

# Weaving relationships in areas of cultural contacts: production, use and consumption of loom weights in pre-Roman Sicily

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## ABSTRACT

*This paper emerges from a wider research program ‘Tracing Networks. Craft traditions in the ancient Mediterranean and beyond’. Our specific project within the program (‘Weaving relationships’) concerns loom weights in the ancient Mediterranean, with particular attention to southern Italy and Greece. These objects have rarely been the subject of careful analysis, although they provide important information about weaving, an activity typically associated with women in this area in antiquity. Their systematic and contextual study allows us: 1) to increase our knowledge of technologies of textile production and weaving; 2) to understand better the manufacturing processes and life histories of loom weights, which are far more complex than has generally been recognised; 3) to explore the socio-cultural relationships and emotional ties between women, as well as personal, familial and group identities. In this paper we investigate what interaction existed between the traditions of making and using loom weights in Sicily, a paradigmatic example of intense and deep contacts between the Greeks and the indigenous communities. We explore: 1) the significance of morphological and technical characteristics, including decoration, for understanding social links; 2) how objects travel through time and accumulate histories; 3) how innovations may be met by adaptation and ‘resistance’.*

*Keywords: loom weights, pre-Roman Sicily, textile production, weaving*

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## 1. “Weaving relationships”, a research project on the manufacture of the loom weights from southern Italy and Greece.

This paper derives from a major research program funded by Leverhulme Trust, ‘Tracing Networks. Craft Traditions in Ancient Mediterranean’<sup>1</sup> which is based on nine projects combining archaeology, archaeometry and computer science, by using two common methodologies, the chaîne opératoire and cross-craft interaction. This program has the goal of investigating how craft and technological knowledge were transmitted in the ancient Mediterranean world between the late Bronze Age and the Hellenistic period, and how the networks of human relationships developed and moved through this.

Our specific research project within the program (‘Weaving relationships: loom weights and cross-cultural networks in the ancient Mediterranean’)<sup>2</sup> investigates the production and the manufacture of loom weights in pre-Roman South Italy and Greece. The systematic study of these neglected objects in association with the various contexts of provenance allows us:

- To increase our knowledge of technologies in textile production and weaving on the warp weighted loom, activities traditionally associated with women in this area.
- To understand better the manufacturing processes and life histories of loom weights and other items of weaving equipment.
- To investigate socio-cultural relationships and emotional ties, as well as personal, familial and group identities.

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1 On this research programme see also Foxhall and Quercia forthcoming a. Further information on ‘Tracing networks’ programme is provided by our website: [www.tracingnetworks.ac.uk](http://www.tracingnetworks.ac.uk).

2 Some preliminary results of this project were presented also Quercia and Foxhall 2012, Foxhall and Quercia, forthcoming a, Quercia and Foxhall forthcoming b. A monograph on the production and manufacture of the loom weights is in preparation.



- |                          |                    |
|--------------------------|--------------------|
| 1. Mozia                 | 13. Agrigento      |
| 2. Selinunte             | 14. Monte Saraceno |
| 3. Segesta               | 15. Butera         |
| 4. Palermo               | 16. Gela           |
| 5. Monte Maranfusa       | 17. Mylai          |
| 6. Entella               | 18. Morgantina     |
| 7. Montagnola di Marineo | 19. Ramacca        |
| 8. Solunto               | 20. Camarina       |
| 9. Himera                | 21. Mylai          |
| 10. Colle Madore         | 22. Megara Hyblaea |
| 11. Polizzello           | 23. Siracusa       |
| 12. Sant'Angelo Muxaro   |                    |

Map 7. Placenames mentioned in the article of Quercia and Foxhall. Illustration: K. Vajanto.

With regards to this last key-research point, the archaeological literature emphasised recently the importance that the study of the everyday objects played in reconstructing cultural, social and personal relationships among the people who lived in the ancient Greek world (Foxhall 2012, 185–186). In particular, since weaving and the textile manufacture in general were well documented as female tasks, the loom weights tell us about women’s networks and female identity (Foxhall 2012, 194–205).

A dataset based on an ontological infrastructure has been used to assemble and organise a large number of loom weights from the published archaeological literature and from our fieldwork in various sites of southern Italy<sup>3</sup> – around 5 000 individual objects (Hong et al. 2013; Foxhall and Quercia 2011). In an ontological database, the characteristics of objects are set out as classes and subclasses. The relationship of these characteristics to each individual object is expressed by properties using a triplet structure consisting of ‘subject’, ‘predicate’ and ‘object’. This is expressed, for example, as:

Loom weight:   Metaponto no. 228 [class/specific individual]  
                  has decoration [property]  
                  decorative motif [class]

In terms of our project, the ontology allows us to collect, analyse and represent consistently a large and heterogeneous data set. The ontology language is able to record and query not only the usual elements found in all traditional archaeological databases, such as the physical features of the artifacts and their archaeological contexts but also characteristics that would be hard to record in a relational database, such as the decorative motifs of the loom weights that are often unclear or which have common elements among them that make them similar but not identical. The ontology is particularly useful for qualitative analysis, such as ‘similarity’ which are difficult to record and analyse in traditional databases (Fig. 1). It also allows us to map the the chaîne opératoire for the manufacture and decoration of loom weights themselves which has rarely been considered.

