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Mystifying Roman Nails: *clavus annalis, defixiones* and *minkisi*

by David Dungworth

Introduction

Iron nails are found on almost every Roman period site in Britain but their ubiquity and apparently straightforward nature has meant that they are at times taken for granted and even ignored. On some occasions publications may do little more than note that nails were recovered during excavation. There is of course the famous hoard of iron nails from the fortress at Inchtuthill where nearly a million nails (10 tonnes) were found in a single pit (Pitts and St. Joseph 1985). The sheer size of this hoard makes the conventional interpretation (Pitts and St. Joseph 1985:109) that the nails were hidden as the army retreated in order to deprive the enemy of a valuable source of metal seem unconvincing. At other sites in the region (e.g. Newstead and Coventina's Well) the ritual deposition of Roman artefacts in pits and shafts is well established. Ethnographic parallels for the ritual use of nails are frequent (and the *minkisi* figures of the Kakongo are perhaps the most dramatic). The Roman practice of *clavus annalis* and the nailing of curse tablets (*defixiones*), however, shows that even the Romans were capable of assigning magico-religious significance to an apparently simple task such as hammering in a nail. While the idea that material culture can bear a range of meanings is not new (cf. Hodder 1982), the demonstration that this could have operated for Roman nails should warn us against complacency in the interpretation of even the humblest forms of material culture.

Bakongo minkisi

Parallels for the ritual use of nails in other cultures are not difficult to find. One of the most visually dramatic is that of a class of *minkisi* (sing. *nkisi*) figures known as *minkondi* (sing. *nkondi*) of the Bakongo in the lower Congo valley, Africa (Bassani 1977; McGaffey 1977; 1988; 1993; Mack 1995; Shelton 1995; Volavkova 1972). These wooden statues, now mostly in European museums, are decorated with large numbers of nails (see figure 1). Interpreting the function and meaning of *minkisi* is made difficult by the fact that those extant in European museums are no longer still in use and ethnographic records from earlier this century must be used to reconstruct how they were used. *Minkondi* figures have become popular in the West for a number of reasons. Initially they were seen as 'fetishes' and examples of the assumed primitivism and lack of abstraction in African art and thought. Indeed some aspects of modern fetishism derive from a (mis-)understanding of *minkisi* figures. For a while almost any anthropological art was assumed to be fetishistic (Shelton 1995). In addition, while *minkisi* were first mentioned by European travellers in the sixteenth century, their use in Africa may have changed under the impact of European invasion and colonialism, especially as some *minkisi* (in particular the *minkondi* figures) were associated with violence and could act as foci of resistance. More recently attempts have been made to view them in context as physical elements in a complex magico-religious belief system (especially McGaffey 1977; 1988; 1993). Bakongo *minkisi* were used in mediations between the living and certain spirits.
in order to solve some problem, especially illness. This was achieved by spirits (called *bakisi*) which hunted out witches who caused the illness. The Bakongo division of their world between the living and the dead was of crucial importance and those who mediated between these two worlds were also important. The social order was governed by lineages ruled by chiefs and elders who also acted as intermediaries between ancestors and the living. Chiefs maintained their power among the living through their influence with the ancestors. Diviners performed a similar purpose with regard to local spirits and could determine fortunes in war, rainfall, etc. Chiefs and diviners who interceded with the spirit world were expected to act for the public good. People who manipulated spirits or ghosts (*bandoki*) for their own ends and inflicted harm on others were regarded as witches. Almost any misfortune or illness could be seen as the result of a witch’s spell and could only be cured by recourse to a specialised spirit called a *nkisi*. Each *nkisi* had a function, such as curing a disease, and could only be ‘activated’ by a special collection of magical substances also called a *nkisi* (McGaffey 1977; 1993). The Kikongo terms for the spirit and the means of activating it are the same in the singular (*nkisi*) but different in the plural (*bakisi* and *minkisi*, respectively).

