LANDSCAPES OF LIFE AND DEATH: SOCIAL DIMENSIONS OF A PERCEIVED LANDSCAPE IN VIKING AGE ICELAND

by

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Chapter 4. Gender, Age and Grave Goods

4.1. Introduction

In order to use the internal and external characteristics of the burials to develop an understanding of the society of the early Viking settlers of Iceland in their perceived landscape, it was necessary to first accumulate the data and then connect them to space and time. The burial data were relatively easy to gather. All the pre-Christian burial sites in Iceland, recorded and analyzed up to the time of this writing, were reviewed and evaluated. A rating system (see Chapter 3, above), which was established for this project, was applied to each of the recorded burial sites and those with higher ratings were selected for use in the project. For research into gender roles and identity based on age, only burial sites and graves with analyzed human skeletal remains were considered in the analysis (see below in section 4.2), which includes grave goods as well. In this way the gender and age interpretations are based on scientific analyses within a controlled setting.

The variables analyzed here, human skeletal remains, artifacts and animal inclusions, were chosen because they have the potential to elicit the personal identity of the buried and the communal identity that defined this person. This is achieved by looking at each grave individually, then noting which characteristics seem to be shared by the overall group under study. The animal inclusions potentially reveal not only the individual's social position within the society, but also the communal worldview.

4.2. Human Skeletal Remains

Many factors contributed to the amount of human remains available for this project. For instance, erosion and construction have often destroyed parts, if not all, of the skeletal remains or have degraded them to where they are unidentifiable and thus

useless in this study. Sites with only fragments of human skeletons were excluded despite the fact that the archaeological record indicated they contained human remains. The excavators' dating and religious designations for a majority of these burial sites were already in place when they were catalogued in *Kuml og Haugfé* (2000). The burial sites investigated after that catalogue was published have been identified by their investigators based on style and grave goods. For this project the main concern is that the sites are pre-Christian, that is, from the settlement (870-930 C.E.) and the earlier part of the Commonwealth (930-1030 C.E.) periods in Iceland.

4.2.1. Sex and Age

Human skeletal remains were not found in all of the graves on record; and when they were, they were not always in a condition to be analyzed for sex and age as the characteristic features that determine such information were missing. The majority of skeletons used in this project were analyzed and reported by osteoarchaeologist Hildur Gestsdóttir in 1998 and thus far more than half have been reanalyzed by her and any changes in the skeletal dataset have been applied. (Gestsdóttir 1998b, 2007) Guðný Zöega provided information on Gr. no. 313. (Zoega 2007, pers. comm.) The analyzed skeletons were matched to the burials being studied and new skeletons, still in the process of being analyzed were also included, although further information regarding the new additions may not be available for complete integration into this project by the time this is published. It is still important for them to be included in the study. Of the 177 analyzed skeletal remains from the pre-Christian period, 15 were excluded because their analysis is not yet complete. Therefore, all analyses in this project which include analyzed human skeletal remains will be based on 162 skeletons from 85 burial sites in Iceland. (See Appendix C: Analyzed Human Skeletal Remains.)[1]

4.2.2. Analyzed Skeletal Remains with Burial Sites

The analyzed human skeletons associated with burial sites are sorted by sex and age in Figs. 4.1 and 4.2. Age and sex have been identified and used to help distinguish those differences in the data relating to gender roles, social position and customs. Sex was divided into five categories: Male (M), Probably Male (M?), Female (F), Probably Female (F?) and Undetermined sex (U). The Male and Female categories are made up of

