Weaving, Writing, and Women: A Case Study of Etruscan Sigla on Loom Weights

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Abstract

Keywords: *sigla*, loom weights, Etruscan

No thorough, systematic study of Etruscan *sigla*, non-verbal marks of communication incised, painted or imprinted on artifacts throughout the Mediterranean, has been conducted to date. This thesis examines *sigla* found on a particular artifact, loom weights, from four sites in Etruria in an effort to interpret these marks. After establishing the cultural, social, and economic importance of weaving to the women responsible for it, as well as the economy as a whole, it is suggested that the women themselves were responsible for making the loom weights and then marking them with *sigla* as symbols of ownership. While the *sigla* themselves have a variety of meanings and likely have multiple functions, they appear to share this usage in the context of textile tools.
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WEAVING, WRITING, AND WOMEN
A CASE STUDY OF ETRUSCAN SIGLA ON LOOM WEIGHTS

By

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Introduction

Weaving, as evidenced by its presence in literary, artistic, and archaeological records throughout the ancient Mediterranean, is an integral part of ancient life. There are many different types of tools and methods for weaving, but the predominant one is the warp-weighted loom. Loom weights, which are used to pull down the loom threads and prevent them from tangling, are the only part of the loom to survive in the archaeological record, as the superstructure and the threads are made of perishable materials. Their presence can help identify not only the occurrence of weaving within a community but the designated areas for textile manufacture and the scale of the production.

The majority of artistic representations and literary sources show that it is women who are responsible for this task, which would have occupied most of their free time. It is logical then, that women hold the weaving implements used in textile production in high esteem. The presence of weaving implements in funerary deposits further suggests that these tools are used as status symbols for the women. Literary sources, such as Homer’s *Iliad*, also suggest that a “proper” woman remained indoors, weaving garments for her household while her husband took care of other affairs.¹

Since these implements function as symbols of social status, they are quite valuable to their owner. In many instances, these tools are marked, either by the owner or creator, with a variety of symbols, either alphabetic or iconographic. The meaning of these marks is disputed and the majority of them still remain to be interpreted.

This thesis examines the meanings of these marks, defined as *sigla* by Nancy de

¹ *Iliad* 6.490-493
Grummond and Giovanna Bagnasco Gianni, on a specific artifact, loom weights.² Though sigla occur in virtually every culture and on a wide variety of artifacts, from pottery to city walls to armor, the focus of my discussion will be on sigla found on loom weights in Etruria proper. First, it is necessary to examine the role weaving played in society in Etruria and the Mediterranean as a whole, as well as the women who were predominantly responsible for its craft, based on surviving literary and artistic representations. Much about the daily craft of weaving as well as its importance within the culture can also be learned through an examination of loom weights discovered in archaeological contexts. Then, based upon analysis of data collected from four sites in Etruria (Cetamura del Chianti, La Piana, Viterbo³ and Roselle), this thesis will suggest possible meanings for sigla found on loom weights and propose methods for further study of this information.⁴

Chapter 1 will focus on the archaeological data concerning looms and weaving implements. This evidence will be supported by textual and iconographic sources about textile production from the Greco-Roman world. These sources make it clear that weaving was an integral part of life in the ancient world and that it was predominantly women who were responsible for the craft. Chapter 2 will first create a framework for studying sigla on a particular artifact. Using the established guidelines, I will examine the data from four Etruscan sites in an effort to interpret these marks.

² Bagnasco Gianni and de Grummond (forthcoming): I thank Dr. de Grummond for providing me with the manuscript of their talk from 2010.
³ The loom weights from Viterbo are a collection of loom weights from a private collection, whose origin is unfortunately unknown. They are likely from sites in the region and are certainly of Etruscan origin, and so are included in this discussion.
⁴ I am very grateful to Dr. de Grummond for providing full access to the loom weights at Cetamura and to Dr. Whitehead for allowing me to visit the La Piana storeroom in Spannocchia to study the loom weights there and providing me with her unpublished catalog of artifacts.
Chapter 1: Weaving in Context

To begin, I aim to make a systematic presentation of the archaeological data of looms and weaving implements. This data forms the basis of my argument and it is supported by iconographic and textual evidence for the art of weaving, particularly on the warp-weighted loom. The earliest material evidence for the activity of weaving comes from the Neolithic period. The warp-weighted loom quickly emerges as the main method of weaving throughout the Mediterranean world and by the end of the Neolithic period, it occurs frequently in all types of archaeological sites in Europe.

Using examples from the early Neolithic period to the Late Roman period (7th millennium BCE–4th century CE), I intend to show the importance of weaving in habitation, funerary, and religious contexts. Both the archaeological and literary evidence suggest that weaving in the Western world was mainly performed by women. Consequently a woman’s role in society was of great importance as both an expression of her own social status as well as the economic success of her household and community.

Looms and Weaving Basics

Weaving on the warp-weighted loom was the predominant method of textile production for the ancients throughout the Mediterranean. In addition to being the most popular instrument for weaving, the warp-weighted loom is the only type that has left traces in the archaeological record and the most common part of the loom that survives in the archaeological data is the loom weight.\(^5\)

The loom is constructed of two vertical beams, often made of wood, with a horizontal cloth beam at the top, to secure the vertical warp threads in order to allow

\(^5\) Andersson 2008, 20
the weft to pass horizontally between the threads. The frame of the loom on average is human-sized, around 165-180 cm. By pulling alternating warp threads and inserting a rod or shed bar through them, the weft can pass through all the threads at once. These elements are all part of a simple woven textile. With the addition of a heddle bar allowing multiple sheds to be used at once, more complex patterns can be produced.

Figure 1: Drawing of a warp-weighted loom by Annika Jeppsson. From Martensson, L. 2009, 374

There is some debate as to how the loom was set up in antiquity, but it is most often believed that it was propped against a wall during weaving. This theory is supported by modern examples of warp-weighted looms in Scandinavia. This position is also the most logical, as it allows gravity to work along with the shed bar to separate the threads. Though this is believed to be the case, several of the loom weight sets discovered in situ do not support this claim. For example, a set discovered at Tiszajeno, Hungary was found so close to the wall that it must have been erected vertically, as

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6 Gleba 2008, 125
7 Barber 1991, 103
there was no room to brace it against the wall.⁸ Others, such as a set unearthed at Aphrodisias are in line with the wall and it is difficult to determine how they were supported.⁹ The only way it would be possible to establish how a loom was set up would be to find an example intact and in situ, which unfortunately is highly unlikely since they were made of wood.

Since weaving in antiquity was a seasonal activity, the looms were disassembled when not in use, making it even more difficult to find in situ examples. Weaving implements have been discovered inside of amphorae, which indicates how they may have been stored when not in use.¹⁰ For example, at the site of Akrotiri, a jar was excavated that contained discoid loom weights, with many more discovered surrounding the jar.¹¹ It appears the jar fell from the second story during the collapse of the floor following the volcanic eruption that destroyed the site.¹² It is also difficult to tell how large the loom would have been, as the loom weights for multiple looms could have been stored in one jar. Finding loom weights in storage is still valuable for indicating the presence of weaving in a particular space. If large numbers of loom weights are discovered in a single location, it suggests the possibility of a workshop or production center where multiple looms would have been in use simultaneously.

