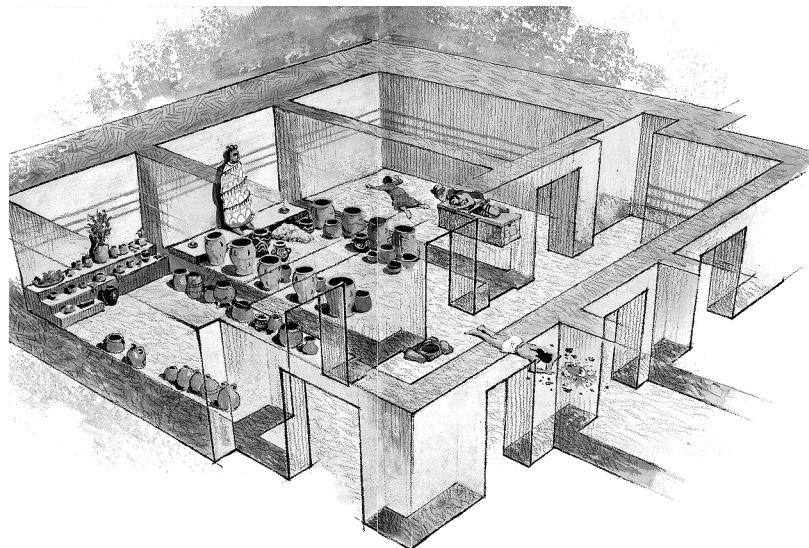


Figure 5: Reconstruction of the shrine at Anemospilia, Crete, at the moment of destruction (National Geographic Magazine).

The corridor or antechamber was where preparation for ritual would have taken place (Figure 5). Among the finds were vases, tripod cooking pots and pithoi, which could have held food or woven cloth. In the antechamber the skeleton was found of a person who had apparently been running from the building holding a sacrificial vase, decorated in relief with a red spotted bull, when the structure collapsed and killed him or her. In the east room there was a stepped altar along the south wall on which large bowls were placed, probably holding offerings of agricultural produce such as fruit, wine or oil. On the floor two small boxes were found similar to ones found at

Mycenae and in the Mycenaean royal burial in Tholos tomb A in Phorri cemetery near Archanes, Crete.

The west room was apparently being used for a blood sacrifice at the time of the destruction. Three skeletons were found in it, one of which was a young male lying on a low platform or altar. From the position and condition of the skeleton the excavators surmised that the person had just been sacrificed. There was a remarkable bronze dagger 40 cm long, with the head of a boar incised on each side, lying on the skeleton.²⁴

The central room was full of pottery vessels and vases, larger than any elsewhere in the structure. These were concentrated towards the south, that is away from the door. Along the south wall was a bench on which was a pair of larger-than-life clay feet surrounded by ash from a burnt wooden object, interpreted as probably the remains of a large cult statue. In front of it a piece of bare living rock, interpreted by the excavators as a sacred stone, had been allowed to intrude into the room.

Whatever the interpretation of the detail, it seems clear that this was a religious structure and that it was divided into three, roughly equal-sized contiguous apartments, linked by a narrower, corridor along one end. Each of the compartments contained somewhat different ceremonial vessels and other remains, presumably indicative of three contrasting processes or dedications. Since we are pursuing an I-E tripartite theme, it seems not completely outlandish to compare the building with Dumézil's analysis of the Roman Regia and to suggest that the side room in which offerings of agricultural produce were stored was dedicated to the third function or a representative of it; the other side room with its blood sacrifice, altar and dagger could align with the second function. The central, and arguably the most important, of the three rooms uniquely was dominated by the presence of a large cult figure. The fact that an outcrop of the living rock was allowed to appear above the floor immediately in front, could indicate that the room and its symbolic occupant represented the entire function, the essence and the sovereignty of the region, that is arguably,

²⁴The excavation of a group of children's bones found near Knossos on Crete has been added to the evidence for human sacrifice in Minoan religion, but there are other possible explanations for the phenomenon (Green 2001, 108).

