

## **Introduction**

Artefacts are playing an increasingly significant role in our understandings of life on the Roman frontier, especially of the range of activities that took place at military sites and of the people who made up these communities. This paper discusses some of the problems and the advantages of using artefacts to investigate these communities and particularly to quantify the civilian population inside Roman military bases.

## **Communities inside and outside of Roman military bases**

In his paper at the XIXth Limes Congress in 2003 in Pécs, Hungary, Bill Hanson (2005) noted increasing recognition of civilians on the frontier. He outlined epigraphical and artefactual evidence for the various civilians who would have made up the communities in and around Roman military bases – local populations, senior officers' households, and the servants and families of centurions, cavalrymen and ordinary soldiers. While Bill acknowledged evidence for families and slaves of both senior officers and ordinary soldiers living within these military bases, he felt that these bases were 'unlikely to have accommodated more than a few of the civilians on the frontier' (Hanson 2005: 304).

Ancient sources indicate that the slaves and servants associated with the Roman legions and auxiliary troops, either owned by individuals or by the unit in general, could outnumber serving soldiers, particularly in a permanent camp (for discussion: Speidel 1989; Phang 2005). Whether or not these personnel were considered civilians (see Wild 1968: 181; James 2001: 80), they can reasonably be counted as essentially non-military personnel who were accommodated, or at least spent much of their time, inside the fort. Other civilians associated with the military –unofficial families of ordinary soldiers, tradesmen and craftsmen – are traditionally assumed to have lived in external settlements outside the fort and fortress walls. However, this assumption is no longer tenable for all early imperial military bases, and neither are assumptions about how civilians living inside and outside the forts would have been differentiated (see e.g. van Driel-Murray 1995; Allison 2013). In this paper, in an attempt to test Bill's assumption that civilians living inside fort walls were few in number, I will explore ways that this civilian presence might be quantified.

Few civilians are assumed to have lived inside military bases partly because past scholars have considered families and personal servants to have required adequate space and appropriately structured residences, as found in senior officers' and some centurions' residences (Hoffmann 1995; for discussion Allison 2013: 25-26; see also Allason-Jones 2013: esp. 81-82). Consequently, the layout of excavated forts and fortresses and the amount of space available inside soldiers' barracks have generally been used to calculate the sizes of units stationed there (e.g. Zanier 1992: 174; for discussion and further references Maxwell 2009), from the premise that these spaces were not occupied by civilians (for discussion: Allison 2013: 15, 335). Except for those who tended animals (von Petrikovits 1975: 57-59), space required for personal servants and camp slaves has not been addressed. However, assumptions about the amount and appropriateness of space required by the servants and families of military personnel are anachronistic (see van Driel-Murray 1995: 31; James 2001: 84), and calculations of available structured space can be misleading for quantifying both military personnel and civilians living inside military bases. The question for this paper is whether the artefacts left behind at these sites provide a more useful key? Can they be characterised to help us to quantify civilian presence, at least to some degree? I will attempt such calculations using examples and percentages of dress-related artefacts from four early imperial sites in Germany – the legionary fortress of Vetera I, the earlier fortress and fort at Rotteil, and auxiliary forts at Ellingen and Oberstimm.

### **Using artefacts to identify the kinds of people inside military bases**

The first question to address is the usefulness of artefacts to investigate different kinds of people, and to distinguish military from civilian personnel. I recently investigated the activities and the modes of dress documented by artefacts and their distribution patterns to gain insights into who might have frequented the different parts of these military bases (Allison 2013). While the pitfalls of associating specific artefacts with particular identities can be demonstrated (e.g. Allason-Jones 1995; Cool 2002: 29-30, 41), I have argued that certain artefact types have a propensity for particular gender and status characterisation (Allison 2013: 65-108; see also Cool 2010: 31; Allison forthcoming), so that the distribution patterns of these artefacts and their assemblages can be used to identify at least some of the civilian members of military communities, their activities and the places they frequented. My study focused mainly women and children, as civilian members most easily identifiable through artefact distribution (Allison 2013: 5). While it is more difficult to distinguish the artefact signatures of combatant males from those of non-combatant males, this paper will

look more closely at the artefactual evidence that can potentially be used for distinguishing the presence of combatants from that of both male and female civilians.