*Minkisi* were composed of two basic elements: the ‘medicine’ and the container. The ‘medicine’ consists of minerals, herbs and plants and animal parts. These were carefully selected as ‘powerful’ elements depending on their colour, name or metaphorical associations. White kaolin clay (*mpemba*) was popular as white was the colour of the dead, while ochre (*nsadi*) was used as a symbol of blood and danger. Bones or teeth from powerful or tenacious hunting animals such as leopards were often used. Other substances could be seen as ‘powerful’ because their names implied useful attributes by pun, e.g. a
creeper with red pods called *kisimani* which means ‘to hold tight’ implying the tenacity of the remedy. All of these ingredients were carefully mixed together and stored in a cloth bag, pouch, pot or cavity in a figure. Simple cloth bags may have been the most common *minkisi* amongst the Bakongo but it is the *minkondi* figures which have been valued by western collectors and so are best known. The ‘medicines bundles’ enabled the owner/client to communicate their problem and make requests to the *nkisi* spirit: the container or figure had no power itself. Particularly powerful *nkisi* had particular owners called *nganga* (pl. *banganga*) who learned special rituals and songs which were used to attract the *nkisi*’s attention (McGaffey 1988; 1993).

From the perspective of this paper the most interesting aspect of the *minkisi* was the hammering of nails or knives into some *minkondi* figures. These wooden figures acted as containers for *minkisi* ‘medicine bundles’ and the hammering of nails or other sharp objects (knives, scissors, etc) acted as part of the ritual. One of the phrases used to indicate the activation of a *nkisi* was *koma nloko* (literally ‘to hammer a curse’). The nails could serve two purposes: either simply as means of attracting the attention of the *nkisi* spirit, or as direct symbols of what would befall the witch who caused the original illness or problem. McGaffey reports on one respondent who says that “the knives in the chest are not put there by the *nganga* but by those who make the contract’. The knives seem to have been to ensure that the medicine would not accidentally fall off. ‘If they were just put on the *nkisi* it might get rid of them” (McGaffey 1993:83). Each blade (*mbau*) driven into the figure also represented an appeal to the force represented by that figure, arousing it to action, and were a direct indication of what would happen to the witch, enemy, etc. (McGaffey 1993:44, 84). The driving in of a nail or other sharp implement clearly formed a focal part of the ritual use of *minkisi*.

**The Crucifixion and more recent use of nails as ritual artefacts**

The belief that nailing could carry some sort of symbolic meaning can be found in many other cultures. In Europe this may derive in part from the symbolism of the Crucifixion (although the survival of folk traditions connected with *defixiones* should not be discounted out of hand). Ferguson (1954:178) identifies nails as a potent Christian symbol because of their use in the crucifixion of Christ. The crucifixion acted to re-establish Christ’s divinity and ensured human salvation (Shelton 1995:22). Many paintings of the Passion, e.g. Mathias Grünewald’s *Christ on the Cross*, have a sado-masochistic air to them. Little doubt is left that Christ is suspended by nails and that this causes considerable pain (e.g. the writhing hands). These paintings show ‘clearly articulated suffering and bodily denial as a path to eternal life and the attainment of supernatural authority’ (Shelton 1995:22). Artefacts associated with the Passion (including the nails) were occasionally painted in their own right, such as Jacopo de Sellaio’s *Christ with the Symbols of the Passion*. The association of spiritual enlightenment with pain can be seen in the lives of some of the early Christian saints. St. Sebastian is usually shown in paintings as having been pierced by a number of arrows: see especially Antonello Da Messina’s *St. Sebastian* where the saint’s far-off gaze transcends the pain and suffering of the piercing crossbow bolts (Thurston and Attwater 1956:128–30). Interestingly enough invocations of St. Sebastian were often undertaken against the plague (ibid.) echoing the use of *minkisi* and *clavus annalis*. The spiritual power of pain in Christianity continued in the Middle Ages with the flagellants, a deeply influential lay movement which gave physical expression to the ‘Christian hatred of the body’ (Shelton 1995:22).
The use of pins or nails is commonly associated in Europe with 'witch-craft'. The stereotypical view of magic and witch-craft sees the use of a dummy or model of the target. This is pierced by pins or needles and the injury is seen to be magically transmitted to the real target. The infliction of pain or death in this way can be seen as early as Ovid: “fashion the waxen image, and into its wretched heart drive the slender needle” (Heroides 6.91–2).