The width of the warp-weighted loom can only be determined when several loom weights are discovered together in situ. On average, between 6 and 30 loom weights are used on a single loom, depending on the size of the fabric produced.¹³

Excavations in Terrace House 1 in Ephesos (Turkey) dated to the Roman imperial

⁸ Barber 1991, 103
⁹ Barber 1991, 103
¹⁰ Gleba 2008, 122-34
¹¹ Barber 1991, 102
¹² Barber 1991, 102
¹³ Gleba 2008, 133
period, revealed a set of four pyramidal weights, which indicate a loom smaller than the norm. Several examples of sets of four loom weights were discovered at Pompeii, suggesting that perhaps a smaller, more frequently used loom was employed in Campania.\(^{14}\)

Textile production appears to have been a group activity. In most depictions, a number of people, usually women, are shown working at the loom, which indicates that it would have been too large for one woman to weave with any efficiency. Other tasks, such as setting up and warping the loom, would have been made easier with multiple people as well. A surviving textile from Trindh\(\ddot{O}\)j, a Bronze Age settlement in Denmark, shows three women simultaneously weaving, exchanging shuttles with their companions while changing the shed.\(^{15}\) This can be determined by the weft structure of the cloak, in which it is possible to see the different speeds of the weavers. The middle weaver of this textile appears to have been slower than the others, perhaps because her skill was not as great. There is literary evidence as well for the fact that it took multiple people to weave on a loom. In Euripides’ *Ion*, the women say that they told myths to each other while weaving, indicating that it was a communal activity.\(^{16}\)

The status of weavers varied greatly from culture to culture. In Syria, ca. 1800 BCE, textile workshops were already in full force and were supervised by queens, while captive women did the weaving. Similarly, in Homeric Greece, Penelope and Helen, weave figured, fancy fabrics while their captives produce plain cloths. By the Classical period in Athens, it is standard for ‘proper’ women to spin at home with their servants

\(^{14}\) Trinkl 2003, 83
\(^{15}\) Barber 2003, 174
\(^{16}\) *Ion* 189-227
and men run slave-powered ‘factories,’ which then sold cloth to men without families.\textsuperscript{17} In Etruria, it appears that status was gained partially by which type of weaving you practiced. At the site of Murlo, the high presence of spools suggests that weavers there were skilled in tablet weaving, a method of weaving to add decorative borders onto ceremonial garments.\textsuperscript{18}

**Weaving and Gender in Myth, Literature and Culture**

Weaving is predominantly considered to be a female task today and in antiquity. A possible explanation for this is that women need a task that is both safe and easily interrupted, since their other main job is child rearing.\textsuperscript{19} Men help with the fiber production, such as the tending and shearing of sheep, but women are responsible for both spinning the fiber into yarn and then using this yarn to weave fabric.

While spinning and weaving are both considered female tasks, spinning became the symbol for women. The spindle and distaff are portable, unlike the loom, so women could travel with their work if they wished and thus it is more visible, whereas weaving often takes place within the home.\textsuperscript{20} A coin from Asia Minor featuring Athena and Arachne further supports this claim. On this coin, Athena, the goddess of weaving, is depicted holding a spindle whorl, therefore representing the act of spinning, rather than weaving.\textsuperscript{21} Another artistic representation comes from a grave monument at Smyrna, in which a woman is accompanied by a slave holding a spindle.\textsuperscript{22} Additionally, spinning is more time consuming. Because of this it is necessary for women to take this work with them. Spindles and distaffs are also highly recognizable as weaving implements.

\textsuperscript{17} Barber 2003, 174-5
\textsuperscript{18} Gleba 2000, 105-6
\textsuperscript{19} Brown 1970, 1075
\textsuperscript{20} Gleba 2008,177
\textsuperscript{21} Vostral 1995, 63
\textsuperscript{22} Fantham 1992, 158
when discovered in archaeological excavations, whereas sometimes loom weights can be argued to be weights for another purpose.

It is a mark of high status for women to be able to stay at home and weave. Demosthenes writes that women of citizenship status were required to work outside of the home as wool-workers (in a factory setting), wet nurses or grape-pickers due to "the misfortunes of the city in those days."\textsuperscript{23} In Republican Rome, it becomes the main task of the household slaves to take care of the weaving, and it is then the matron's responsibility to oversee this activity.\textsuperscript{24}

This ideal image of a woman, who was in her proper place at home at her loom was constructed first by Homer. In the \textit{Iliad}, Hector instructs his wife Andromache to return to the safety of their home and take up her work, namely the loom and distaff.\textsuperscript{25} Then, in the \textit{Odyssey}, the main job of Penelope, the devoted wife of Odysseus, is to weave the burial shroud for her father-in-law.\textsuperscript{26} Somewhat ironically, she unravels the shroud so that she can further put off marrying a suitor, which taints the image of the ideal, loyal wife who remains at home to weave. It also demonstrates the power Penelope holds in this situation, for it is through her weaving that she is able to delay the suitors.

The ancient Egyptians, however, differ from the social norm established in the Mediterranean. Here, each gender knows how to weave and is responsible for weaving the garments they would need. Based on both textual and iconographic evidence, women weave garments in workshops and educate children in school-like settings, rather than in their individual homes as is frequently seen in the Mediterranean.\textsuperscript{27} As

\begin{itemize}
\item \textsuperscript{23} Demosthenes 57.45
\item \textsuperscript{24} Fantham 1992, 270
\item \textsuperscript{25} \textit{Iliad} 6.490-493
\item \textsuperscript{26} \textit{Odyssey} 2
\item \textsuperscript{27} Barber 1991, 174
\end{itemize}
attested by Herodotus, the Egyptians use different methods for weaving, pushing the “woof” down, rather than upwards as on the warp-weighted loom. He also attributes most weaving to men, who stay indoors, while women run the shops and markets.²⁸ Murals on the walls of tombs also indicate that men took part in weaving on the two-beam vertical loom. This difference suggests that perhaps textile production was more difficult or time consuming, requiring both men and women to take part and that weaving was not a sign of status for women, as was true in Greco-Roman world.

![Figure 2: Drawing of an Egyptian style loom. From Crowfoot, 1936, 37.](image)

Throughout the Mediterranean, women are primarily responsible for the art of textile production. It is an extremely time consuming task, but one that could be easily interrupted to allow for tending to the household and caring for children. Additionally, it was a symbol of status for women to remain at home and an expression of their power.

**Archaeological Evidence**

Weaving elements are found in three primary contexts: funerary, votive and

²⁸ Herodotus II.35
habitation. The context of the artifact allows us to offer some possible interpretations of the functions and significance of weaving and weaving implements in antiquity. Burial sites (ex. Tarquinia, Orvieto) give evidence for the status and wealth of women and votive sites (ex. Baratella at Este, Practica di Mare) provide information about textile production within a sacred setting. It is only through habitation sites (ex. Cetamura del Chianti, Murlo) that information about the technological function of weaving implements can be gathered.

The earliest examples of loom weights from warp-weighted looms come from Hungary and date to the early Neolithic period, the late 7th and 6th millennia BCE. At Tiszajeno, a group of clay weights of a truncated pyramid shape were discovered between two post-holes. Similar sets of weights were found at other sites in Hungary, suggesting that the warp-weighted loom was used frequently in this region by the end of the early Neolithic.29 Examples of loom weights from the same period have also been discovered in Switzerland, proving that the technology of the warp-weighted loom was available throughout Europe.

The earliest example of loom weights in the Mediterranean comes from Çatal Hüyük in Turkey around the beginning of the 6th millennium BCE. Here, several “apple” shaped weights were discovered. In Greece, only one loom weight exists from the Early Neolithic period, a truncated pyramid shape from Corinth. In Italy, the earliest loom weights have been excavated in northern Italy in the region of the Square-Mouthed Pottery Culture and date to the 5th millennium. By the Bronze Age, loom weights are a common discovery throughout sites in Europe and Anatolia.30

Textile production via the warp-weighted loom continues throughout Italy until

29 Barber 1991, 94
30 Barber 1991, 99-100
the end of the Roman empire in the west. In the Villanovan and Orientalizing periods of Etruria, weaving implements are frequently discovered in female burials. At some sites, such as Murlo, thousands of textile tools have been found, suggesting that perhaps it is a site of workshop production.\textsuperscript{31} Hellenic sites in southern Italy, such as Paestum, give early examples of the presence of weaving implements in a votive context, in association with a temple or other sacred area. The warp-weighted loom is used in the Mediterranean throughout the Roman period in both Italy and the provinces, though comparative archaeological evidence occurs less frequently. The decrease in artifacts found suggests that perhaps the warp-weighted loom was replaced by another form of weaving. It may be that a faster method was developed, making the warp-weighted loom obsolete or that the demand for garments made on warp-weighted looms decreased. Or, since fewer artifacts occur in sum from this period, it is possible that loom weights do not survive either. Most likely, a combination of factors influence this diminished number of tools found.

**Burial Sites**

Textile tools occur frequently in burial sites, most often in the Early Iron Age and Orientalizing periods, though they continue to appear throughout Roman times. The presence of such artifacts as spindle whorls and loom weights aids archaeologists in identifying a grave as belonging to a female, as these objects are rarely discovered in a male tomb. Shears are the only artifact associated with textile production that regularly appear in male burials.\textsuperscript{32} The high presence of weaving implements found in tombs during the Iron Age indicates the value placed on weavers and their art during this time period. Perhaps during the Iron Age, weaving was a coveted skill that was not

\textsuperscript{31} Gleba 2000, 105-6
\textsuperscript{32} Gleba 2008, 171-3
possessed by all members of the society, thus making it a marker of high social status or the artistic gift of which some women were capable. The decrease with which these loom weights occur in later burials may suggest that a greater number of women are able to weave, meaning that simple ability to weave is not enough, but a particular gift for it is needed to enhance social status.