the first function.²⁵ Altogether, then a plausible case can be made that the building was not only tripartite, but also tri-functional. The problem is, it is on Crete, and Minoan religion is not supposed to have had any I-E influences at this time, which is the early 17th century BC. It could be that the lesson is that archaeological remains lacking inscriptions, historical contexts or iconography can be misleading and the original meaning of the Anemospilia site had nothing to do with I-E trifunctionalism.²⁶ One wonders, however, if the same structure had been found on mainland Greece and dated from around the same period, would we have the same worries over a possible I-E interpretation?

Antrim Castle

I recall one evening in 1970 visiting Antrim Castle while it was in the process of being pulled down as a dangerous, legally unprotected, structure. Some carved stones from its windows and façade had been salvaged for safekeeping. It wasn't until thirty years later, when the present Viscount Massereene and Ferrard, who lives in Yorkshire, asked for the return of his stones that I gave the site further attention. A colleague, Terence Reeves-Smyth, an architectural historian, was very enthusiastic about Antrim Castle and the significance of the stones that had been held and protected in store for 30 years.²⁷

²⁵Burkert (1985: 287-288) notes that at Eleusis there was a temple, the *Telesterion* in the centre of which there was a building, the *Anaktonon*, a rectangular, oblong stone construction with a door at the end of one of its longer sides. Here the throne of the hierophant was placed and a piece of natural unhewn rock was exposed inside. A fire underneath which the hierophant celebrated burned on top of the *Anaktonon*. The cult at the site can be traced back to Mycenaean predecessors (*ibid.*, 285).

²⁶It should be noted that a 'tripartite shrine' accompanied by goats is depicted on the famous peak sanctuary rhyton from Zakros, now in Heraklion Museum. An earlier essay (Miller and Lynn 1999), explored the possibility that three the famous carved stone vases from the small palace at Aghia Triada, near Phaistos, Crete, and dating from about the same time as the destruction of the Anemospilia shrine, might be a tri-functional set.

²⁷Reeves-Smyth is preparing a definitive article on the history and architecture of Antrim Castle for the *Ulster Journal of Archaeology*.



Figure 6: Main entrance façade of Antrim Castle (Environment and Heritage Service).

The most important group of carvings came from the impressive, east, entrance façade of the 17th-century part of the castle (Figure 6). The carved façade constituted a single architectural composition, starting with the entrance on the ground floor (above a basement) which was surmounted by a large panel reserved for coats of arms, surmounted in turn by further crests. The whole ensemble was crowned at its pinnacle by a bust of Charles II, with above his head a small round window pierced at the apex of the gable or attic. The purpose of the carved façade was to demonstrate the history and loyalty of the Massereene family and to ensure that everyone who entered the building, symbolically became part of the ideological scheme, or at least was aware of it. Given the graded nature and subject matter of the façade, could its composition have been inspired by the tripartite ideology? At the bottom there was a large doorway flanked by ionic columns embellished with the emblems of two mermaids and a scallop shell, presumably family emblems (research in heraldic lore might provide some answers here). The door, with its necessarily low position and during its lifetime, great numbers of people passing in and out, seemed that it might represent the most basic, the most populous, third function. The next story up with its coats of arms and its memorial to a fallen member of the family appeared to represent the second function, while all the crests, the royal arms and the bust of the King himself seemed to represent the first function or, more correctly, rulership.²⁸ The composition seemed to be completed by the existence of the basement (? F4-) and the round window above, shining from the sky, perhaps representing the divine (F4+). The fully tri-functional nature of the composition, however, was disrupted by the lack of clear iconographic distinction between the second floor zone (of