One of the main aspects of our research is the analysis of the loom weights within the broader setting of cross-cultural interactions and technological exchanges among the various communities

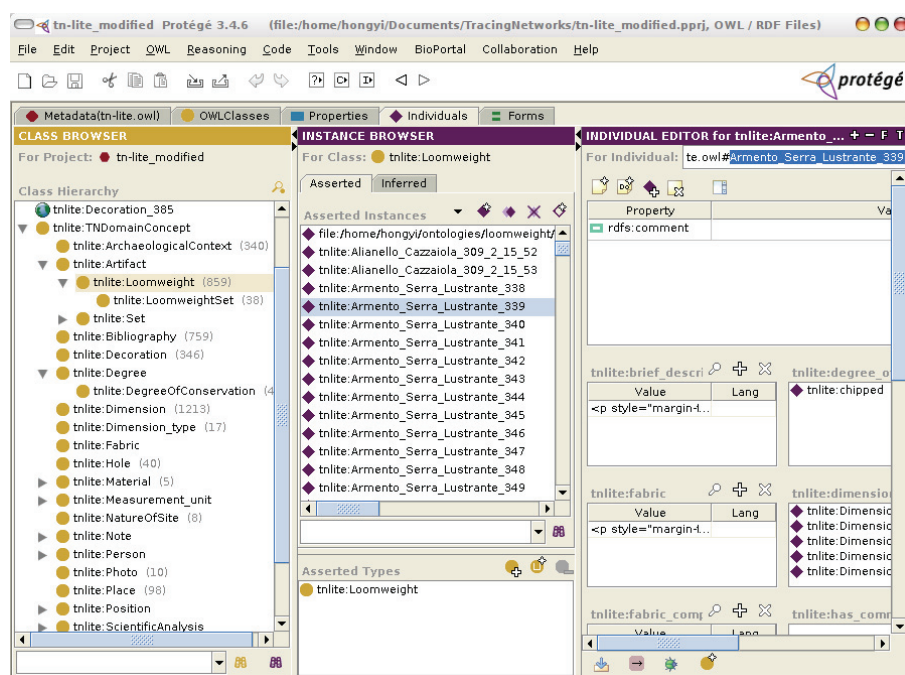


Fig. 1. The Ontology Loom weights Database.

3 We are analysing loom weights from various archaic and hellenistic assemblages of the Greek town of Metaponto and indigenous sites of Lucania (Torro di Satriano, Montescaglioso, Timmari).

who inhabited southern Italy from the Iron Age. In particular, Sicily represents an paradigmatic case of intense and deep interactions among Greek, Phoenician and indigenous communities from the earliest phases of contact in the island, which was well provided with fertile lands and raw materials, saw increasing and continuous cultural relationships with foreign incomers from the Aegean and East Mediterranean areas, that had its peak with the foundations of Greek and Phoenician settlements in coastal areas in the late Iron Age (i.e. second half of the 8th century BC). The early Greek communities concentrated on the shores of the eastern part of the island, while the Phoenicians preferred western Sicily for their settlements – primarily Motya, although trade contacts with the eastern part of the island are archeologically documented too. The presence of new Greek and Phoenician settlements affected extent and organisation of the territories controlled by the various indigenous communities of the island. In this regard, the definition of the different communities that populated the proto-historical Sicily has been a lively issue debated in the archaeological literature and it is still perceived as a comparison between archaeological evidence and textual sources, resulting in much debate over methodologies (Albanese Procelli 2003, 18–25; Leighton 1999, 215–222). According to the much later textual sources<sup>4</sup>, at the arrival of the first Greek newcomers the island was inhabited by three populations: Sikels in the eastern zone, Sicans in the western and the central part and the Elymians in the northwestern area. In fact, the contemporary archaeological evidence shows how the ethnic map of Sicily was more complex and reflects the variety of proto-historic craft traditions, burial customs and material cultures in the island. As Leighton (1999, 221) emphasised, it seems quite evident that these Sicilian communities which came into contact with the Greek and Phoenician settlers were not homogenous and their cultural and physical boundaries were permeable. Although the picture which we will show here is to some extent similar to that observed elsewhere for other Italian areas of cultural contact such as Lucania (Quercia and Foxhall 2012; Quercia and Foxhall forthcoming a; Quercia and Foxhall forthcoming b), Sicily displays distinctive features, different from the patterns of cultural interchange found in the southern Italian peninsula.

In this paper, we will examine the archaeological evidence provided by the production and manufacture of loom weights in Sicily, with particular focus on a few selected assemblages. Also, we will investigate weaving practiced in Sicily throughout time, from the Iron Age to the Hellenistic period (3rd century BC) and which forms of craft and cultural interaction and transmission existed between Greek, Phoenician and indigenous communities who lived in the island (see Map 7). Finally, we will formulate some concluding remarks.

Unfortunately, the general picture is quite fragmentary, since numerous archaeological finds that could provide information on weaving and more generally on the chaîne opératoire of textile production in pre-Roman Sicily are frequently neglected in the scholarly literature. Information on the kinds of sheep exploited for wool, the kinds of yarns produced are not available in the archaeological record, and even well recorded and analysed animal bone assemblages and remains of actual textiles are rare. Likewise, textual sources provide little relevant information on textile production in ancient Sicily (Brugnone 2008).