Usually textile tools are made of common and inexpensive materials, such as clay and wood, and their worth is only to their owner. Therefore, their placement in the tomb has a symbolic, rather than monetary value. Textile tools also indicate that the particular community is not only capable of weaving, but that both the craft and the women who perform it are indispensable to society, and thus are given burials with grave goods. When items such as spindle whorls and distaffs made of amber, bronze or other precious materials are deposited in tombs, however, it shows the wealth and high status of the deceased, since such tools are both too expensive and too impractical to be used in daily tasks.

The type of textile tool found in the grave goods can also suggest the wealth or importance of the deceased woman. For example, spools are used primarily in tablet weaving, which is used only to make decorative borders for ceremonial garments. Only elite women are allowed to weave such garments, therefore a grave with spools can indicate the increased wealth of the deceased as well as her value and importance to her society.

There seems to be some regional variation throughout Italy in weaving artifacts found in tombs. In northern and central Italy, during the Villanovan period (900-700 BCE), spindle whorls, spools and distaffs all occur. In Puglia in the southern heel of

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33 Gleba 2008, 175
Italy, however, loom weights are discovered only after the region became more
Hellenized.\textsuperscript{34} This fact suggests that perhaps the warp-weighted loom is introduced to
Southern Italy from Greece and becomes more popular throughout the region as Greek
culture spread.

Throughout Italy, distaffs “largely disappear” as grave goods after the 7\textsuperscript{th}
century BCE. Despite their disappearance from the graves in Etruria, they continue to
be used symbolically to represent spinning and womanhood in the Roman period.\textsuperscript{35} In
the marriage ceremony, Roman brides carry a spindle and distaff, which suggests that
spinning and weaving are still an important role of females and could represent their
value to their future husbands.\textsuperscript{36} Just as in Classical Greece, it is a sign of status for a
woman to be able to stay at home and weave, perhaps its presence in a bridal ceremony
suggests that once married, the Roman woman becomes a matron, staying home,
raising children and weaving. In this way, weaving may also be affiliated with the rite
of passage from maiden to womanhood.

\textbf{Votive Sites}

Textile tools frequently occur in votive deposits in different regions of Italy.
Votive deposits consist of artifacts offered to a deity for worship in an area designated
for a ritual purpose. Examples of such deposits can be found in or around altars or
temples. Of the textile tools, spindle whorls, spools and loom weights are discovered
most often. The occurrence of these implements more frequently than others may be
because they are the most identifiable objects and therefore most representative of
women. Though they are found repeatedly in a votive context, they are usually not

\textsuperscript{34} Gleba 2008, 171
\textsuperscript{35} Gleba 2008, 174
\textsuperscript{36} Gleba 2008, 174
found in large concentrated quantities.

On occasion, these offerings are inscribed with a dedication. For example, a loom weight fragment from Roselle was discovered with “VEI” inscribed on it, suggesting that it was an offering to the Etruscan goddess Vea, who is compared to Ceres or Demeter.\footnote{Gleba 2008, 178} This practice, however, is less common in Etruria than in Southern Italy, where it may have been introduced by the Greeks with the Hellenization of the area.\footnote{Gleba 2008, 182} The influence from the Greeks presents a logical explanation, though it may also be that the Etruscans predominantly choose not to use inscriptions. They may simply prefer other types of markings, such as sigla, or perhaps do not explicitly dedicate implements to a single god, thus making an inscription unnecessary. Like most inscriptions, sigla, or decorations on weaving implements, they are usually incised prior to firing, showing their sole purpose as dedicatory.

The role that weaving implements plays in votive rituals has been debated. It has been suggested that perhaps the loom weights were not intended as offerings, but instead were attached to dedicatory textiles.\footnote{Gleba 2008, 183} This theory does not account for the presence of other tools, such as spindle whorls, nor does it explain why some artifacts are inscribed with dedications. On occasion, the loom weight aperture holes show signs of wear, which indicates that they are used for weaving, either within the sanctuary itself or prior to dedication. When they exhibit signs of use, it indicates that the loom weights are not intended solely for attachment to a fabric offering, but instead are used as a dedication themselves.

It is possible that in some instances, sanctuaries are the sites of textile

\footnotesize{\begin{itemize}
\item[37] Gleba 2008, 178
\item[38] Gleba 2008, 182
\item[39] Gleba 2008, 183
\end{itemize}}
production. The most famous example of this is the *peplos* woven for Athena Polias in Athens. The Arrhephoroi lived on the Acropolis while they were weaving the garment, so it is plausible that the weaving also took place there, perhaps in the Temple of Athena Polias.40 Archaeological evidence to support this theory is found at many Hellenic sites in Southern Italy, such as Halae, where many discoid loom weights were found inside room F, which is interpreted as a textile workshop within the sanctuary of Athena. The only non-Hellenic site in southern Italy that gives evidence for textile production within the sanctuary is at Pratica di Mare, where two hundred loom weights were found in a building adjacent to the altar complex. This sanctuary has a strong affiliation with matrimonial rites.41 Since women are primarily responsible for weaving, weaving implements become a symbol of womanhood, as evidenced by the grave goods discussed previously. They are often used to represent women in a marital context, so their presence in a sanctuary connected with matrimonial rites is quite logical. Perhaps the garments woven within a sacred area are then used, like the *peplos* for Athena, in a ritual function within the sanctuary itself. Even if the woven fabrics are not used within the sanctuary proper, they would contain a sacred or religious aspect, which may have increased their value and importance to the women who wore them, as well as the status of those women themselves.

The presence of weaving implements within votive or sacred areas reinforces the social and cultural importance of weaving in society. The tools created solely for dedication are similar to those of precious materials made for the tomb. Both show the figurative value weaving implements hold within the society, as well as the wealth of the community, as they are able to create tools, sometimes of costly materials, to be

40 Gleba 2008, 184
41 Gleba 2008, 187
given to the gods, rather than used by the artisans within the town. In many cases, the ancients are dependent on textile production as fabrics are necessary for clothing, household goods and religious purposes and the production and purchasing of textiles could fuel the economy of an ancient community. Therefore, by offering textile tools and possibly even fabrics to the gods in votive areas, they are able to ensure their continued success in weaving. Since textile production and the tools themselves are frequently associated with women, their appearance in votive contexts suggests the role women play in religious ceremonies within Etruria, which again would enhance the importance of women in society and elevate their status.

**Habitation Sites**

Textile tools in habitation sites reveal information about the daily practice of weaving, particularly when the artifacts are discovered *in situ*. It is from such discoveries that it is possible to draw conclusions about the size of looms, their place within the house and the frequency in which they occurred within a particular settlement.

The earliest examples of loom weights from warp-weighted looms are those from Tiszajeno in Hungary from the early Neolithic period. Eight weights of a truncated pyramid shape and measuring approximately two inches high were discovered *in situ*, though there were more which were unable to be excavated due to their poor condition. Similar sets of loom weights, often in groups of 20 or 30 were discovered at houses within other sites in Hungary, such as Szolnok-Szanda and Kisköre, which suggests that the warp-weighted loom is already a common element in Hungarian households by the 6th millennium BCE.\(^{42}\) These sets of loom weights in Hungary

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\(^{42}\) Barber 1991, 94
support the average size of looms that Gleba suggests.\textsuperscript{43}

Loom weights begin to emerge in the Mediterranean at Çatal Hüyük in Turkey around the beginning of the 6\textsuperscript{th} millennium BCE. Here, several “apple” shaped weights were discovered, along with scraps of cloth. One of these cloth scraps has a possible heading band, which would have been created on the warp-weighted loom.\textsuperscript{44}

Based on both textual and archaeological evidence, it is believed that the warp-weighted loom is not the primary method of weaving during the Roman imperial period. Seneca (ca. 63 CE) and Julius Pollux (ca. 180-192 CE) write that the warp-weighted loom was rapidly declining in use in favor of the two-beam loom in the Mediterranean.\textsuperscript{45} This claim may explain why there are fewer loom weights discovered in the Roman provinces. In fact, Roman loom weights are found in greater numbers in the least “Romanized” dwellings throughout the provinces.\textsuperscript{46} This indeed suggests that this weaving method is displaced during the Roman period. The warp-weighted loom, however, is still used for some garments, such as the \textit{tunica recta}, according to the Roman author Festus (late 2\textsuperscript{nd} century CE).\textsuperscript{47} Perhaps then the warp-weighted loom is used for sacred or ritual garments, but is abandoned for traditional household garments in favor of a faster method. Since other methods of weaving do not use loom weights, there was then no further need for these artifacts, which explains their disappearance from the archaeological record. The diminished need for loom weights may also explain why the distaff and spindle survive as representations of the weaving process, as these are used throughout the Roman period.