²⁸Only one other comparable architectural composition is known from Britain or Ireland, that is the early 17th-century stair tower of Huntly Castle in Aberdeenshire (Reeves-Smyth, pers. comm.). In view of the relative dating it is assumed that the Antrim example was inspired by Huntly or some now-vanished contemporary. The doorway of Huntly, dated 1602, is set at the foot of a cylindrical stair tower with armorial panels piled above in the face of the tower. Over the doorway are the arms of the first Marquess of Huntly and his wife. In the level above are shields bearing the Royal arms of Scotland and Denmark, with the initials of King James and Queen Anne. The top tiers are filled with religious imagery and are surmounted by the triumphant figure of St Michael slaying Satan. These superimposed panels seem to display an even more clear-cut trifunctional organization.

the military) from the upper, first function panels. It seemed that the architectural composition in the late 17th-century gable of the castle was simply a clever, but independent, depiction of the contemporary hierarchical relationship of the symbols of sovereignty and loyalty which did not spring from a continuous tradition of depictions of the tri-functional ideology. But that ideology is difficult to escape from in this context because the kingship and society that was carved in the mid-17th century was derived in a continuous sequence from ancient I-E roots.²⁹

Conclusion

The examples of possible tri-functional ideology in archaeological and architectural contexts rehearsed above have varied degrees of plausibility in the sense that their patterning might have been conditioned by a tripartite view of the world and society. As noted at the outset, however, exploration of the threefold nature of some compositions has potential value, with much still to be pursued, whether or not the tripartite nature of the construct turns out arguably to have been inspired by an I-E ideology. The idea that the Navan Fort mound might have been deliberately designed to evoke or enshrine a tripartite pattern, perhaps representing a religious belief, has some attraction, but is difficult to substantiate. More optimistically, further research might demonstrate that deposition of metalwork hoards in the Late Bronze Age of Europe represented a widespread set of religious beliefs and, further, that the society represented by the bronze material was divided along I-E tripartite lines. This would indicate that the language ancestral to Old Irish was spoken in Ireland in the Late Bronze Age. Aspects of I-E religious beliefs arguably underlying the origin and nature of the spectacles that took place in the Roman amphitheatres may be reflected functionally and symbolically in their architectural design. The tripartite structure of Roman society appears to be represented in inverted form in the seating and access arrangements of the Colosseum. The three linked rooms and varied contents of the excavated small temple at Anemospilia, Crete, suggest that I-E influences may have

²⁹Ownership of the sculptures has been transferred to the state and it is understood that they will be displayed as close as possible to the Castle site when a suitable repository can be identified.

reached Crete by the 17th century BC. At the other end of the time scale, the design of the façade of a mid 17th- century AD castle in Antrim, N. Ireland, arguably was inspired to reflect a tripartite, layered social hierarchy. If this is so, it demonstrates the endurance of the ancient institutions of rulership and a conceptual social hierarchy that go back to I-E roots and which can, as Dumézil has shown, become manifest in architectural compositions or in archaeological material at a variety of places and times.

Acknowledgments

I am most grateful to Dean Miller for making valuable comments on a draft of this paper and earlier for encouragement and guidance in exploring the examples which have gone into it. I would like to thank Terence Reeves-Smyth for information about the façade of Antrim Castle and for pointing out the Huntly, Aberdeenshire, parallel.

Bibliography

- Allen, N.J.
 1996 Romulus and the Fourth Function. In: Polomé, E. (ed.) *Journal of Indo-European Studies*, Monograph Series no. 16: Indo-European Religion after Dumézil, 13-36.
- Auguet, Roland
 1994 *Cruelty and Civilization: the Roman Games*. London and New York: Routledge.
- Baillie, M.G.L.
 1988 The dating of the timbers from Navan Fort and the Dorsey, Co. Armagh. *Emania* 4: 37-40.
- Bomgardner, D.L.
 2000 *The Story of the Roman Amphitheatre*. London and New York: Routledge.
- Brown, S.
 1995 Explaining the arena: did the Romans “need” gladiators? *Journal of Roman Archaeology*, 18: 376-384.
- Burkert, W.
 1983 *Homo Necans: the anthropology of ancient Greek sacrificial ritual and myth*. Berkeley, Los Angeles and London: University of California Press.
 1985 *Greek Religion*. Cambridge, Massachusetts: Harvard University Press.