While nails could easily be used in this context they could also be used as more positive symbols. Lupton’s *Thousand Notable Things* (published in 1579, quoted in Opie and Tatem 1989) recommends the driving in of three nails to cure ‘falling sicknes’. Ter Laan (cited in Shelton 1995:22) records a miraculous head of a saint which cured headaches when nails were hammered in by pilgrims. Similarly nails were hammered into skulls (presumably of those long dead rather than the actual sufferer!) in early twentieth century Ireland to cure headaches (Westropp 1911:56). Pins were also stuck into an image of a saint in one part of France to help young girls find future husbands (Shelton 1995:23). Nails could also be used as protection, such as the witch-bottles (Merrifield 1987:163–75) which were used to counteract witch-craft.

During the First World War the German public were encouraged to drive nails into statues as a fund raising exercise (Shelton 1995:23–5; *The Illustrated London News* December 25, 1915). Nails have continued to exercise powerful symbolic associations in the western world in the post-war era. Luck and magic are often associated with nails amongst recent populations in the mid-western states of the United States of America, for example, nails were not used in a child’s coffin to ensure future fertility, but a single nail was used as an amulet to ward off ill-luck (Hand et al. 1981).

Nails and other sharp implements have continued to act as symbolically powerful artefacts through their use in fetishism (Shelton 1995). Amongst the sadomasochistic acts highlighted by the Spanner Trial (*The Times* 21 February 1992, 12 March, 1993) was the hammering of a nail into a man’s penis.

*Traditional Archaeological Approaches to Nails*

Any sizeable excavation on a site occupied in the Roman period is likely to yield at least one nail. Despite their ubiquity, the study and publication of iron nails is not always as comprehensive as it might be. Guides to Roman archaeology are variable in their coverage: for example, Collingwood and Richmond (1969:312) note that Roman nails are usually square in section and vary greatly in size, while Bédoyère (1989) makes no reference to, or illustration of, nails. Similarly, the treatment of nails in excavation reports, is uneven. Some reports catalogue all of the nails present according to some typology (see below) and illustrate at least one example from each type, e.g. Lankhills (Clarke 1979). Many others, however, make no mention of the nails which were found, e.g. Castle Street, Carlisle (Padley 1991), Neatham, Hampshire (Millett and Graham 1986) and Cirencester, Gloucestershire (Wacher and McWhirr 1982). Use has been made of the positions where nails have been found during archaeological excavations to infer the presence of various wooden structures such as buildings (Woodward and Leach 1993:60–1, figure 53), timber-lined pits (Pitts and St. Joseph 1985:109, figure 23) and coffins (Clarke 1979).

Nails have been studied as artefacts in their own right by Cleere (1958) and Manning (1985) who have provided typological schemes based on the size of the nails and the shape of the head. These two typological schemes are very similar and both identify four principal types of nail. Two have square sectioned shafts; one of these has a flat head (figure 2.2, by far the commonest type of Roman.
nail) and the other has a domed or pyramidal head (figure 2.1). The other two types of nail have a rectangular section and either flat heads (figure 2.4) or diamond shaped heads (figure 2.3). Nails, even of just one type, show such a variation in their size and proportions that it is clear that they were all made by hand (Clarke 1979:332–6). Pliny (34.49.143) reports that of the various types of iron produced, soft iron (i.e. wrought iron containing no carbon but some trapped slag) that was best for making nails. He also notes that, ‘another variety of iron’ (steel?) was more suitable for the nails for soldiers’ boots. Angus et al. (1962) carried out a detailed scientific study of the nails from Inchtuthill. The metallographic examination of the nails confirmed that most were made from relatively soft wrought iron while some of the larger nails made use of harder steel. Angus et al. (1962:966) tentatively suggest that harder, carbon-rich iron (steel) was selected for use in the manufacture of larger nails. The use of wrought iron (at least for smaller nails) is also confirmed by Smythe (1937:397) who noted that hobnails tended to have higher carbon contents (cf. Pliny).

The traditional approach to the study of Roman nails has catalogued their shape and size and even made use of scientific techniques to determine the mode of manufacture. This approach seems to have reached its limit and it is necessary to expand our horizons to...
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include more complex configurations which include the ritual use of nails. The ethnographic
evidence discussed earlier should alert us to the possible associations between nails and
magico-religious beliefs and practices. There is, however, some direct evidence that in the
Roman world nails could be viewed as magical artefacts.