\textsuperscript{43} Gleba 2008, 133
\textsuperscript{44} Barber 1991, 99-100
\textsuperscript{45} Wild 1970, 67
\textsuperscript{46} Wild 1970, 67
\textsuperscript{47} Wild 1970, 68
Iconographic Evidence

The earliest iconographic evidence for the warp-weighted loom comes from the Great Rock at Naquane, dated to the 14th century BCE, which has multiple simple carvings. All six consist of the basic loom shape with a row of dots underneath, which represent loom weights and two also contain human figures working at the loom. Another early example is a Linear A symbol on a clay sealing from Hagia Triada, dated to roughly the same period. In this example, three vertical lines with dots on the end, representing the warp threads and weights, hang from a horizontal line representing the cloth beam at the top of the loom.48

The main source for depictions of the warp-weighted loom comes from Greek vase painting. The depictions on these vases vary greatly in both the context and detail given to the loom and consequently to weaving. A group of Boeotian vases from the 5th and 4th centuries BCE show a rough “sketch” of the loom, giving only the most important details such as the warp, the upright beams which create the loom and sometimes a weft. Additionally, all of these vases show two rows of loom weights, showing their importance in the warp-weighted loom. Most likely, they are also what help identify the loom most easily.

48 Barber 1991, 91-2
Figure 3: Drawing of a loom from a Boeotian vase, 5th century BCE. From Crowfoot, 1936, 41.

Looms are also used in vase painting to establish a setting for a mythological scene. In a skyphos from Chiusi, dated to the 5th century BCE, Penelope is seen sitting in front of a loom while her son Telemachos stands next to her. Since Penelope is skilled in weaving, her presence next to a loom helps identify her, rather than play a part in the scene depicted on the vase. Despite the loom merely being a part of the setting, to help establish context, it is quite detailed. This loom has an additional cross-beam at the top from which bobbins of weft hang and another beam which serves to support the cloth. Both of these features are considered unrealistic. Loom weights are given a slightly more defined triangular shape than the blobs seen on Boeotian vases, but they are attached to every warp thread, which is also highly impractical. The presence of these incorrect details suggests that perhaps the artist was not that familiar with the construction of the loom, though he still wished to provide as much detail as possible. The inaccuracies on these vase paintings reinforce the argument that though artistic representations can present some support for archaeological evidence, ultimately they are not wholly reliable.

The most detailed example of a loom on a vase painting is on a 6th century BCE lekythos from the Metropolitan Museum of Art. In this vase, two women are shown weaving on a loom larger than them. The basic frame of the loom, along with the top cloth beam, heddle bar, and weft is depicted. One woman appears to be weaving the weft through while the other is beating the already woven threads upwards. In this vase painting, there is only one row of loom weights, but they are depicted as pyramids,

49 Hoffmann 1964, 305
a common shape for loom weights. More importantly, the artist shows how they are attached to the warp threads, with multiple warp threads fastened to a single loom weight by means of an intermediary device, which in this case appears to be a ring. This depiction reinforces the archaeological evidence found at Nemea where the rings were found still attached to loom weights, though the shape of the weight is different. The lekythos also shows other women preparing wool for weaving which supports the claim that women are responsible for textile production as a whole, rather than just weaving.

![Lekythos from the Metropolitan Museum, 6th century BCE.](image)

Figure 4: Lekythos from the Metropolitan Museum, 6th century BCE.
Figure 5: Reconstruction of the loom from the lekythos in the Metropolitan Museum. From Crowfoot, 1936, 41.

There are two examples of warp-weighted looms on Etruscan artifacts from the Villanovan period. A bronze *tintinnabulum* from Bologna has four scenes that show different steps of the weaving process performed by women. In the lower register of one side, two women are putting wool onto their distaffs. On the top half, a woman is spinning wool. The other side is badly damaged at the bottom, but it is believed that the women are preparing warp threads for the loom. The top half shows a woman weaving on a tall warp-weighted loom while another woman hands her weft yarn.\(^{50}\) This example of a loom is quite large in comparison with most other iconographic evidence. Unfortunately, without archaeological evidence to support this depiction, it is impossible to determine if looms were feasibly this large or if this image is exaggerated. The women are all in fancy dress, with decorative borders on their garments. Other

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\(^{50}\) Haynes 2000, 36-7
items, such as the fans and stools upon which the women sit are also upper class, highly decorated luxury items. This artifact reinforces the theory that upper class women were responsible for weaving the nicer garments.

Figure 6: Bronze *tintinnabulum* from Bologna, 9th-8th century BCE. From Gleba 2008, 72.

A wooden throne was discovered in a tomb in Verucchio, which also depicts the steps of textile production. The lower frieze shows men shearing sheep and washing the wool. Perhaps it was necessary for men to assist in this process because it was more physically demanding. The setting for this scene appears to be outside and the presence of warriors suggests that the task may have been too dangerous for women. An enthroned figure, whose gender is unidentifiable due to damage, is present, perhaps to supervise the transport of wool. In the register above, women are shown

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51 Haynes 2000, 39-41
manufacturing cloth: dying, spinning wool with distaffs, and weaving material on elaborate looms.\textsuperscript{52} Like the \textit{tintinnabulum}, the throne reinforces the division of labor by gender, that men performed the more dangerous, outdoors tasks while women wove inside the home as they cared for their children. It also reiterates the idea that the weaving process was a communal activity and may even suggest the presence of an early workshop in Etruria.

\begin{center}
\includegraphics[width=\textwidth]{figure7.png}
\end{center}

\textbf{Figure 7: Drawing of figures from the wooden throne from Verucchio, 9\textsuperscript{th}-8\textsuperscript{th} century BCE}

\textbf{Loom Weights}

Key elements of the warp-weighted loom are the loom weights, which are necessary to weigh down the vertical warp threads and keep them taught. Simple stones would have had the same effect as loom weights, but instead, artisans took time

\textsuperscript{52} Haynes 2000, 39-41
to craft a tool for the job. The fact that weavers took the time to shape and in many cases even mark or decorate their own loom weights indicates their importance to the weavers and may help explain their presence in the tombs. Loom weights could be made from clay, metals and stone. The majority of loom weights found in Etruria were made from terracotta, and these will be the focus of my discussion.

Loom weights come in a variety of shapes, such as conical, discoid, and rheniform and vary in the number and placement of holes, but all would have ultimately had the same function. Particular shapes do not appear to be region-specific, but the most common shape among ancient Etruscans and Romans was a truncated pyramid made out of fired terracotta. Loom weights do not evolve much over time, making dating difficult, unless one is found in a securely datable archaeological context.\textsuperscript{53} At the Etruscan site of Murlo, a proportionally high large number of \textit{rocchetti}, or spools, were found which suggest that they may be analogous with loom weights at this site and used to produce narrow decorative bands of cloth to adorn garments.\textsuperscript{54}

Most of the time, loom weights were handmade, causing great differences in both size and mass, even at the same site. For example, a set of loom weights discovered \textit{in situ} at Rentenanstalt, a Late Neolithic site in Switzerland indicate that even on the same loom, the variation in loom weight size was drastic.\textsuperscript{55} Usually, this would not be case, as a greater variation in size on the same loom would only complicate the weaving process, making it more difficult to adjust the warp threads.