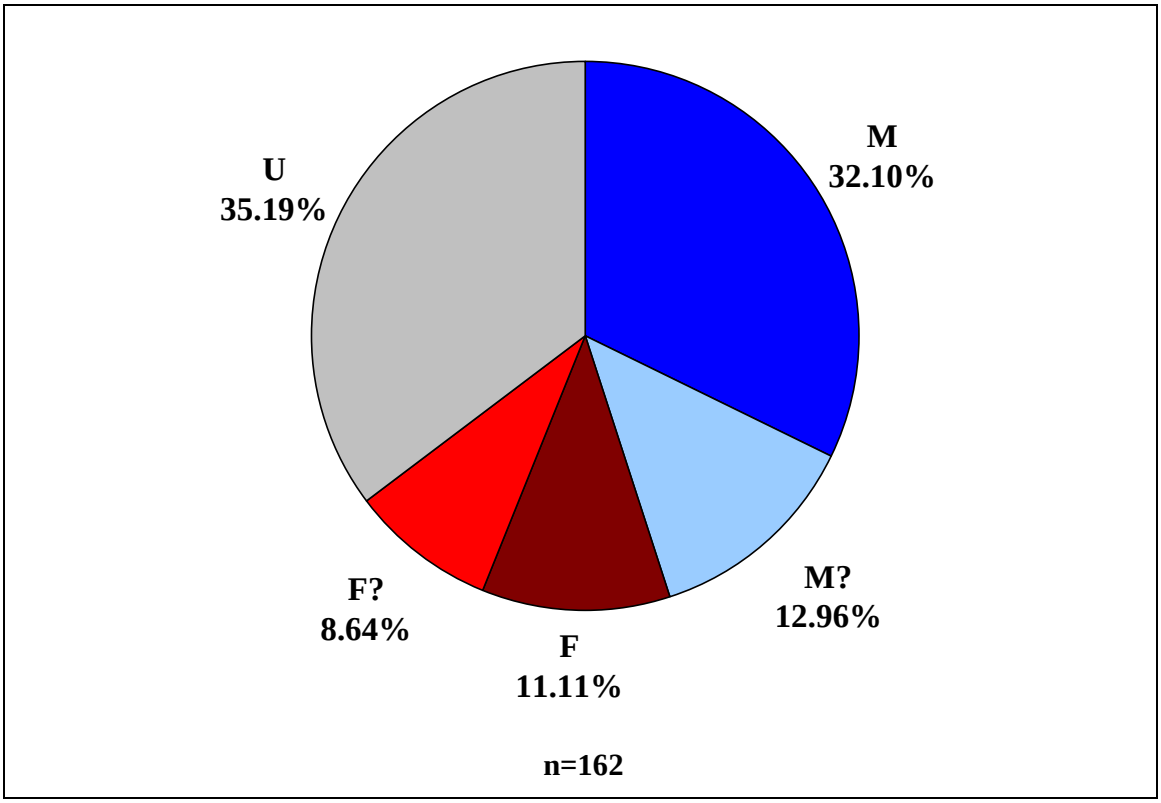


Fig. 4.1 Pie chart showing the 162 analyzed human skeletal remains associated with 85 burial sites used in this project, broken down by determined sex category.

skeletons that have positively been identified as being either male or female as these skeletons have at least the required number of characteristics to distinguish sex. The probably Male and probably Female categories have a few of the characteristics needed, but not enough to state the sex firmly. In order to shorten sentence structure as well as make the text more fluid, when the confirmed sex and likely sex individuals are being

counted together in one category or being discussed together, they will be referred to as: male/?, males/? or female/? and females/?. The Unidentified skeletons do not have enough to be positive about their sex (in two cases, the skeletons have not yet been analyzed in time for this project). The overall ratio of male/? to female/? in the skeletal dataset in this project is 2.3:1. (Gestsdóttir 2007)

Of the 162 analyzed human skeletons, 64.81% have been identified by sex and 71.60% by age, at least to a reasonable amount of certainty. The graves contained in these burial sites are the foundation of the following gendered and age analyses.