## **2. Weaving in Sicily: the archaeological evidence.**

### **2.2. The earliest phases; proto-historic traditions and implements, new alien techniques, first forms of cross-craft contacts (10th to 6th centuries BC)**

As observed in other areas of southern Italy such as Lucania (Quercia and Foxhall 2012, 369–371; Quercia and Foxhall forthcoming a; Quercia and Foxhall forthcoming b), the warp weighted loom and its associated weights were already documented in the proto-historic communities of Sicily long before the arrival of the Greeks and Phoenicians on the island's shores. However, the available evi-

<sup>4</sup> Primarily Thucydides, VI, 2

dence, primarily for the eastern part of the island, shows how the concentrations of loom weights were small, never exceeding ten in number. The weights used for the proto-historic loom were made of coarse 'impasto' fabric; their sizes and weights are uneven and not constant. The settlement of Morgantina, which is located in the centre of Sicily, provides good evidence of household contexts where spinning and weaving were performed alongside other domestic activities such as cooking, food processing and storage; spindle whorls and, in smaller quantities, loom weights, were recovered from huts dated from the 11th to early 9th century BC (Leighton 1993, 45, Fig. 229; Leighton 2012, 125–126). Unlike the prestigious female grave goods from some of the female burials in necropoleis of Lucania such as Incoronata, San Teodoro near Metaponto and Santa Maria d'Anglona, it is noteworthy that the Proto-historic tombs of Sicily rarely yielded loom weights<sup>5</sup>. In contrast, the higher frequency of spindle whorls among the burial goods could suggest that these were more valued by the deceased women and played a larger role in constructing female identities, perhaps as spinners (Leighton 1999, 197–198). It is likely that loom weights and other tools related to the process of weaving were not used as indicators of high rank for women in Sicily, in contrast to Lucania where textile manufacture is specifically associated with high-status women (Quercia and Foxhall forthcoming a). Also, decorated loom weights were rare in Sicily<sup>6</sup>. They reproduced geometric motives significantly different from those depicted on the specimens from Lucania; this decorative repertoire is likely reminiscent of that of the contemporary impressed and incised local pottery (De Simone 2003, 347–348) and it was still attested in the 6th and 5th centuries BC, as the example from Colle Madore shows (Fig. 2; Tardo 1999, 245, no. 467, Fig. 236).

From the end of the 8th century BC the Greek communities founded settlements on the Sicilian coasts bringing their own craft textile and weaving traditions and perhaps the associated equipment with them. In this regard, the loom-weight assemblages discovered in the household complex which faced the agora in the Mannuzza hill at Selinous represent a useful case study, since this district was inhabited by the earliest settlers, probably from the mother colony of Megara Hyblaia (Mertens 2006, 179–183, 327–328; Mertens et al. 2013). At the end of the 7th century BC; this area yielded also limited archaeological evidence of an indigenous village predating the Greek settlement, among which few loom weights were recovered (Rallo 1976–1977, 722–724, Pl. 151, Figs. 1–2). In particular, one of the houses the Agora quarter, the so-called 'Pastas House', excavated by the German Archaeological Institute under the direction of Dieter Mertens, provides particularly pertinent data. This house, which was occupied from the end of the 7th century BC until 530 BC over four distinct occupation phases (Fig. 3), yielded an assemblage of almost 400 loom weights; concentrations of these objects in different sets confirms that weaving was practised throughout the lifetime of the building<sup>7</sup>. In contrast, other textile tools are very rare in this domestic complex; spindle whorls are absent, while three spools or bobbins were found in the earliest layers of the main room (room B), in association with one loom weight<sup>8</sup>. Unfortunately only some of the loom

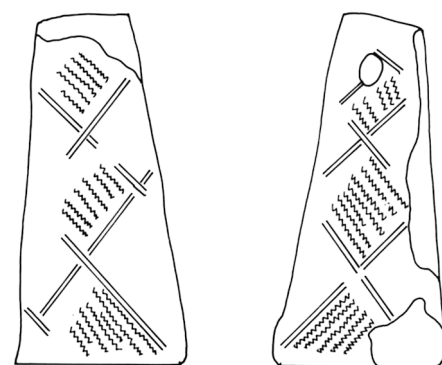


Fig. 2. Colle Madore. Decorated loom weight (Reworked from Tardo 1999, no. 467, Fig. 236).

5 A set of three spindle whorls and two loom weights was discovered in the necropolis of 'Istmo' in the territory of the future Greek town of Mylai; one of the loom weights was decorated with the incision of a stylised human figure. See Bernabò Brea and Cavalier 1959, 169, Tomb 104, Pl. 36.14.

6 An 8th century BC loom weight from a hut at Butera, which is carved by short oblique traits within lozenges, is one of the few decorated examples: Adamesteanu 1958, 522–523, Fig. 197.

7 An overall publication of the 'Pastas House', is in preparation in a volume (*Selinus III*) edited by Dieter Mertens and other members from the German team.