In the Hellenistic period, some were mold-made, though most were still made individually. Loom weights were usually produced locally, adding to the variety in

\textsuperscript{53} Gleba 2008, 127-8
\textsuperscript{54} Gleba 2000, 105
\textsuperscript{55} Barber 1991, 95
proportions and shapes between different sites.\textsuperscript{56} There is some evidence, however, for the export of loom weights. At the Etruscan site of Cetamura del Chianti, a loom weight made of a non-local fabric was discovered with an S stamp on the top, which may be the stamp of the Roman Sestius family, prominent traders in the Hellenistic period.\textsuperscript{57}

There is some debate as to how the loom weights would have been attached to the loom. Despite the fact that many vase paintings depict the loom weights attached individually to warp threads, it is unlikely that loom weights were attached directly to the warp threads, because it would have been difficult to adjust the tension on the threads. Additionally, the apertures on many loom weights are not large enough for multiple warp threads to pass through them. It is also unnecessary to attach loom weights to each thread and it is likely that they would have been more cumbersome than practical. Since loom weights are not often found \textit{in situ} in large numbers, this also suggests that multiple warp threads were attached to each loom weight. The use of an intermediary device, such as a ring or rod, attached through the aperture allowed for easier adjustments and better spacing for the warp threads. While having an intermediary ring or rod of some type is necessary for successful weaving, there was no advantage in attaching too many warp threads to one weight, as it would make setting up the loom, as well as the weaving process, more difficult.\textsuperscript{58}

Two conical loom weights from the site of Nemea were discovered with wooden rods attached, to which the warp threads would then have been tied. This method is also shown in the form of stamps on loom weights from Athens and Corinth, again on

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{56} Gleba 2008, 134
\item \textsuperscript{57} De Grummond 2005, 30-35
\item \textsuperscript{58} Martensson 2009, 382-383
\end{itemize}
\end{footnotesize}
the conical shape. Hellenistic weavers normally used conical weights, and so this
Nemean method may have developed during this period.60

Figure 8: Drawing of a loom weight stamp on a conical weight from Corinth,
showing the intermediary rod. From McLauchlin, 1981, 80.

Figure 9: Example of a conical loom weight with the metal rod still attached

Another example, this time on a pyramidal weight from the British Museum also
has a metal ring through the aperture to which the warp threads would have been
attached. Most loom weights, however, do not have a linking element attached to

59 McLauchlin 1981, 80
60 Carroll 1983, 97
them, which suggests that it was most likely made of a perishable material. On some loom weights, such as one from Aszod, Kalicz, the aperture hole shows some thread wear.\textsuperscript{61} This proves the presence of an intermediary rope or cloth loop as well as that the weight was used for weaving.

The presence of weaving implements throughout in a variety of important contexts—archaeological, iconographic and literary—indicates their integral part in both the economy and culture of the ancient world. Since women were primarily responsible for the textile arts, loom weights can be used not only to show their presence but also their status. If weaving implements function also as markers of social status, it is only logical that women would pay a particular care in identifying, personalizing, and marking their own weaving tools. Such heightened social significance may also result in the increased frequency of \textit{sigla} found on loom weights. The loom weights, as their owners, convey their social message silently and subtly.

\textsuperscript{61} Barber 1991, 95
Chapter 2: Interpreting Sigla on Loom Weights

In this chapter, I will define and examine the term *siglum* in the context of the archaeological data I have collected from sites in Etruria. The discussion will focus primarily on artifacts from four sites with well-published sigla: Cetamura del Chianti, La Piana, Roselle and Viterbo in an attempt to interpret these previously unidentified marks.

To date, there has been no thorough and systematic study of Etruscan *sigla* conducted. Many excavators disregard these marks as meaningless or merely decorative and fail to record them in their artifact catalogs. In the instances when *sigla* are recorded, the information given about them varies and often the descriptions are not detailed enough to interpret these marks. Therefore finding well-documented examples of *sigla* is often difficult.

There is also an insufficient understanding of the Etruscan language. While much work has been done, there is still much to be learned about the vocabulary, grammar and syntax of the language, which will impact the meaning of *sigla* as a whole. For instance, *sigla* of two adjacent alphabetiform characters are often interpreted as being abbreviations of Etruscan words or names based on the words we know. With a greater vocabulary to work from, it would be easier to interpret these types of marks or give a more conclusive interpretation of their meaning.

In regards to the role of women in the Etruscan economy, there is not sufficient evidence either in literary or iconographic sources. All written records come from Latin and Greek male authors, reflecting a gender and cultural bias. Iconographic sources, as demonstrated above, can also be unreliable, since it is difficult to determine which details convey meaningful information and which are merely for artistic purposes. A
further problem stems from the automatic transfer of understanding of both weaving practices and female roles of the Greco-Roman world onto Etruscan culture.

The *International Etruscan Sigla Project*, under the aegis of Nancy de Grummond and Giovanna Bagnasco Gianni, aims to create an online database of *sigla*. The group is working to develop a protocol that will govern the correct cataloging of data regarding *sigla*. It is only with a large corpus of data with thorough documentation that conclusions can be made about the meaning behind *sigla*.62

A *siglum* (pl. *sigla*) is a mark or combination of marks, which has been incised, stamped or painted onto an artifact for a purpose different from “normal linguistic means, i.e. the writing of words.”63 Previously, these marks have been referred to as graffiti. Though further analysis is needed of *sigla* as a whole, based on my research focused on loom weights, I am inclined to suggest that these marks serve a variety of purposes. Some, particularly those with multiple alphabetiform characters seem to have a linguistic meaning, often relating to female names. Numeriform *sigla* do not appear to indicate a quantitative value, but instead may present a ritual meaning or may be more closely related to abstract forms. Others with abstract symbols can be difficult to interpret, though they may be used as marks of ownership or craftsmanship.

These *sigla* are alphabetiform, numeriform, or abstract characters. Characters found on a single artifact range from single forms, multiple alphabetiform characters in close proximity to each other, entire identifiable Etruscan words and names, to the pairing of abstract sigla with inscriptions. For the purposes of the current discussion, I have limited my study to a maximum of two adjacent characters. Though some loom weights have more than two adjacent characters, those markings are no longer classified

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62 Bagnasco Gianni and de Grummond (forthcoming)
63 De Grummond 2000, 25
as *sigla* as they often become an entire word, an abbreviated form of a word, or a clear decorative pattern. This protocol was established by the members of IESP in an effort to count all examples of *sigla* documented in 2010.64

First, my focus will be on loom weights discovered at the site of Cetamura del Chianti, since I have been able to catalog, examine, and study these artifacts first hand. I was also able to visit the site of La Piana and examine the loom weights discovered there as well. To compare with examples from these sites, I will use others from the sites of Roselle and Viterbo. These are somewhat different archaeological sites from those of Cetamura and La Piana, but all contain the same type of loom weights as Cetamura (the truncated pyramid shape) and are securely Etruscan.65 Though some of these sites differ drastically in size and complexity from Cetamura and La Piana, their *sigla* can provide a useful comparison.66

In my analysis, I organized the data in three separate categories: alphabetiform, numeriform, and abstract *sigla*. By doing so, I hope to find more similarities between previously unrelated marks. I have sorted my data first by archaeological site, and then by type of *sigla* within each site. I will first focus on alphabetiform *sigla*, because the normal tendency is to interpret these marks with a linguistic meaning. Additionally, they are the most frequently documented examples, as the symbols are more readily identifiable. I will then discuss numeriform *sigla*, as these also are fairly recognizable.

64 Bagnasco Gianni and de Grummond (forthcoming)
65 Roselle is a more urban site with a larger population. It spans a broader period, though the majority of loom weights are still datable to the Late Period. Since the origin of the Viterbo loom weights is uncertain, the type of site from which they come is unknown, but the types of *sigla* found provide a worthwhile comparison to Cetamura.
66 I was partially limited in my selection of Etruscan sites by those with well-documented *sigla*. 
Lastly, I will focus on the abstract sigla, which have a greater variety of forms and have been less frequently studied.
<table>
<thead>
<tr>
<th></th>
<th>Total Sigla</th>
<th>Alphabetiform</th>
<th>Numeriform</th>
<th>Abstract</th>
<th>Non Sigla</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cetamura</td>
<td>19</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>La Piana</td>
<td>7</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Viterbo</td>
<td>14</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Roselle</td>
<td>13</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 1: List of sigla and their types from each of the four sites

The site of Roselle is drastically different from the other three in the type of sigla found on loom weights, as all are alphabetiform. It is possible that this indicates a higher rate of literacy amongst the makers of weaving implements, though it may be that only alphabetiform characters were recorded. The examples from Viterbo are unusual, as it is the only site that exhibits all four categories of markings. However, since this collection is likely from several different sites, it is difficult to draw any conclusions from its collection as a whole, though it is still useful to study individual examples.