- Claridge, Amanda
1998 *Rome: an Oxford Archaeological Guide*. Oxford and New York: Oxford University Press.
- Coleman, K.M.
1990 Fatal charades: Roman executions staged as mythological enactments. *Journal of Roman Studies* 80: 44-73.
- Connolly, Peter
2003 *Colosseum: Rome's Arena of Death*. London: BBC Books.
- Dumézil, G.
1950 Dieux cassites et dieux védiques: à propos d'un bronze du Louristan. *Revue Hittite et Asiatique* 11: 18-37.
1954 Le trio des Macha. *Revue de l'Histoire des Religions* 146: 5-17.
1996 *Archaic Roman Religion* (trans Philip Krapp). Baltimore and London: Johns Hopkins Press.
- Eogan, George
1983 *Hoards of the Irish Later Bronze Age*. Dublin: University College Dublin.
- Freibergs, G., Littleton, C.S. and Strutynski, U.
1986 Indo-European tripartition and the *Ara Pacis Augustae*: an excursus in ideological archaeology. *Numen* 33: 3-32.
- Grant, Michael
2000 *Gladiators*. London: Penguin (first pub. 1967).
- Green, M.A.
2001 *Dying for the Gods*. Stroud: Tempus.
- Gunderson, E.
1996 The ideology of the arena. *Classical Antiquity* 15: 113-151.
- Harding, A.F.
2000 *European Societies in the Bronze Age*. Cambridge: Cambridge University Press.
- Lincoln, Bruce
1986 *Myth, Cosmos and Society: Indo-European themes of creation and destruction*. Cambridge, Massachusetts and London: Harvard University Press.
1991 *Death, War, and Sacrifice*. Chicago: University of Chicago Press.
- Littleton, C. Scott
1982 *The New Comparative Mythology* (3rd edition). Berkeley and Los Angeles: University of California Press.
- Lyle, Emily
1990a Dumézil's three functions and Indo-European cosmic structure. In Emily Lyle (ed.) *Archaic Cosmos* 6-25. Edinburgh: Polygon.

- 1990b The circus as cosmos. In: Emily Lyle (ed.) *Archaic Cosmos* 35-47. Edinburgh: Polygon.
- Lynn, C.
1992 The Iron Age mound in Navan Fort: a physical realisation of Celtic religious beliefs? *Emania* 10: 33-57.
- Lynn, C. and Miller, D.
1999 Three carved stone vases from the Minoan Villa at Aghia Triada, Crete: a trifunctional set? *Journal of Indo-European Studies* 27: 335-353.
- Mallory, J.P.
1989 *In Search of the Indo-Europeans: language, archaeology and myth*. London: Thames and Hudson.
- Mallory, J.P. and McNeill, T.E.
1991 *The Archaeology of Ulster*. Belfast: Queen's University.
- Mallory, J.P. and Ó Donnabháin, B.
1998 The origins of the population of Ireland: a survey of putative immigrations in Irish prehistory and history. *Emania* 17: 47-81.
- Mann, Michael
1986 *The Sources of Social Power: a history of power from the beginning to AD 1760* Vol 1. Cambridge: Cambridge University Press.
- Puhvel, Jaan
1996 After Dumézil, what? In: Polomé, E. (ed.) *Journal of Indo-European Studies*, Monograph Series no. 16: Indo-European religion after Dumézil, 147-155.
- Rowland, I.D. and Howe, T.N.
1999 *Vitruvius: Ten Books on Architecture*. Cambridge: Cambridge University Press.
- Sakellarakis, J.A. and Sapouna-Sakellaraki, E.
1991 *Archanes*. Athens: Ekdotike Athenon.
- Waterman, D.M.
1997 *Excavations at Navan Fort, 1961-1971*. Belfast: Stationery Office.