8 From US 505.



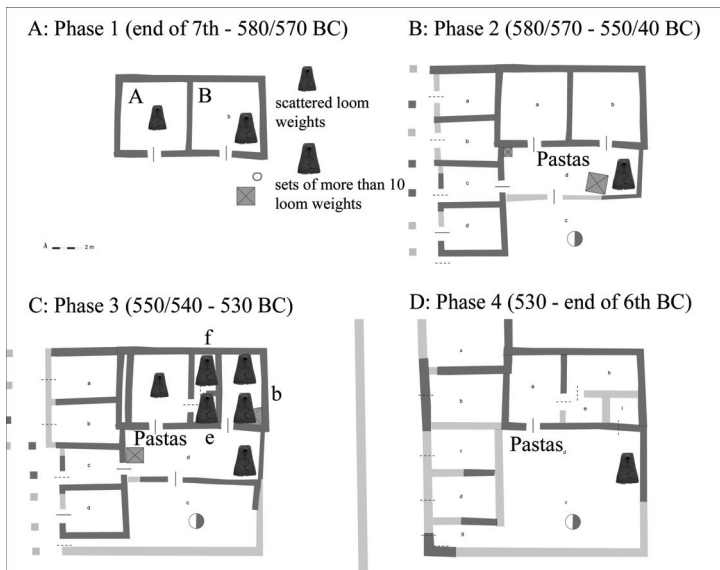


Fig. 3. Selinous, Pastas Haus. Spatial distribution of the loom weights over the occupation phases (Reworked from Helas and Baitinger forthcoming). Courtesy of D. Mertens and H. Von Hesberg, DAI.

weights were discovered on the house floors and in primary contexts, suggesting the presence of one or more looms. Their spatial distribution suggests that weaving activities were concentrated during the earlier phases mainly in room B and then later in the portico. From the earliest phase of the house (late 7th century to 580/570 BC) room B yielded two groups of 21 and eight loom weights respectively alongside few spools (Figs. 3a, 4). Also later, this room continued to be the main place of weaving into the house. In the third phase of the house (Fig. 3c), dated between 550/540 and 530 BC, the main room (B) was divided into smaller ones (e, f, b) where various groups of loom weights including 15 to 33 specimens for a total of 132 loom weights were discovered. However, these concentrations were found in secondary contexts, specifically in the fill layers of the floor. It is likely that they were used in room B during the previous phase (580/570 to 550/540 BC): unfortunately, it is still uncertain whether these loom weights were employed for more looms or they were hung only to a single loom containing more than 100 weights. The declining evidence of loom weights from the middle of the 6th century BC suggests some changes in the activities performed in room B, when an oven-hearth for processing food was installed in one of the corners of the room. Contemporaneously, in the third and fourth (Fig. 3c–d) phases of the house, that is from 550/540 to the end of the 6th century BC, the *pastas* too was dedicated to the practice of weaving; two concentrations of 21 and 15 loom weights in the southern-east corner of the portico suggest the presence of a smaller loom than that placed in the



Fig. 4. Selinous, Pastas Haus; phase 1. Loom weights set in the room B (US 499). Courtesy of D. Mertens and H. Von Hesberg, DAI

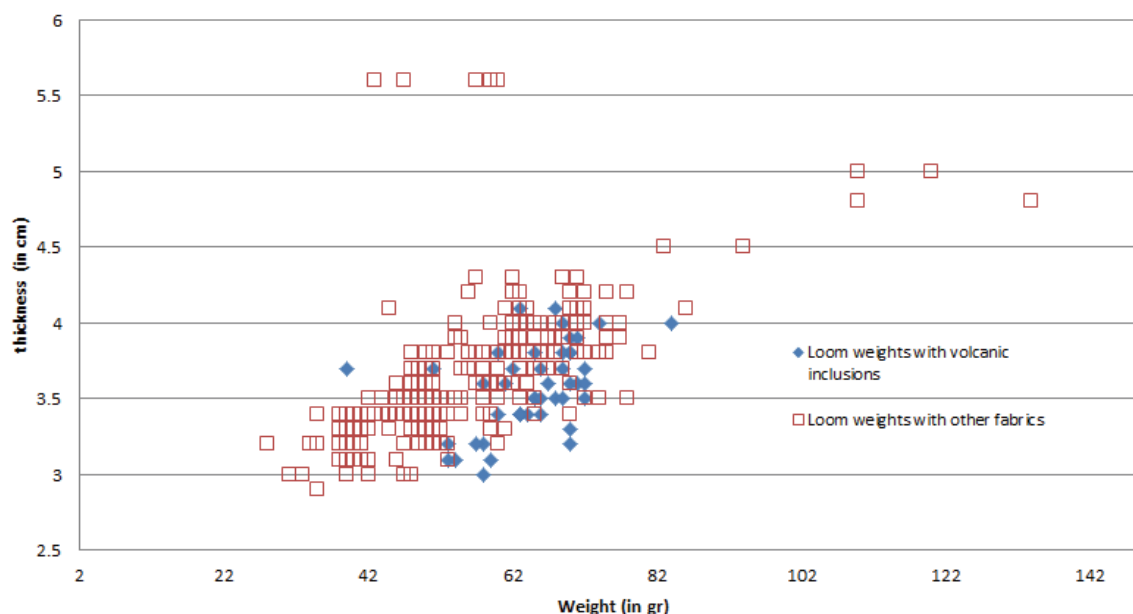


Fig. 5. Selinous, *Pastas Haus*. Ratio weight/thickness of the loom weights.