### *Modes of dress*

One of the main ways in which different status groups distinguish themselves is through their dress and many artefacts found scattered across military sites are dress related. These dress remains are almost invariably of metal, at least in part – belt fittings, brooches, pendants and other items of jewellery (e.g. finger rings and beads) – and are likely to have comparable depositional histories. Across the general artefact assemblage, these types of ‘small finds’ have the greatest propensity to be lost items dropped in areas frequented by their wearers and so the greatest potential to document spatial practices. Remains of leather shoes are also frequently found at military sites (e.g. at Bar Hill: Robertson *et al.* 1975: 59-83; Vindolanda: see van Driel-Murray 2001: esp. 186; Valkenburg: van Driel-Murray 1985: 49-53). However, these tend to be discarded, as opposed to lost, artefacts, because they were worn out or surplus to need. They are often found in the fort ditches but also inside military buildings, possibly discarded by the building’s occupants during their departure (van Driel Murray 1995: 8, 16).

Despite the different types of dress worn but different identity groups in the Roman world, it is quite difficult to definitively associate archaeologically-evident dress-related artefacts with different identity groups. That said, some artefacts have a greater potential than others for such associations. The following discussion briefly outlines those types of dress-related artefacts that occur on Roman frontier sites and that can, to some extent, be characterised according to different status and gender identities.

### Artefacts associated with military dress

Allason-Jones noted (1999: 3) that relatively limited amounts of ‘unequivocally military [items], such as helmets, swords and shields’ occur at such sites, as these items would more normally have been taken by departing soldiers. Remains of armour that are definitively military dress are indeed found in excavated military sites but may have been disposed of as scrap during abandonment of a site (see Bishop 1986), or recycled, rather than being lost near the location of their end use, not least because armour was not usually worn by soldiers inside forts. Here they normally wore just a short tunic and a cloak (see e.g. Sumner 2009; Speidel 2012). The tunic was hitched up with a leather military belt (*balteus* – Bishop and Coulston

2006: 106-9), which often had a decorative front panel, or ‘apron’ (Bishop and Coulston 2006: 109-10; see also Hoss 2012). The cloak could be draped cloak (*sagum*) attached at the shoulder with a metal brooch, or a poncho-like cape (*paenula*) fastened with buttons and toggles (Bishop and Coulston 2006: 111). When he was ‘at home’ these elements of a soldier’s dress and his hobnailed leather military boots (*caligae* or *calcae*) distinguished him from a civilian (Speidel 2012: 8-9).<sup>1</sup> Indeed, the remains of such military dress – belt fittings, brooches and parts of nailed shoes – are more frequently found in military sites than pieces of armour and helmets (for discussion: Bishop 2011).

Military belt fittings – the main artefacts excavated from military bases most convincingly associated with military dress – consist of metal plates and hinged buckles, but could also include other unspecified buckles and hinges, strap fittings and pendants, the latter as parts of the aprons that hung from these belts (see Bishop and Coulston 2006: 109 fig. 6.3). Pendants of a suitable size and type for this function were probably less than 80 mm in length and leaf or teardrop shaped (see Allison 2013: 86-88). It is not clear, though, how other types of small pendants found at military sites (e.g. *phalloi*) were worn, whether by soldiers, civilians, or indeed by horses (Bishop 1988: 98; see Allison 2006: 228 cat. no. 1724, 382). These remains possibly broke off easily and were either lost or discarded.