The IESP has created a signary of the twelve most frequently occurring symbols and assigned them Latin names, and whenever possible I will use these names.\(^{67}\)

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\(^{67}\) Bagnasco Gianni forthcoming
## A Signary of Etruscan Sigla

**Siglum** (pl. *sigla*): marking on an artifact or monument made by incising, painting, stamping, or punching. Such markings are symbols or abbreviations of some kind that communicate without using words. Latin names have been assigned to selected non-verbal sigla by the International Etruscan Sigla Project.

<table>
<thead>
<tr>
<th>Sigle</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ancora</td>
<td>anchor</td>
</tr>
<tr>
<td>Bipennis</td>
<td>double axe</td>
</tr>
<tr>
<td>Craticula</td>
<td>grid</td>
</tr>
<tr>
<td>Forma quadrans</td>
<td>a cross mark, form with four equal quadrants.</td>
</tr>
<tr>
<td>Lineae radiantes</td>
<td>radiating lines</td>
</tr>
<tr>
<td>Pentaculum</td>
<td>five-pointed star</td>
</tr>
<tr>
<td>Ramus siccus</td>
<td>dry branch</td>
</tr>
<tr>
<td>Swastika</td>
<td>a cross mark with an extension on each leg of the cross</td>
</tr>
<tr>
<td>Tridens acutus</td>
<td>pointed trident</td>
</tr>
<tr>
<td>Tridens quadratus</td>
<td>squared trident</td>
</tr>
</tbody>
</table>

### Other Types of Sigla

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alphabetiform</td>
<td></td>
</tr>
<tr>
<td>Numeriform</td>
<td></td>
</tr>
</tbody>
</table>

Figure 10: Signary of Etruscan *Sigla* established by the IESP.

Graphic by Crystal Lopiccolo, 2011.
As mentioned above, alphabetiform *sigla* are the most frequent type documented. The *Corpus Inscriptionum Etruscarum* is a collection of all Etruscan texts discovered (and reported.) *Sigla* are often documented but only when the mark(s) can be readily identified as a character of the Etruscan alphabet. The *Rivista di Epigrafia Etrusca* in *Studi Etruschi* also records Etruscan inscriptions of all lengths. Individual site reports as well as museum and exhibition catalogues have provided further examples of *sigla*.

**Cetamura del Chianti**

The site of Cetamura del Chianti was rediscovered on September 14, 1964 by Alvaro Tracchi while surveying sites in the region. He began studying the site, primarily through collecting of surface finds, clearing of visible walls and creating a full site map. The first excavation season was in 1973, led by John J. Reich of Florida State University. It became a field school in 1978 under the direction of Nancy de Grummond and she has continued as field director since 1983.\(^{68}\)

The first evidence for the inhabiting of Cetamura comes from the Paleolithic period, ca. 40,000 years ago. Following this, during the Etruscan Archaic Period (7th–6th BCE) a settlement was established. The majority of Etruscan evidence, however, dates to the Etruscan Late Period, from ca. 300–75 BCE. The site was then occupied by the Romans, with the earliest evidence from the period of Augustus and continuing until the 4th century CE. As noted by documents at Badia a Coltibuono, as well as archaeological evidence at Cetamura, the site was inhabited during the eleventh and twelfth centuries.\(^{69}\)

My focus is on the buildings and artifacts discovered during the Late Period. Located on the lower zone, Zone II is an Etruscan sanctuary as well as an artisan area.

\(^{68}\) De Grummond 2009 24-25

\(^{69}\) De Grummond 2000 7
with a kiln, which have yielded many of the weaving implements discovered on site. These buildings, as well as most artifacts discovered within date to this period. The buildings were constructed during two major phases. Buildings of Phase I (ca. 300-150 BCE) are made from small, neat stones, whereas Phase II (ca. 150-75 BCE) consists of large, irregular stones which have “conspicuous tool marks.”

Figure 11: General Site Plan of Cetamura Del Chianti, 2007. From de Grummond, 2009.

**Sanctuary at Cetamura del Chianti**

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70 De Grummond 2009 39-40
Nancy de Grummond has argued for the presence of a sanctuary at Cetamura, consisting of a large structure, Building L, where sacred rituals and offerings occurred.⁷¹ This building does not resemble other Etruscan sacred buildings and instead possesses elements of both temples and the sacred area normally found in front of a temple. It is trapezoidal in plan and has an interior open-air courtyard with a ritual cavity carved into the bedrock and a rustic altar. There are channels leading to the cavity from both the northwest and southwest, enabling libations to be poured from either direction.

Building L encompasses a suite of rooms, which are oriented to the cardinal directions, aligning them with the buildings within the artisans’ quarters of Phase I. There is not evidence for the superstructure of the rooms, but they may have been made of wood or rammed earth. Some areas of the sanctuary, including the courtyard, feature a beaten earth floor.

The shape resembles that of Edificio Delta at Gravisca, which has a trapezoidal courtyard accompanied by several smaller rooms.⁷² This courtyard, however, is not aligned to the compass points and did not possess an altar or ritual cavity. The orientation is comparable to that of an Etruscan temple, but the ground plan does not resemble the standard plan for temples.⁷³ However, the presence of seven votive features within the sanctuary have helped in identifying the complex as such.⁷⁴

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⁷¹ De Grummond 2009 39
⁷² De Grummond 2009 39
⁷³ De Grummond 2009 39-40
⁷⁴ De Grummond 2009 41
Figure 12: Sanctuary Complex at Cetamura del Chianti. From de Grummond, 2009

Artisan Zone at Cetamura del Chianti

In the northwest area of Zone II, there is a group of buildings that have been identified as an artisans’ zone, due to the presence of two kilns (Structures J and K). Structures A, B and D are cisterns which would have been used to supply water to the artisans who use the sanctuary.
Figure 13: NW Complex at Cetamura del Chianti, 2011. Courtesy of N de Grummond.

Structure K is rectangular, comprised of irregular sandstone blocks. The ground plan is consistent with other ancient kilns discovered in Italy. The southwest corner of the kiln was excavated down to bedrock and revealed remains of the side of the kiln, showing a corbelled effect made from stone. No Etruscan kiln has been preserved with the original cover and through comparisons with medieval and Renaissance examples, it has been speculated that the cover was frequently dismantled and reassembled.\textsuperscript{75}

\textsuperscript{75} De Grummond 2000 19-20
The kiln contained the final materials to be fired prior to its closing. The contents consisted of under-fired examples of bricks and tiles, of which most were “amorphous chunks of unfired clay.”\(^{76}\) Apart from bricks and tiles, a partially fired loom weight was excavated, suggesting that this kiln was used for the firing of bricks, tiles and weaving implements, but not pottery. This makes sense since all were made of CF2, shape of kiln is consistent with brick and tile.

Figure 14: Structure K, 300-1\(^{st}\) cent BCE. From de Grummond, 2000, Plate III.

Structure C, a large room with a paved floor, has been hypothesized to be the location of a weaving workshop at Cetamura. Within (or in close proximity to) the structure a large number of weaving implements have been uncovered, including loom weights, spindle whorls, and spools. While the kiln was closed ca. 150 BCE, weaving seems to continue throughout the Late Period, since weaving implements have been uncovered within Structure C dating from Phase II. \(^{77}\)
Cetamura has four local fabrics for ceramic materials. Cetamura Fabric #1 is primarily used for cookware and is thick and coarse. It is often of a muddy orange color with large white inclusions. Cetamura Fabric #2 is used for tile and brick, storage vessels and loom weights. It is an orange clay with small inclusions of sandstone. Cetamura Fabric #3 is the most frequent fabric found on site, used for table and storage wares. It is normally a pink fabric with a grey interior and is gritty with inclusions of sandstone, mica and quartz. Cetamura Fabric #4 is used for tableware and spindle whorls. It is the most refined of the fabrics, with an orange color with miniscule colorless but often shiny inclusions. 

Loom Weights with Sigla at Cetamura

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78 De Grummond 2000 22
Though there is a great variety in loom weight shapes in the ancient Mediterranean, all those discovered to date at Cetamura are of the truncated pyramid shape, the standard shape for Etruscan loom weights. They are all made of terracotta and most are made from Cetamura Fabric #2. There is drastic variation in the size of loom weights on the site, which may in part be because most of the weights were handmade, causing greater diversity.

As of summer 2011, 35 loom weights had been discovered at Cetamura, of which 19 (54%) contain *sigla* on either the top or sides of the loom weight. Of the 16 without a *siglum*, 11 of them are missing significant portions of the original loom weight (69%), and one must consider seriously the possibility, even likelihood, that originally these weights had *sigla* on them. *Sigla* at Cetamura are most frequently found on the tops of the weights, with 15 examples (79%), compared to only four that are incised on one of the sides. 13 loom weights (68%) have *sigla* that were either stamped or impressed onto the weight prior to firing and six were incised, also prior to firing. Nine different kinds of *sigla* have been found thus far.