room B. It cannot be ruled out that for some reason there was a shift or a duplication of weaving activity from room B to the portico, which represents a place particularly suitable for weaving because of the availability of good natural light. The archaeological evidence documents many cases of looms which were set up along a portico, such as those from Greek Olynthus (Cahill 2002, 250–252.) and the indigenous Italic *anaktorion* of Satriano in Lucania (Quercia and Foxhall forthcoming a). Also, a group of loom weights was placed into the foundation trench of one of the walls of the *pastas* in one of the earliest phases; this practice finds parallels in the Greek areas of Sicily where foundation and consecration deposits containing loom weights were frequently found underneath or into the wall trenches of sacred and household contexts (Orlandini 1953, 442–443; Gleba 2008, 182–183). The occasional presence of loom weights in the other rooms of the ‘Pastas House’ and in the shops facing the agora do not suggest that weaving was carried out in the rest of the house.

Analysis of the loom weights through the entire lifetime of the ‘Pastas House’ shows their substantial uniformity and standardisation in term of shape, size, and weight. Most of them are pyramidal with a single hole and square base; sometimes some pierced and irregular stone pebbles appeared alongside the sets of loom weights and they probably were also used as loom weights for weaving, as in the case of another Greek town in Sicily, Himera (Allegro et al. 1976, 360, 559). The weights (Fig. 5) are quite light, rarely exceeding 100 g, while the thickness is limited to the narrow range of 3 to 4 centimetres. Within this relatively uniform picture, however some distinctions can be observed. Most of those which belonged to the earliest levels are bigger and have a wider hole; more significantly, they were made of a fabric rich in black inclusions. The on-going mineralogical analyses<sup>9</sup> are suggesting that the black grains derived from volcanic rocks, which are prevalent in eastern Sicily and in the area of Megara Hyblaia, the motherland of Selinous. In addition, some ceramics with similar black inclusions which were found in the assemblages of Selinous are thought to come from Megara<sup>10</sup>. If the ongoing archaeometrical analysis confirms that the loom weights of Selinous with black inclusions were manufactured in Megara Hyblaia, it might be suggested that these were brought from the mother colony to the new settlement by the Megarian women, or perhaps were received from Megarian women with whom the emigrants to Selinous still maintained contact, as gift or items of exchange. It

<sup>9</sup> The analyses are carried out by Sara Strack in the ceramic lab of the School of Archaeology and History in the University of Leicester within a joint project focusing on the archaeometrical analysis of pottery and other clay materials from Selinous.

<sup>10</sup> Among the pottery from Megara Hyblaia, a group with reddish brown clay and black grains was claimed to be local: Vallet and Villard 1964, 140.

seems that Selinuntine weavers continued to use them in their looms in the ‘Pastas House’ alongside new weights produced locally but to the same dimensions. Later, the new sets of loom weights in the ‘Pastas House’ consisted of slight different ones, which were lighter than the earlier loom weights and made of clay without black grains, however some of the earlier ones were still incorporated into the later sets, while others seem to have been discarded.

Some of the loom weights appeared to be manufactured using moulds. The bottoms of the pyramidal specimens from the ‘Pastas House’ are frequently wrinkled or they present two quite irregular and convergent curvilinear lines or a central depression, as the clay for making the loom weights were pressed into a mould. Similar marks are attested on the bases of loom weights from various assemblages; wrinkles and depressions are frequent in examples from the Pnyx at Athens (Davidson and Thompson 1943, 71–72) and from various Greek and indigenous settlements of South Italy, as Adelfia (Tunzi Sisto 1988, 63, no. 97, Pl. 21a), Pontecagnano (Tang 2007, 135–137, Fig. 112, GG-9), Torre di Satriano and Timmari (Quercia and Foxhall forthcoming a). The suggestion that these are mould-made is further supported by the discovery of what are probably moulds for pyramidal loom weights at other Greek sites<sup>11</sup>.

A few loom weights from Selinous bear simple decorative motives such as incised crosses and rows of dots which are reminiscent of those attested on some specimens from Megara Hyblaia (Gras et al. 2004, 143–144, Fig. 156). Also, it is not surprising that the impressions of ornaments and jewellery were generally absent on the Selinountine assemblage; this practice of impressing loom weights with personal objects is a habit that developed in Greek and indigenous communities of southern Italy later, roughly from the end of the 6th century BC. For that reason, a loom weight from a house located in the Agora quarter at Selinous is extraordinary, since although its archaeological context dates to the end of the 7th century BC - early 6th century BC<sup>12</sup>, but it bears the earliest impression known so far of a brooch in the Mediterranean (Fig. 6). This *fibula*, which belongs to the type with arc bow, finds parallels with contemporary metal specimens documented in Selinous itself<sup>13</sup> and in numerous indigenous contexts of Sicily (for example, in Ramacca: Albanese and Procelli 1988–1989, 70, 133, Fig. 82, no. 89). The uniqueness of this decoration not only in Selinous but also in Sicily as a whole might suggest that the loom weight’s owner was not local in origin. Impressions of fibulae appear to have been most frequent in the Adriatic and Ionian areas of southern Italy, mainly among the indigenous communities of Lucania and Apulia (Quercia and Foxhall 2012, 373; Quercia and Foxhall forthcoming a) and to much lesser extent in the Greek cities of the Ionian side (for example, Metaponto).