Brooches are another major group of potential dress-related artefacts found at military sites but are less certainly part of soldiers’ attire. Scholars have argued that the presence, and indeed the proliferation, of certain brooch types at military sites can be used to identify them as soldiers’ brooches. For example, of the types found in the sites discussed in this paper, *Drahtfibeln* (wire brooches), *Kniefibeln* (knee-shaped brooches) and Aucissa brooches, are the main types considered to be more strongly associated with soldiers (see Swift 2011: 212-13).<sup>2</sup> Astrid Böhme also argued that spiral brooches with a triangular head plate, *Augenfibeln* (eye brooches), and omega- and ring-shaped brooches were associated with the military (for discussion and references: Allison 2013: 72-74, 242). Conversely, Allason-Jones (1999: 2) argued that it is impossible to assign military or gender identities to brooches, on the bases that exceptions can always be found. However, an observed consistent association of these brooch types with military sites (Gechter 1979), rather than an exclusive association and use

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<sup>1</sup> See Juvenal *Sat.* 16 on the ‘hob-nailed’ centurion.

<sup>2</sup> An exception is the Aucissa brooch type with protuberances (*Fortsätzen* – see Allison 2013: 116-17).

is likely to mean that these particular types may have had a propensity to be worn by military personnel.

Further dress-related items that occurred at these sites and that could have been worn by serving men include medallions (for discussion: Allison 2013: 118) and also finger-rings that would have fitted male fingers (see Allison 2013: 80-1). In addition, drop handles may have been used as helmet carriers, although these could also have had other non-military functions (see Allason-Jones 1999: 2; Allison 2013: 69).

While footwear generally associated with soldiers consisted of hob-nailed boots, they also wore sandals (*crepidae*) or clogs (*sculponae*) when inside the fort (Sumner 2009: 191-205; see also van Driel-Murray 2001). And, although essentially Roman types, these shoes could be worn by civilians – male, female and children (see van Driel-Murray 2001: esp. 194). Probably because of the excavation dates for the sites discussed, and their taphonomic conditions, only a few items of footwear were recorded.

#### Artefacts of non-military dress

Identifying dress-related artefacts that would not have been part of the attire of serving men and therefore the attire of male civilians is problematic. Civilian male dress in northwest provinces consisted of a long-sleeved tunic with leather belt that probably lacked a buckle (Wild 1968: 181-3; see also Sumner 2009: 205; Speidel 2012: 9). Like the soldiers, though, they could wear a *sagum* with brooch, or a *paenula* (Wild 1968: 183-4; Böhme 1997: 33-5). A tablet from Vindolanda describes the centurion Clodius Super's request for six *sagaciae*, a number of *sagae*, seven *palliola*, and six(?) tunics for his *pueri* (Tab *Vindol.* II 255; see Birley 2002: 101; Speidel 2012: 6), indicating that slaves wore similar attire. We cannot be certain that personal servants did not wear armour, although Michael Speidel argued (1989: 240-5) that they did not have swords or sword belts.

There is no specific evidence that servants, especially freedmen (Phang 2005: 207), would not have worn finger rings. Given the general higher status of soldiers (see Phang 2005: 205-8) most of the rings found in these military sites, that were not those of women and children, were more likely to have been worn by soldiers than by their servants. This does not mean, though, that none would have been owned by non-combatant male members of military communities.

Thus, civilian male dress can be described rather by what is missing than by any specific artefacts considered to belong to their dress that could not equally have been part of soldiers' attire. That said, some belt buckles found in the sites in this study can be considered parts of male civilian dress, such as a belt buckle made of deer antler recorded at Oberstimm (Böhme, in Schönberger 1978: 287, cat. no. F1a). The most likely traces of the dress of non-combatants on military sites, however, would be brooches but the question is how to distinguish them from brooches worn by serving men? It is conceivable that types of brooches that are less prevalent and seemingly less representative of some sense of a 'military uniform' were more likely to have been worn by civilians. Given the evidence for civilians within these military bases the logic that the military context identifies all these brooches as soldiers' brooches is unsustainable.

Dress-related artefacts found inside military bases that are most obviously part of civilian attire are those most likely to have been parts of women's and children's attire. These consist mainly of hairpins and necklaces, and possibly other beads, but include particular types of brooches and belt fittings, and certain sizes and types of finger rings (see Allison 2013: 71-89, 116-17, 164-5, 189, 242-4) as well as small-sized shoes (see van Driel-Murray 1995). These items could equally have been worn by female members and children of serving men's families, by female servants, or by tradeswomen (see e.g. Allison 2013: 142, 145).