**Alphabetiform *Sigla***

Cetamura only has one loom weight that is an identifiable alphabetiform character. This loom weight features an S stamp on the top of the weight. This weight, however, is not made of local CF2, but a foreign fabric. De Grummond has interpreted it as the stamp of the Roman Sestius family, who were prominent businessmen in Cosa.\(^7^9\) Since Cetamura is located on the crossroads between Arezzo and Volterra, as well as Fiesole and Chiusi, all of which were prominent Etruscan cities, it is logical stopping point on a trading route. The different fabric as well as a non-Etruscan stamp

\(^7^9\) The trade of the Sestius family spread across both the Tyrrhenian and Mediterranean Seas. De Grummond 2005, 30-35
suggests that the weight was an import. The presence of this weight also shows the influence and prominence of the Sestius family.\textsuperscript{80}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{loom_weight}
\caption{C-74-AII Loom weight with S stamp from Cetamura. From de Grummond, 2000, Plate XIX (drawing) and back cover (photo).\textsuperscript{81}}
\end{figure}

It is noteworthy that the only loom weight from Cetamura with an alphabetiform character is not actually of Etruscan origin. A lack of this type may suggest that a lower percentage of those making the loom weights were literate at the site. Inscriptions and other alphabetiform sigla have been found at Cetamura, however, so the population was not wholly illiterate. In fact, the most common \textit{siglum} found on other artifacts is an alpha, but this symbol is found solely on pottery and not on any loom weights. Perhaps the individuals making loom weights are different from those making pottery on site, or perhaps in relation to weaving implements, the meaning of \textit{sigla} is so abstract that alphabetiform characters were unnecessary.

\textsuperscript{80} De Grummond, 2005, 30-35
\textsuperscript{81} All artifacts from Cetamura del Chianti are currently in storage at the site laboratory at Badia a Coltibuono in Gaiole in Chianti.
**Numeriform Sigla**

Two loom weights at Cetamura have an X mark incised, one on the top and the other on one side. These two *sigla* vary greatly in size, as one (C-06-305) stretches from all corners of the top of the weight while the other (C-76-1600) is a shallow, small incision along one side. The X is often interpreted as a numeriform *sigla*, since X is the number 10 in Etruscan numerals. But if it is a numerical symbol, it is impossible to determine what the number represents. The two loom weights with X markings on them are drastically different in both dimensions and mass; thus, the number cannot represent the size of the weight.

![Image](image.jpg)

Figure 17: C-06-305: Loom weight with an X sigla incised on the top of the weight. Photograph by Cassidy Phelps.

There is one loom weight from Cetamura with a stamp impressed onto the top of it resembling an asterisk. The Etruscan numeral 100 is a six-bar asterisk. This example, however, has an additional bar, which likely changes the meaning of the *siglum*. It is possible that the added bar increases the numerical value, the same way that an additional mark increases the number II to III. The meaning may also change entirely and not have an associated numerical value. Perhaps it is merely a decorative symbol and the creator of the stamp liked the appearance of an asymmetrical asterisk.
instead. This *siglum* also falls under the category of *lineae radiantes*, defined in the signary above.

![Image of loom weight](image1)

![Image of loom weight](image2)

Figure 18: C-95-158: *Lineae radiantes* stamp on a loom weight from Cetamura.

From de Grummond 2000, Plate XXI (drawing) and back cover (photo).

**Abstract Sigla**

The most common *siglum* found on loom weights at Cetamura is the circle or oval shape, with seven loom weights with this mark. Most frequently this mark is stamped or impressed onto the top of the loom weight, though an incised example has also been found. At this point, it cannot be determined whether the incised and stamped ovals have different meanings. Both types are found on the tops of the weights and in similar contexts.

Three of the loom weights with oval impressions are of a comparable size, with conjectured weights, if they were complete, between 400-500 grams. This is an unusual similarity for weights at Cetamura, as the majority are drastically different in size.\(^{82}\) This resemblance may indicate that these weights were all made by the same individual or workshop, choosing to mark his or her weights with a common identifier. These three weights were all found around Structures C and K, one of which is the misfired

\(^{82}\) De Grummond 2000,
example found in the kiln itself. The correlation in size between these weights suggest that they may have been intended for use on the same loom as well.

Figure 19: C-81-551 One of three loom weights of comparable size with oval siglum. From de Grummond, 2000, back cover.

Figure 20: C-75-WT Example of a circle inscribed siglum. From de Grummond, 2000, back cover.

There are two examples of a forma quadrans siglum incised upon the tops of two loom weights. This siglum is described as a “quartering form” consisting of two lines,
dividing the field it is incised upon into four quarters.\textsuperscript{83} This symbol differs from the X mark in that it has four 90 degree angles, rather than varying sizes as seen in C-06-305 above.

Figure 21: C-Wt-1 Drawing of a \textit{Forma quadrans siglum} from Cetamura del Chianti. From de Grummond, 2000, Plate XX.

La Piana

The site of La Piana is located near modern day Siena and is comparable to Cetamura in size. It is also an Etruscan habitation site with evidence for textile production, giving similar contexts for the loom weights discovered. The site was excavated by Jane Whitehead. Loom weights at La Piana are of the truncated pyramid shape as well and the fabric of these weights is a red-brown color very similar to that of Cetamura.

\textit{Sigla} at La Piana

At La Piana, there are seven examples with \textit{sigla} inscribed on the tops of them. No loom weights from La Piana have markings on the sides. La Piana has also yielded other textile implements with \textit{sigla} inscribed upon them, where only loom weights at Cetamura have \textit{sigla}.

Alphabetiform \textit{Sigla}

\textsuperscript{83} Bagnasco Gianni, deG forthcoming
One loom weight from La Piana has been argued to have letters alpha, lambda, nu incised on the top of it. During my examination of the loom weight, however, I was unable to make out any letters, both from the artifact and the drawing of it. It seems to be a type of abstract design and a connected form, rather than individual letters. It is rather tempting to interpret any markings as alphabetiform, but as the images below show, we do not have enough foundation to interpret these marks as letters.

Figure 22: Loom weight with unidentifiable, possibly alphabetiform, siglum from La Piana. Photograph by Cassidy Phelps. Drawing courtesy of Jane Whitehead.

**Numeriform Sigla**

Similar to the X mark at Cetamura, two loom weights from La Piana have the numeral X inscribed on the top of them. These weights, however, are of drastically different sizes than those examples at Cetamura, as well as different from each other. These examples reinforce the theory that though the symbol X may be numerical, in the context of sigla on loom weights, it does not appear to have a numerical meaning.
Figure 23: X mark on the top of a loom weight from La Piana. Courtesy of Jane Whitehead.

Abstract Sigla

A loom weight with a circular depression, similar to those impressed on weights found at Cetamura, was discovered at La Piana. However, this oval siglum was found in the corner of the loom weight, rather than in the center. Interestingly, this loom weight is similar in size and mass to the oval weights found at Cetamura, though most likely this is coincidental. The loom weights with X sigla have proved that the marks on loom weights are not used to represent a particular size or mass.

Figure 24: Oval impression in the corner of a loom weight from La Piana. Courtesy of Jane Whitehead.

Alphabetiform Sigla at Viterbo and Roselle

Alphabetiform sigla are quite common on weaving implements, particularly at more urban sites.

A collection of three loom weights of comparable sizes, all with alphas inscribed on top were found at Roselle. Like the set of loom weights with oval impressions on the top from Cetamura, these weights may indicate that they were created by the same person or used on the same loom. All three of these marks were discovered in the same area of the site, making their relationship to each other more likely.
Figure 25: R.23239, 36748, 36767: Three alpha sigla on loom weights discovered at Roselle. From Pallottino, 1978, 334.

Another set of three weights with identical sigla were found at Viterbo. This time, however, they are inscribed with two letters, LA. Again, these examples are all approximately the same size. It is possible that LA is an abbreviation for the female name of Larthia.84

Figure 26: Inv 363/808: Loom weight with an LA siglum from Viterbo. From Emiliozzi, 1974, Plate CLXXV.