Clavus annalis

One of the clearest examples of the ritual use of nails in the Roman world is the so-called
clavus annalis ('annual nail', see Freerstein 1901). Most scholarly attention to this
practice has focused on the possibility that it may help to provide an absolute chronology for
early Rome (Unger 1873; Mommsen 1859). Livy describes how in 363 BC a dictator was
elected to drive a nail into the wall of a temple to ward off floods and disease, supposedly
reviving a practice carried out during secessions of the plebs (Livy 7.3.3-4). Similarly in
331 BC a dictator was elected to drive in a nail. The aim seems to have been to restore social
order in the wake of mass poisonings (Livy 8.18.12-13). Livy (7.3.5-9) also provides a
fairly detailed account of the context for the nail driving. Nails were hammered into the wall
of the temple of Jupiter on the 13th of September by an elected dictator as a protection
against the plague. Each nail would have been left in place and Ogilvie (1969) suggests that
by the end of the Republic the temple wall bristled with nails: 'sight-seers in Sulla's day
could still see and count rows of rusty nails' (Ogilvie 1969:95). The practice also seems to
have been carried out at the temple of Nortia at Volusii and Dio Cassius records that
Augustus allowed the same privilege to the temple of Mars Ultor.

Unger (1873) claimed that the practice was annual, while Mommsen (1859) thought it
might only have occurred each century. Others (e.g. Ward-Fowler 1899:172) have doubted
whether the practice was of such chronological, rather than religious importance. Some have
suggested that when the ritual was revived in the later Republic its purpose was in part
misunderstood. Nevertheless the idea of clavus annalis as a means of recording time can be
seen to have had some general currency (Cicero Letters to Atticus 5.15. "Ex hoc die clavum
anni movebis").

While nails had a clear and explicit ritual role in the so-called clavus annalis there are
other ritual practices which would have used nails. Nails may have been selected because of
the existing symbolic associations or acquired new ones through different rituals.

Nails in Roman Burials

Nails are regular finds in Roman burials (cremations and inhumations) where they are
usually interpreted simply as the means with which coffins, biers and other containers were
held together (Clarke 1979:332; Wenham 1968:25, 39). This purely functional interpretation
has led to some simplification of the excavated evidence: the illustrations of the graves at
Lankhills do not show the positions of all the nails 'in the interests of clarity' (Clarke
1979:19). It is possible that nails were deliberately added to burials, perhaps as a means of
'fixing' the dead (Black 1986:223). Thompson (1956:E442.2) records just such a use of
nails driven into the corners of a grave to lay a ghost to rest in modern India.

Pliny (28.17.63) proposes that a nail could be used to cure an epileptic: the nail should
be hammered into the spot where the epileptic's head first struck the ground. Clearly Roman
nails could have symbolic associations and may have been a focus for intercessions between
the natural world and the Otherworld. Many of the metal plaques, and letters associated with
Roman temples would have been hammered to the walls. This leads directly on to a
consideration of tabellae defixiones many of which were pierced by nails.
Defixiones

The Roman habit of writing out magico-religious prayers or curses is fairly well-known (Henig 1984:166; Keppie 1991:118; Merrifield 1987:137–142; Preisendanz 1972). Tacitus (Annals 2.69) implies that magical means were used in the assassination of Germanicus and lists a number of objects which are supposed to have been used, including a lead tablet inscribed with his name. Small sheets of lead bearing inscribed derogatory messages are fairly well-known archaeological finds.