### **Quantifying artefacts to quantify the kinds of people occupying Roman military bases**

To use such artefacts to assess the quantities of civilians inside military bases is undoubtedly problematic. Fittings from armour or soldiers' belts indeed can be ascribed to service men with some degree of certainty and items likely to be associated with women's and children's dress can most probably be ascribed to civilians, but many dress-related items can be less assuredly ascribed. Thus, quantifying the numbers of women and children inside military bases through artefact assemblages (Allison 2013: 335-43) is less difficult than estimating how many civilians in general, may have occupied military bases but it can assist in the latter endeavour.

The following calculations use ascriptions based on the above outline of dress types and their accessories to postulate the quantities of civilians that may have inhabited the four military

bases – Vetera I, Forts I and II at Rottweil, and the forts at Oberstimm and Ellingen. The types of artefacts used here have been chosen on the basis that there is likely to be some coherency across their depositional histories, although these cannot be considered equivalent. As very few shoe remains were recorded in the sites in this study, and as their depositional histories tend to be different, they are not included in these calculations.

In the first-century fortress, Vetera I, excluding two pieces of leather, and three wool samples, 347 recorded artefacts are potentially associated with dress (Hanel 1995 vol II; Allison 2012: Downloads, Vetera) (Fig.1). All of these are metal except for 49 glass beads, glass medallions, and glass-paste inlay from finger rings, 8 bone discs and pins and two stone finger-ring inlays. Of these 58 artefacts (metal armour and belt fittings) can be definitely identified as military dress, and another 186 artefacts may have been parts of the attire of serving men. The latter include the remains of three glass medallions and 35 male-sized finger rings and possible finger rings. This means that only c. 17% of the dress artefacts from this site can be definitively associated with military dress although another c. 54% were possibly the attire of military personnel (Fig. 2). 74 items (c. 21%) of the dress-related remains from this site were most probably from women's and children's dress. Another 29 (c. 8%) were possibly associated with male civilian dress. These calculations suggest that 21% of the occupants inside the fortress at Vetera I were almost certainly civilians and probably some 30%, implying that the population within this double legionary fortress, if at full capacity, was likely to have included some 3600 civilians. This figure is probably rather low, however, as it implies that the majority of the civilian occupants were women and children, with less than half as many male civilians - slaves, servants and tradesmen.

Only 26 dress-related artefacts were recorded during the piecemeal excavations of the first-century fortress and subsequent fort at Rottweil (Forts I and II - Franke 2003; Allison 2012: Downloads, Rottweil). These limited artefacts are provenanced to both forts in relatively equal numbers. What is perhaps notable is that very few were definitely (c. 8%) or more probably (c. 19-20%) parts of military dress. The majority of these dress-related items are associated with women and children (c. 54%) and possibly civilians more generally (c. 73%). These percentages might be explained by the less rapid process of abandonment of these sites and the likely depositional processes of most artefacts of military dress. Of these dress-related items under half are of metal suggesting possibly recycling.

In the first- to second-century supply fort at Oberstimm 209 potentially dress-related artefacts were recorded, excluding remains of one nailed leather shoe sole (Böhme in Schönberger 1978: Allison 2012: Downloads, Oberstimm). 44 of these were brooches comprising a great range of types (Böhme in Schönberger 1978: 181-4), only seven of which would appear to be military types., 70 (33.5%) of these dress-related artefacts are from military dress and another 59 (c. 28%) may have been worn by soldiers. Thus, potential soldiers' attire comprises some 62% of all dress-related items from this site. The presence of some of these dress-related artefacts might result from this fort's function as a supply fort, or perhaps as a location for recycled metal, rather than that they were the dress of the fort's inhabitants (see Bishop 1986: esp. 719, 721-2). However, some 47 artefacts (c. 22.5%) are associated with women's and children's dress, a comparable percentage to that at Vetera I. The 33 items (c. 16%) possibly associated with male civilians bring the quantity of potentially civilian dress-related items to over 38%. Again, these percentages suggest that there were more women and children than male civilians occupying this fort. They imply that this rather small fort, covering some 1.7 hectares (see Sommer 1999: 166) and housing up to 300 soldiers (Schönberger 1978:15; see Allison 2013: 335), was likely to have been home to over 120 civilians, inside the fort walls.