The age categories of Gestsdóttir´s original report were adjusted slightly to fit the data on human skeletal remains being used in this project. For instance, there were no foetal, perinatal or younger neonates in this pre-Christian burial dataset, so they were not included throughout the analyses; and, since there are skeletons in the dataset that are considered adult, but not enough characteristics were present to define the age group further, they were placed into a category of their own, "Adult?" or "A?." The categories used in this project and their abbreviations are:

Age	**Category**	**Abbreviation**
0-0.5	Younger neonate	YN
0.5-1	Older neonate	ON
1-4	Younger juvenile	YJ
4-8	Older juvenile	OJ
8-13	Younger subadult	YSA
13-18	Older subadult	OSA
18-25	Young adult	YA
25-35	Younger middle adult	YMA
35-45	Older middle adult	OMA
45+	Mature adult	MA
18+?	More than likely adult - nothing further can be determined	A?
U	Unidentified, not enough material to determine	U

Tab. 4.1 Age categories, derived from Gestsdóttir, that are used in this project.

As can be seen in Fig. 4.2 below, the majority of the aged skeletons are adults

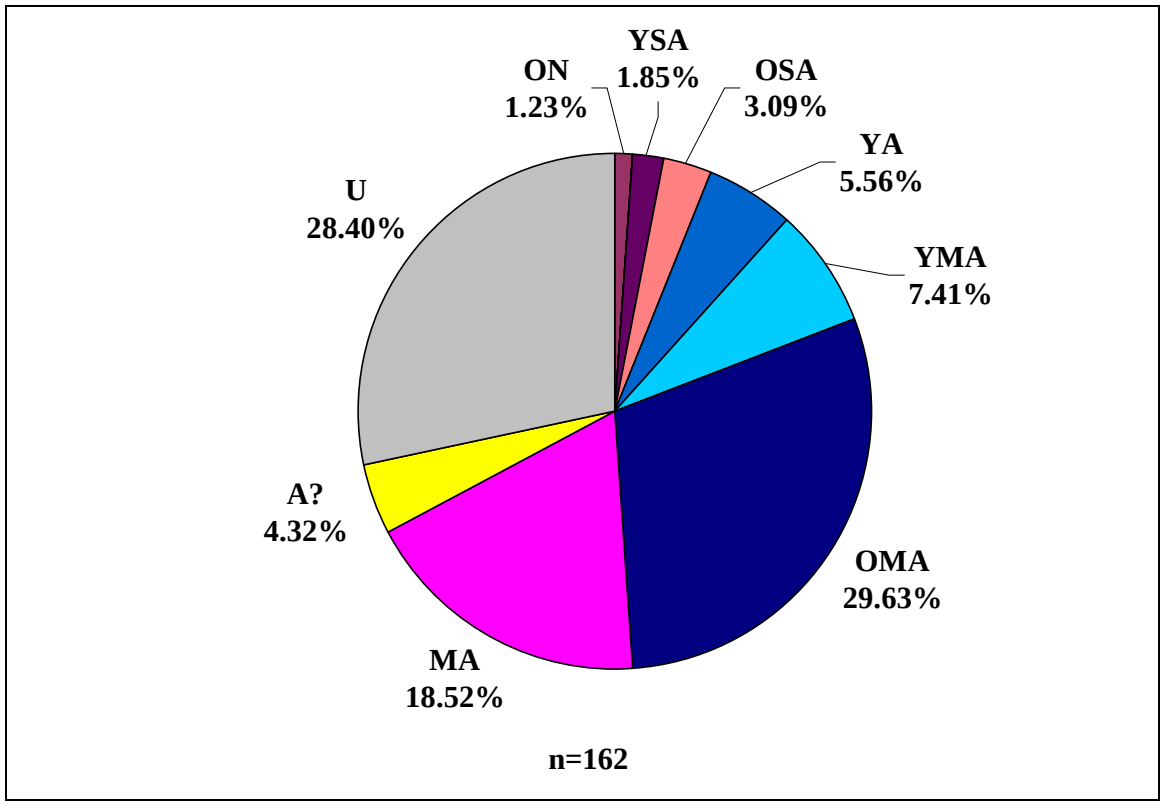


Fig. 4.2 Pie chart showing the percentage of analyzed human skeletal remains associated with burial sites used in this project, broken down by age.