Numeriform Sigla

An example from Viterbo has an asterisk stamp impressed upon the top of the loom weight similar to the one found at Cetamura. This stamp, however, only has six bars, making it more likely to be the number 100. Similar to other numeriform sigla, without finding more examples, it is impossible to determine what the numerical value refers to, if anything.

84 Emiliozzi1974
Figure 27: Inv. 363/805. Loom weight with an asterisk *siglum* from Viterbo.

From Emiliozzi, 1974, Plate CLXXVII.

**Abstract Sigla**

This *siglum* is another example of a *forma quadrans*. Here, the lines intersect at almost 90 degree angles, rather than varying greatly as seen with a true X mark. In the left quadrant, two lines have been added. Bagnasco Gianni has suggested that such a *siglum* is a method for delineating space, and marks in a particular section suggest the importance of that quadrant for ritual purposes. Therefore, perhaps there was something significant about the left side of this weight, or it may have even intended to indicate its placement on the loom. If the latter is true, however, it would be a rare example of a *siglum* serving such a purpose, as there are not others found at these sites which suggest their relationship to other weights.

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85 Bagnasco Gianni (forthcoming)
Figure 28: Inv 363/799: Loom weight with a *forma quadrans* with two additional lines from Viterbo. From Emiliozzi, 1974, Plate CLXXVI.

The following loom weight from Viterbo is an example of a *ramus siccus siglum*. It resembles a dry branch, perhaps indicating a tree that has lost its leaves. It is unclear what relationship this loom weight would have to a tree, so perhaps it had special significance to the creator of the loom weight or perhaps is serving as a mark of identification.

Figure 29: Inv 363/804: Loom weight with a *ramus siccus* from Viterbo. From Emiliozzi 1974, Plate CLXXVI.

**Inscriptions (not sigla)**

Though they are not sigla, there are many loom weights with entire words or inscriptions on them. One example from Roselle has been interpreted to read “Thana,” which is another Etruscan female name. Another, inscribed on the side instead of the top, reads Velia Taiinal, which is again a woman’s name. Both were incised prior to firing, which suggests that they were made for particular women.

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86 Bagnasco Gianni and de Grummond (forthcoming)
87 Ambrosini 2000,
Figure 30: R. 20555: *Thana* inscription on a loom weight from Roselle. From Pallottino, 1978, 335.

Figure 31: Velia Tainal inscription on the side of a loom weight. From Ambrosini, 2000, 141.

This may suggest a commission system, by which individual women would request a particular size or type of loom weight to be made for them, rather than purchasing loom weights made at random by a craftsman. This system would make sense, as women may have their own preferences for style of weight or have a need for a weight of a particular size, depending on the type of garment they were weaving. As most loom weights were handmade, their size could be adjusted quite easily. The lack of mold-made weights may not be from a lack of technology, but rather a desire to be able to customize these weights easily.

**What do they mean?**
In order to interpret a particular *siglum*, it is necessary to have many examples from a specific site with as many similarities in the loom weight, marks, and context as possible. Just as there is great diversity in loom weight sizes and shapes from site to site, the types of *sigla* vary. Since the majority of *sigla* are incised or stamped pre-firing, they were added when the loom weight was made. These marks could be made either by the creator of the loom weight or the kiln worker who would have fired it. This process is done on a local level, which increases the diversity both in loom weight size and the sigla placed upon it. Therefore, the same *siglum* may have a drastically different meaning from one site to the next. Even if it is not possible to determine the meaning of *sigla*, some preliminary conclusions may be drawn and some hypotheses discarded.

Most frequently, previous scholarship has focused on marks that can be interpreted to have a numerical or linguistic meaning. In their analysis of loom weights discovered on the Pnyx, Davidson and Burr Thompson originally hoped that loom weights stamped with single letters would represent the mass of the weight. However, like the X loom weights at Cetamura, there were not similarities in size between marks with the same *sigla*.\(^\text{88}\) This evidence suggests that the *sigla*, though alphabetiform in shape, have another meaning.

It has also been argued that *sigla* are a form of maker’s marks. This opinion has not been supported by most scholars.\(^\text{89}\) I think this may sometimes be an acceptable explanation, such as with the Sestius stamp found at Cetamura mentioned above. The maker’s mark could also be a symbol of authenticity or quality of the loom weight. Davidson and Burr have suggested that the artisans would make the weights in sets and

\(^{88}\) Davidson 1943, 74

\(^{89}\) Gleba 2008, 137
mark them either with a symbol or letter for their own identification purposes, but the 
women would then be able to choose a set with their initial or favored design.\textsuperscript{90}

An analysis of 46 loom weights with inscriptions by Ambrosini has shown that 
these inscriptions are of personal names. The majority of these are feminine names and 
all are in the genitive case, which indicates the owner of the loom weight.\textsuperscript{91} As most 
loom weights appear to be incised prior to firing, the women would then be 
commissioning their loom weights from artisans in order to have their name inscribed. 

The argument for owner’s marks can carry over to \textit{sigla} as well. In the 
alphabetiform examples from Viterbo and Roselle, the woman merely would have the 
first letter(s) of her name inscribed, allowing her to identify them after they were fired. 
At Cetamura, where abstract marks are more popular, perhaps each woman chose a 
particular shape to mark her weights, rather than an alphabetiform character. This 
difference may be due to a lower rate of literacy or a personal preference. 

Comparable examples of loom weights with \textit{sigla} from Greece exist during the 
Classical and Hellenistic periods. Loom weights were often stamped with a gem or 
bezels from rings as a method of identification. There are usually few duplicates of a 
particular stamp at a site, with the exception of Olynthos, where a collection of twenty 
loom weights with the same stamp were found. Single letters were also commonly 
stamped on pyramidal weights at Athens and incised on conical weights from Corinth.\textsuperscript{92}

The interpretation of \textit{sigla} as owners’ marks is quite tempting, especially in the 
case of abstract marks for which no other explanation has been offered. I, however, 
would like to propose that women were creating their own loom weights and then 

\textsuperscript{90} Davidson 1943, 74  
\textsuperscript{91} Ambrosini 2002, 156  
\textsuperscript{92} Davidson 1943, 74-75
marking them prior to having them fired by kiln workers. They would not have to go through the trouble of having them commissioned and could choose their own marks. Since the value of weaving implements was high only to their owner, it would make sense that women wished to craft the tools themselves.
Conclusion

In an ideal situation, we would have a substantial corpus of Etruscan loom weights with *sigla* inscribed upon them in order to draw conclusions on the meanings of these mysterious marks. As it is, however, we are greatly limited by the information that survives and furthermore by the record of the weaving practices of Etruscan women. Though much work remains to be done on this topic, there are preliminary conclusions that can be drawn concerning the meaning of *sigla* and their relationship to the loom weights upon which they are inscribed.

Weaving is considered to be a female task throughout the Greco-Roman world, as documented by to both literary sources and artistic representations. Two Etruscan artifacts, the bronze *tintinnabulum* from Bologna and the throne from Verucchio, suggest that this is true too of Etruscan culture. The high presence of weaving implements in graves throughout Etruria also indicates their female ownership, as well as the importance they had to their owner. Since the objects themselves were not of high value, their worth stems from their usefulness to their owners. It follows then that the *sigla* would reflect things that were important to their owners. Also, it would be unnecessary for this to be a verbal message, as the owner herself would know its meaning.

It is not true either that *sigla* were used only by those who were illiterate. Not only are some alphabetiform characters, which shows at least the partial literacy of the makers, but some are found in conjunction with longer inscriptions. Though some appear to be abbreviations for known Etruscan words, particularly names of deities or women, the combination of *sigla* with inscriptions suggests that at least in some instances, they possess a non-verbal meaning.
As the majority of sigla found on loom weights in Etruria are stamped or incised prior to the firing of the object, it is the maker of the loom weight who was responsible for the mark(s). It is therefore possible that individual women would make their own loom weights and mark them in a way of showing ownership before having them fired in a kiln by skilled artisans. This system of ownership allows for the great variety of types of sigla as well as the similar sizes of some loom weights with the same symbol, such as the oval impression set from Cetamura.

In all likelihood, sigla have a widespread variety of functions that are largely dependent on the context in which they are found as well as the object upon which they are marked. This thesis represents a case study, focusing on one artifact type, loom weights, in an effort to determine the meaning(s) of these sigla within the context of weaving. In order most effectively to interpret these marks, it was necessary to focus on sites with well-documented examples. Though more work is needed to determine the meaning of sigla, it is evident that they were most meaningful to their owners, women.
Bibliography