At Ellingen 148 dress-related artefacts were excavated from within the second-century auxiliary fort, and another 33 were from the supposed *vicus* area to the east or unprovenanced (Zanier 1992; Allison 2012: Downloads, Ellingen). 119 of the former and all but two of the latter were metal finds. 25 of those from within the fort were nails from shoes and so are not in the percentages here. Of 21 brooches recorded from within the fort only six are of potentially military type, although another four are too fragmentary to identify. Ten decorative discs were also recorded from within the fort whose function is unclear (Zanier 1992: 181-182), so they have been considered part of civilian dress. While only two dress-related items from within the fort (1.6%) are definitely parts of military dress, some 48% are likely to be from military dress. Of the dress-related artefacts from inside the fort 29 (23.6%) are potentially from women's and children apparel, with a further 36 (c. 29%) possibly from civilian dress. This brings the total of potentially non-military personnel to c. 53%. Interestingly, the percentages for unprovenanced dress-related items and those from outside the fort are similar, with c. 45% potentially from military dress and c. 55% likely to be from civilian dress. 33% of the latter are probably from women's clothing. If these calculations have any validity they suggest there were probably more civilians living in this fort than serving men. If Zanier's estimate that this fort would have held some 250 people (1992: 174)



is valid this suggests that some 132 of them would have been civilians. However, the relative lack of traditional military dress found in this fort may say more about the type of troop stationed here than high numbers of non-military personnel (see Allison 2013: 354; see also Bishop 2011: 131-2).

Both Schönberger's and Zanier's calculations of the size of unit stationed at Oberstimm and at Ellingen, respectively, are based on what they considered the capacity of the structural remains of these forts. The percentages above take their estimates to refer to 100% fort capacity. Therefore, the calculations for civilian presence are a percentage of that capacity. However, if Schönberger's and Zanier's calculations can be considered estimates of serving men in each of these forts then, using the above percentages, 300 serving men at Oberstimm would constitute 61% of the occupants of this fort and 250 serving men at Ellingen would constitute 47% of this fort's occupants. In other words, there could have been close to 200 civilians in the fort at Oberstimm and some 280 within the fort at Ellingen.

These percentages are obviously rather crudely constructed. However, as discussed above, they have used relatively similar types of artefacts with relatively similar depositional histories, implying some level of analytical consistency. Some level of reliability of these calculations might also be indicated by the greater percentages of military dress-related artefacts at the legionary fortress of Vetera I and the least at the supposed work *vexillatio* fort at Ellingen (Zanier 1992: 164-166; see Allison 2013: 234), and a relatively consistent percentages of women's and children's items (c. 20%) across Vetera I, Oberstimm and Ellingen. Given the likelihood for greater numbers of servants and possibly civilian tradesmen than families among the community inside the fort, the percentages for civilians overall might indeed be rather conservative. The civilian presence inside legionary fortresses might constitute at least 30% of the community and, in auxiliary forts, some 40-50%.

### *Combat and non-combat activities*

As well as evidence for modes of dress, there is a wealth of artefactual evidence for non-combat activities within military sites that far outweighs that for combat activities. These include artefacts associated with administration (e.g. writing), trade and industry (e.g. stone and metal working, leather working, agriculture, cloth production, weighing and measuring), foodways (e.g. food storage, food preparation, eating and drinking), leisure (e.g. gaming, music) personal hygiene, lighting and transport (Allison 2013: 89-105), with some activities

crosscutting the main activity groups. Similar comparative calculations could be carried out for these items but such calculations are unlikely to be useful for estimating civilian presence. Associating particular artefacts with specific activities can be problematic and the lines between activity groups and specific activities can also be blurred. However, the main reason why such calculations are problematic is that serving men undoubtedly took part in most of these non-combatant activities (for references: Phang 2005: 209).