Figure 3. Lead curse tablet (tabellae defixiones).
(Collingwood and Wright 1965: RIB 221: © Royal Archaeological Institute.)
Mystifying Roman Nails: clavus annalis, defixiones and minkisi throughout the Roman empire (Keppie 1991:118; Tomlin 1988; 1993; RIB:6, 7, 154, 221, 243, 306, 323). The motivation for the curses is frequently theft, loss or luck but also includes legal disputes, love affairs, chariot races and gladiatorial fights. Curse tablets primarily show an interest in human success and failure: they “can be used to ensure bad luck for someone else, or to correct own bad luck” (Tomlin 1988:60). In many cases the lost or stolen property (or a portion of it) is promised to a deity in return for the recovery of the property and punishment of the thief. The level of punishment to be meted out on the culprit often seems out of all proportion to the crime committed; for example, “he may be accursed in his blood and eyes and every limb, or even have all his intestines quite eaten away” for stealing a silver ring (Tomlin 1988:230–1; Tab. Sulis 97). The inscriptions are often directed against an individual but in many cases (e.g. theft) the identity of the individual is unknown and resort is made to quasi-legal formulae such as “whether pagan or Christian, whosoever, whether man or women, whether boy or girl, whether slave or free” (Tomlin 1988:232; Tab. Sulis 98). Roman curse tablets may on occasion have been inscribed by professional ‘magicians’. The use of mystifying procedures such as reversing letters or words and the use of Greek all helped heighten the impression that this was a magical activity (Merrifield 1987:138). Some tablets may, however, have been written out by the aggrieved individual: the inclusion of uninscribed lead tablets and of tablets with simple, almost random scratches from the amphitheatre at Trier implies their use by the illiterate who were unwilling to entrust a professional (Rheinisches Landesmuseum Trier 1984:189; cf. Tomlin 1988:253).

Curse tablets were activated in one of two main ways: by placing in a chthonic or haunted location or by nailing (Merrifield 1987:138). Most of those tablets which have recently been discovered in Britain belong to the former category (Tomlin 1988; 1993). Once inscribed tablets were carefully folded or rolled up and dropped into a sacred well or spring (as at Bath). Alternatively it was assumed that the message could be taken by a ghost who would pass the message on to the powers of the underworld. This was achieved by depositing the curse tablet in a tomb, cemetery or in an amphitheatre (commonly assumed to be haunted). The other means of activating a curse tablet was to pierce it with a nail. The very term for these artefacts (defixion) implies that the nailing of the tablet could act as an important focus for the ritual ‘fixing’ of the target (Henig 1984:166). Occasionally the nailing may have been intended to be transmitted to the target literally: such an example is the tablet from Carthage (CIL 8 supplement no. 12511) which says that the victim’s hands and head are to be nailed down in the same way as the feet, hands and head of the sacrificed fowl (discussed in Jevons 1908). The nailing of the curse tablet may also have acted as a means of displaying the tablet (perhaps in a temple precinct) where it could be seen by all (unlike those which were rolled up and then hidden in wells, cemeteries, etc). The exhibition of the aggrieved’s wish for vengeance or the like could have acted as a powerful check on anti-social behaviour. The differences between these two means of activation are not always clear cut, examples from Trier were rolled or folded up and pierced by a nail (Rheinisches Landesmuseum Trier 1984:189).

The recent discovery of large numbers of rolled or folded up curse tablets (especially at Bath, Tomlin 1988) has tended to focus attention on this category and away from the nailed tablets. The current imbalance between nailed and rolled or folded tablets may be largely a product of archaeological preservation rather than ancient action. Tablets which were nailed up would be much more likely to be recycled (either as curse tablets or melted down and used for some other purpose) than those which had been hidden in wells or springs. The curse tablets discovered before intensive modern excavations may provide a more accurate impression of the ways in which they were activated. Only 7 curse tablets are recorded in
Of these only one was folded (RIB 243 from Chesterton), two were flat and had no nail holes (RIB 154 from Bath and 306 from Lydney Park), while the remaining four had nail holes. The Walbrook curse tablet (RIB 6; Merrifield 1987:140, figure 7) is pierced by eight nail holes and the Baldock example (RIB 221; Westell 1931:290~2) has five nail holes (four of which still have iron nails, see figure 3). This suggests that nailed and displayed curse tablets may have been more common than the partial survival in the archaeological record would otherwise indicate. The use of more than a single nail shows that nailing was not simply a means of fixing a tablet to a wall or such (indeed the Walbrook example has hammered from the uninscribed side, thereby hiding the message, and the Baldock tablet came from a burial). Repeat nailing could have formed an important part of the ritual (to say nothing of potential cathartic benefits).