In conclusion, the loom weights of the ‘Pastas House’ document a case of a textile manufacture which might be included within the domestic mode of production according Peacock’s model used for pottery (Peacock 1997, 24–27), though the scale seems to be relatively large. Weaving was perhaps one of the main economic activities performed in the house but not the only one, as the presence of numerous transport amphorae in the house’s shops facing the Agora suggest. However, the concentration of quite standardised



Fig. 6. Selinous, Agora. Loom weight with the impression of brooch. Courtesy of D. Mertens and H. Von Hesberg, DAL.

11 For example, the Hellenistic settlement of Trypitos in Crete yielded a loom weights assemblage, including hollow pyramids with a cavity 7 centimetres deep that was supposed to be a mould for loom weights (Sophianou 2011, 427–428, Fig. 36.7).

12 From area ‘O’, US 258 (inv. no. SL 21546).

13 From sector R, year 2001, US 71 (inv. no. SL 21007). We are grateful to prof. Henner von Hesberg for reporting us this information.



loom weights probably made in moulds opens questions on the nature of the textile production in this house: the standardisation and the length of time that substantial levels of textile manufacture are documented suggest this complex had some features typical of a more structured familial workshop aimed at the commercial production of textiles.

Similar household textile production was attested in other Greek towns of Sicily, as in Himera in the 6th and 5th centuries BC (Allegro et al. 1976, 81–83, 213–218, 357–360, 461–464, 557–559). Unlike what observed for Selinous, the loom weight repertoire documented in Himera is much more varied, since the sets show a combination of different types (pyramid with a single and two holes, conical, discoid) related not only to the morphology but also to technological choices associated with different weaving traditions. Another peculiar aspect of the loom weight assemblage from Himera is the variety of the decorative motifs, which included impressions predominantly from gems and rings (Adriani et al. 1970, Fig. 1), as well as an abundance of graffiti and Greek inscriptions (Manni Piraino 1976, 668–669, 676) which recalls the roughly contemporary assemblage of Metaponto (Foxhall 2011). In few cases, the sets include numerous loom weights marked by the same impression, which probably represents a personal mark of the owner. For instance, all 21 specimens which were found as a group in room no. 33 of a house in *Insula 2* bear the same impression of a gem representing a woman holding a mirror (Allegro et al. 1976, 216–217, no. 281–301, Pl. 34.4). Other Greek *poleis* of Sicily, such as Agrigento and Gela (De Miro 2000, 119–120, Figs. 132–133), yielded a less rich decorative repertoire on loom weights. What is interesting is that apart from the impressions of gems and ring signets, the rest of ornaments and personal objects which very commonly marked the loom weights of Lucania and Apulia such as fibulae, earrings, tweezers (Foxhall 2011; Foxhall 2012; Quercia and Foxhall 2012, 371–373; Quercia and Foxhall forthcoming a) do not appear among the Greek and indigenous communities of the inland.

## 2.2. Craft transmission and technological exchanges among the ancient communities of Sicily (6th to 4th centuries BC)

From the 6th century BC some indigenous communities seem to have acquired new modes and more specialised techniques of weaving through the relationships with the Greeks, adopting sets of loom weights with more numerous and standardised weights. However, the kinds of large and relatively specialised looms like those discovered in the *anaktoron* of Torre di Satriano in Lucania (Quercia and Foxhall 2012) are not documented for archaic Sicily, and the limited availability of fully published archaic Sicilian contexts exacerbates the problem. There is only a small amount of evidence to suggest that the previous small indigenous looms, consisting of small numbers of weights which were not uniform, were taken over by sets larger in number and with a high level of standardisation. The group of over 60 loom weights found in the house D at Monte Saraceno near Ravanusa might be an example of these new sets for weaving (Calderone 1980–1981, 610, Pl. LXXXIX, Fig. 3). Also the Greek practice of dedicating loom weights and textile tools in general in votive contexts (for instance, in Gela: Orlandini 2008, 174, Fig. 67) was soon adopted by the female worshippers in some indigenous cult places; a group of nine specimens located around an hearth was identified in the local sanctuary of Polizzello (Perna 2009, 237–240). Furthermore, some settlements adopted loom weights typical of the Greek repertoire (Albanese and Procelli 1988–1989, 71, nos. 104–106, Fig. 85). *Oscilla* are attested in the site of Ramacca from the second half of the 5th century BC, more or less contemporaneously with the earliest introduction of this new type of loom weight among the Western Greeks. This type is attested in Himera from the end of 5th century BC (Allegro et al. 1976, 462), while the production of *oscilla* is dated to the third quarter of the 5th century BC and the second half of the 4th century BC at Camarina (Pisani 2008, 143).