If, as argued by Speidel (1989: 242) and Sara Phang (2005: 209-13), soldiers left the ‘dirty work’ of domestic chores such as cooking to their servants (cf. Hanson 2007: 674), then artefacts associated with food-preparation activities might be considered to document civilian activities.<sup>3</sup> Artefacts associated with cloth working (e.g. needles and spindle whorls) are also likely to document civilian presence as cloth production was most probably women’s work (Allison 2013: 93-4). However, another factor in the difficulty of effectively comparing these artefactual remains, to quantify the presence of civilians, is their very different depositional histories. For example, metal artefacts associated with military and industrial activities, and ceramics associated with foodways have rather different reuse and discard histories, while cloth-working artefacts tend to be easily lost items.

Thus, we can make distinctions between combatant and non-combatant activities, but distinguishing activities associated with combatants from those associated with non-combatants is problematic and quantitatively comparing them is unlikely to provide reliable information.

### **Concluding remarks**

The above discussion uses quantitative analyses of artefact assemblages to demonstrate that military bases, as habitation sites, were likely to be occupied by high proportions of non-military personnel. While such analyses might seem a rather dubious procedure for segregating military from civilian and for calculating the numbers of the different types of people who inhabited military bases, I would argue that artefactual analyses are likely to be as useful as analyses of structured space for characterising and quantifying the nature of communities inside military bases, if not more so.

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<sup>3</sup> Although see Herodian 4,7,5 on ordinary soldiers grinding their own corn.

An important question for the aims of this paper is whether slaves and servants should be considered as civilians. Simon James argued (2001: 80) that ‘servants could be *de facto* part of the regiment ... who often appear on tombstones as quasi-soldiers’ and, as noted above, they could wear military dress. However, this recognition has little impact on the above calculations, except perhaps to show that there may have been even more civilians, other than personal servants, within these military bases.

While identifying artefacts as either military or non-military is undoubtedly problematic, many of the artefacts discussed here have a tendency towards a specifically military or civilian association rather than any certainty. Added to this, definite military items were taken by departing soldiers and, being mainly metal, might often be melted down and reused. Indeed, the artefactual evidence at military sites overwhelmingly documents non-military activities. While taphonomic conditions are significant for the role that artefactual remains play as evidence for lived behaviour, the arguments here hinge on more losable dress-related items at sites that demonstrate relatively rapid abandonment. Thus, the specific sites and specific types of artefacts selected here are likely to have suitable depositional conditions and social associations for such analyses.

Arguments that the proliferation of certain types of artefacts inside military bases indicates such artefacts were associated with soldiers rather than civilians assume the majority of members of the communities inside these bases comprised combatants. The above discussion indicates that this is unlikely to be the case and that there is obviously a certain amount of circularity in such arguments. Given our changing approaches to military space and to who occupied it, it seems timely to revisit many such assumptions. More detailed, comprehensive and quantitative studies of different artefacts and artefact types, their representation (if possible), their contexts and their assemblages, in both military bases and their associated extramural settlements are needed that do not consider military bases as segregated soldier communities with ‘military assemblages’ (Allason-Jones 1999; see also Birley 2013). Such studies also require more comprehensive and quantitative comparisons between military bases, extra-mural settlements and other types of rural and urban settlements.

Hopefully this paper serves to demonstrate that we can continue to develop approaches to artefact assemblages excavated from Roman frontier sites to gain greater understandings both of the people who occupied these military bases and of their participation in these

communities. Such approaches are best served by the digital collation and characterisation of large datasets of artefacts and their contexts. The data used in this paper and in my previous study (Allison 2013) are readily available on the Archaeological Data Service (Allison 2012) and can be manipulated. It is my hope that other such artefactual data from comparable frontier sites can be consistently recorded and made digitally available so that they can be used more effectively and more reliably, to investigate the populations on these frontiers, investigations that are less reliant on anecdotal evidence.

We will probably never be able to quantify exactly the number of civilians who inhabited Roman military bases, not least because the socio-spatial boundary between serving personnel and civilians in frontier communities is likely to be fuzzier than we tend to think. However, civilians undoubtedly formed a substantial presence within military sites and had a significant impact on these communities.

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