Conclusions: Nailing as a Ritual Activity

All archaeological analysis starts by analogy: we recognise Roman nails as nails because they resemble modern ones. Modern nails are viewed almost exclusively as utilitarian items which are used to fix pieces of wood and the like, and so Roman nails (especially those recovered by archaeologists) have usually been regarded as simple utilitarian artefacts. The above discussion of specific ritual uses of nails from ancient Rome, the Congo and elsewhere shows that nails can acquire deep symbolic meanings and can act as powerful foci during magico-religious activities. While I do not want to propose that there is a single explanation for the use of nails as items in ritual activities for all cultures and all times, there are some physical attributes of nails which remain constant and so are available for incorporation in a wider cosmological scheme.

Discussions of magico-religious rituals feature prominently in social anthropological literature (e.g. Durkheim 1915; Evans-Pritchard 1937, 1969; Frazer 1936; Mauss 1972; Skorupski 1976). The traditional Frazerian view of magical action is as sympathetic or as contagious magic. In sympathetic magic an image or effigy is created and any injuries which befal the image are believed to also occur to the real object (Frazer 1936). The classic image of the wax effigy being pierced by a needle and the intended subject then suffering excruciating pain falls into the category of sympathetic medicine. In contagious magic some property of an object is supposed to rub off on the subject (for good or ill). The choice of which objects and which properties are appropriate for transference in this way are always embedded in the cosmology of the particular society.

Nailing at first seems to be an essentially destructive, penetrative and painful act and it is possible that nails could be used in a similar way to needles in sympathetic magic to inflict pain. Nevertheless nailing may be transformed into a positive act such as the curing of ailments of the head by hammering nails into skulls. This is also seen in Christian cosmology where Christ’s pain (inflicted with nails) is seen as the route to salvation.

Many examples of the magico-religious use of nails illustrate how they could be used in contagious magic. In some societies nails are used as lucky charms. The way in which nails have acquired this protective quality is rarely made explicit but may be related to the power that (coffin) nails have to fix the dead in another world.

The literal, physical action of a nail is always open to ambiguous symbolic interpretation. Nails penetrate and damage that into which they are nailed and so can easily be seen as destructive and negative. Nails also unite or bring together the objects which are nailed and so can also be seen as positive. Even where neither of these symbolic aspects of a nail is used explicitly they can still serve to add power and significance to other magical symbols.
In this way the nailing of minkisi figures or defixiones helped ensure that the 'spell' was taken seriously. This may even be heightened where an incompletely hammered nail provides a visual aesthetic impact: the protruding nail head advertises its presence for all to see (as in the rows of nails in the temple of Jupiter).

I hope I have shown that even the most humble of artefacts such as the Roman nail may have had complex symbolic associations. A recent study of ritual artefacts (Whitehouse 1996) focused entirely on those objects for which no utilitarian purpose could be found. It should be clear by now that many 'everyday' objects could be used in magico-religious activities. We should always be wary of common sense explanations of artefacts. I hope that future excavations and publications pay more attention to Roman nails.

So what are all those nails doing at Inchtuthill?

My suspicion that Roman nails may not have been viewed exclusively as simple utilitarian tools was sparked by all those nails in a pit in the fort at Inchtuthill. To me there seemed to be far more of them than could be plausibly explained in terms of simple disposal. The claim that the army did not have the resources to transport them south seems unlikely and the nails were hardly made of the sort of high quality metal which could be used to manufacture weapons (to say nothing of the technical problems of trying to weld together dozens of nails). If the traditional explanation is rejected and a ritual explanation is seen as acceptable there still remains the problem of the exact nature of the magico-religious symbolism of the nails in this case. The nails were not hammered into anything and were buried out of sight. It is possible that accumulation of such a large number of nails during the demolition may have been unsettling. The soldiers would have been aware that nails had powerful magico-religious symbolism and may have felt the need to prevent any uncontrolled magical consequences. The burial of symbolically powerful artefacts can be found in other societies (e.g. the burial of the large gongs used in Gamelan orchestras in Bali because of their inherent powerfulness, Jane Dowdes pers. comm.).

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Bibliography


Heinemann.
Mommers, T. 1859. Die Römische Chronologie. Berlin
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