In contrast, some indigenous centres of western Sicily, such as Monte Maranfusa (De Simone 2003, 347–350), Colle Madore (Tardo 1999) and Monte Polizzo (Balco and Kolb 2009) had quite a conservative repertoire of loom weights. Here the traditional pyramidal type was still by far the most predominant loom weight and only sporadically were other shapes attested, such as the pyramidal form

with two holes, the conical and the cube-shaped one. The first two types (pyramidal with two holes and conical) belonged likely to the Greek repertoire, while the origin of the last one is quite debated and might derive from the indigenous or the Punic tradition (see Balco and Kolb 2009, 178) as the predominance of this type in Motya seems to suggest (Rossoni 2002, 318). In contrast to South Italy, the habit of impressing gems and other ornaments was not well attested in the non-Greek communities of Sicily at least until the full 5th century BC. As already noted, the loom weights from the indigenous settlements still reproduced the decorative repertoire used on the local pottery.

From the end of the 5th and throughout the 4th century BC the situation is more complicated. Different weaving traditions and techniques, as well as the equipment used for the textile manufacture appears to be mutually and selectively appropriated, exchanged and sometimes rejected across the various cultures and communities who inhabited the island at that time. In particular, some indigenous and Punic settlements of western Sicily, such as Segesta, Entella, Montagnola near Marineo and Motya (Fig. 7) display a mixed repertoire including types of loom weights and decorations belonging to culturally different craft traditions. For instance, the deposits from the area of the fortifications at Segesta (Biagini 2008) yielded an abundant assemblage of loom weights, where the cube-shaped type belonging probably to the Punic tradition and the rectangular one are the predominant tools for weaving; they are quite light, since their weight ranges from 20 to 60 g. However, these weights are decorated by brown and red painted crosses, a motif which is most common in indigenous settlements from the second half of the 6th - early 5th century BC, such as at Monte Maranfusa (De Simone 2003, 356, no. 66, Fig. 288) and Entella (Fig. 8: Nenci 1992, 702–703, nos. 8–11, Pl. 36, 1a–d). Nevertheless painted crosses are also depicted also on examples from Motya (Biagini 2008, 653, no. 25), a Punic town recorded as a thriving centre for textile manufacture (Rossoni 2002). In contrast, some of the cubic and rectangular loom weights from Segesta display the Greek practice of impressing them with ring signets and gems. The adoption of *oscilla* decorated in relief by *Gorgoneia* (Fig. 9) and other motifs is also adopted in the same area, and there are close parallels with the examples produced at Agrigento and Gela (Adamesteanu 1954, 130, Fig. 2). *Oscilla* were also manufactured in other culturally mixed centres, such as Monte San Fratello, the ancient *Apollonia*, where some moulds for *oscilla* were discovered (Bonanno 2008, 57, 61). The *oscilla* are generally much thinner than the pyramidal and the cubic ones and then they were used probably for weaving finer textiles.

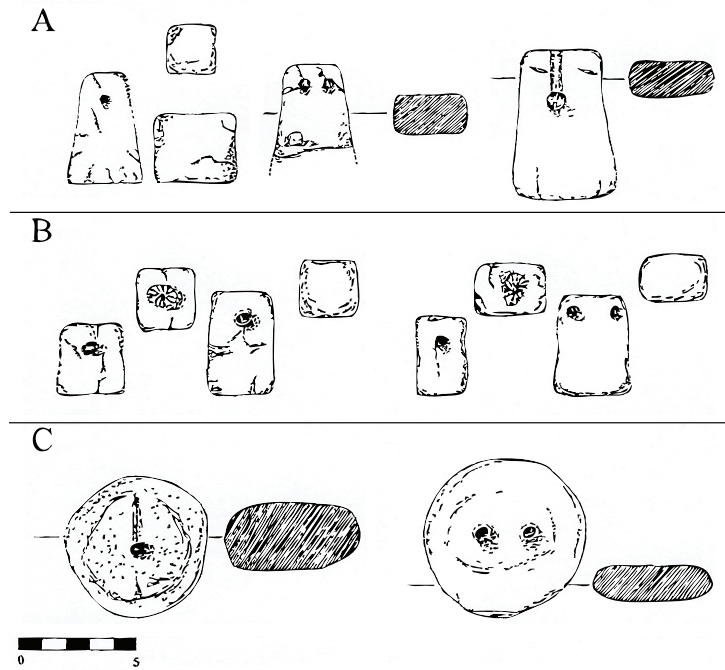


Fig. 7. Motya. Repertoire of loom weights A) truncated pyramidal loom weights B) cubic and parallelepiped loom weights C) discoid loom weights (Drawing: S. Lipkin after Rossoni 2002, Fig. 199).

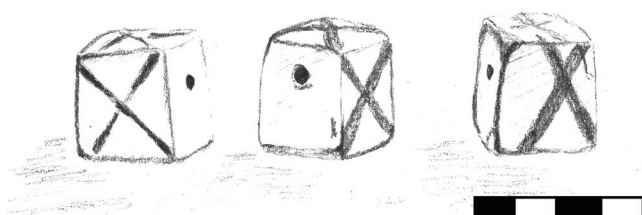


Fig. 8. Entella. Loom weights decorated with painted crosses (Drawing: S. Lipkin after Nenci 1992, Pl. XXXVI, 1).

Other indigenous sites show the combination of different types of loom weights. The case of a building with public functions at Entella, dated between the end of the 4th and the half of the 3rd century BC is a good example. Here, the discovery of a mixed group of pyramidal weights and *oscilla* associated with the wooden remains of a loom (Nenci 1992, 653) raises questions about how the loom worked<sup>14</sup>. *Oscilla* represented nearly half of the loom weights at Montagnola at Marineo (Valentino 1997, 201–202), a fortified site which was active from mid-4th century BC and is located strategically between the Punic centres of Palermo and Solunto.

The above picture, which clearly shows a variegated pattern of adoption, sharing and coexistence of different weaving traditions across the indigenous settlements of western Sicily, is rather different from what we discovered in the indigenous communities of Lucania in the same chronological period of the 4th and 3rd centuries BC. Here, the Lucanian women regularly marked their weights with personal objects, however they were strongly conservative in the type of weights they adopted; they continued to use pyramidal loom weights and generally did not adopt the *oscilla* and the new styles of decorating them with standardised moulds belonging to ceramic workshops, perhaps for technical and functional reasons, as well as for cultural habits and beliefs (Quercia and Foxhall 2012, 375–376; Quercia and Foxhall forthcoming a; Quercia and Foxhall forthcoming b).

The Sicilian case therefore shows therefore intense and complex technological exchanges and cultural interactions, as well as some possible indications of the movement of women and their loom weights. In this regard, the case of Scornavacche, a Hellenistic settlement located in eastern Sicily characterised by numerous ceramic workshops active until 280 BC is a good example. Some of the loom weights probably manufactured here bear the Punic sign of Tanit carved and impressed on pyramidal specimens and on a pinched weight (Di Stefano 2008, 224–225, Fig. 8). The latter is a shape rare in Sicily but documented in some Greek and indigenous sites of southern Italy (Foxhall 2011, 542, 554, nos. 44–45)



Fig. 9. Entella. *Oscillum* decorated with gorgoneion (Drawing: S. Lipkin after Bove 1995, Fig. 9).

### 3. Conclusions

The data available for the analysis of loom weights in Sicily provide a fragmentary picture of how loom weights were used for weaving, and served as signifiers of feminine personal and familial identities (or not) across the range of cultures inhabiting the island. However some general observations on loom weights and textile manufacture in ancient Sicily can be summarised as follows:

- the warp weighted loom was known and used in Sicily long before the foundations of the earliest Greek cities on the island's coast. Nevertheless the Proto-historic looms were probably smaller and less sophisticated, judging from the evidence of surviving weights, and they consisted of relatively few pyramidal weights in coarse fabrics. Moreover, unlike the spindle whorls, loom weights were rarely attested among burial goods. It is probable that unlike what has been observed in other proto-historic societies in central and southern Italy, weaving was probably not associated with high rank among Sicilian women.
- the arrival of newcomers and the contribution of their craft traditions entailed substantial changes both in the manufacture of the textile tools and the weaving techniques in both southern

<sup>14</sup> The analysis of modern warp weighted looms from the Scandinavia documents how the presence of weights different in weight, shape and dimension does not necessarily have a negative effect on the weaving process: Hoffmann 1964, 42.

Italy and Sicily. The archaeological evidence from some well documented Sicilian Greek *poleis* such as Selinous and Himera shows how, unlike the looms of protohistoric Sicily, the Greek loom-weight sets were composed of a larger number of weights which were much more standardised than the indigenous ones in term of shape, size and dimensions. Similarly, in the rest of the Greek world, from the 6th century the practice of impressing gems and other jewellery and personal items on loom weights took over in the Siceliote *poleis* too; this habit most likely reflects the agency of the loom weights' owners personalizing their own weaving tools by marking them with objects to which they were closely and emotionally attached.

- From the 6th century BC, Sicilian indigenous communities rapidly started to adopt new techniques of weaving, new implements as well as different ways of decorating their loom weights. However, the limited evidence available does not allow us to understand fully the degree or scale of this adoption. It is plausible that the earliest changes did not affect all local populations uniformly but only some settlements (i.e. Monte Saraceno), where socio-economic relationships and technological interactions with the Greek material culture were more intense. In contrast, numerous indigenous centres, primarily those of western Sicily (i.e. Monte Maranfusa, Monte Polizzo and Colle Madore) appear to maintain their local weaving traditions and their own patterns for decorating loom weights; only sporadically were alien textiles techniques and tools adopted in these contexts. Yet, unlike the Lucanian and Apulian communities of the Italian peninsula, Sicilians of Archaic period did not show much interest in adopting the Greek habit of impressing objects on loom weights

- Only later, that is from the 5th century BC until the first half of the 3rd century BC, did weaving practices and the loom weights themselves become objects of intense forms of adoption, craft exchanges and transmission across the various Greek, Punic and indigenous communities of Sicily within a cultural and craft *koinè*. Numerous settlements in western Sicily display a mixed repertoire of loom weights which consist of shapes belonging originally to various cultural areas and traditions; sometimes, different forms of loom weights were intentionally combined in the same set (e.g. in a building at Entella). Moreover, at this time the Greek custom of impressing loom weights with ornaments and jewellery became a very common practice in the Punic centres (e.g. Motya) as well as in the indigenous 'Elymian' settlements (Segesta, Entella) which coexisted with the local decorative patterns, like as the painted cross. This indicates, perhaps, the complex and hybrid nature of Sicilian communities, no matter what their origins, which had developed by this period.

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