(65.44%) and only 6.17% are under 18 years of age. Also, in most cases males dominate the dataset. Although it may be the case that there were simply more males than females during this period of time, it is also important to remember that female characteristics can be more difficult to assess, especially with poorer bone preservation, which might also lead to such a marked difference in numbers. (Gestsdóttir 2009:pers. comm.)

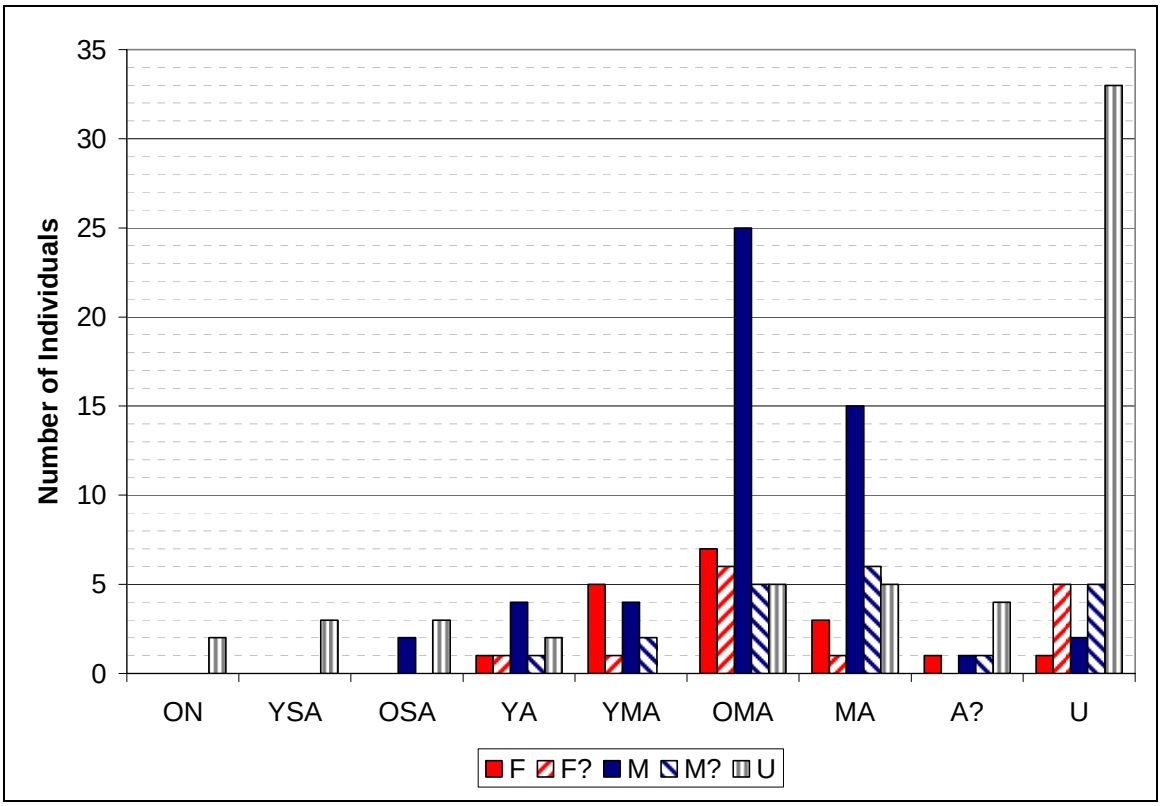


Fig. 4.3 Distribution graph indicating the analyzed human skeletal remains in the project by age and sex. The Older Middle Adults and Males/? clearly dominate, thus age and sex are obviously factors in the burial rite.

As many of the burial sites are made up of more than one individual grave, determining individual graves was necessary in order to connect grave goods to their owners. In doing so, the number of skeletons was reduced due to lack of provenience. This is partially due to the fact that the identification numbers assigned to the skeletal remains when they were originally recorded had been changed as many as four or five times during the years the material had been stored. Thus, in the following analyses involving graves, the total number of human skeletal remains is 148.

4.3. Human Skeletal Remains with Artifact Inclusions

There were 1,732 individual artifacts associated with 89 graves which also included analyzed human skeletal remains, of which 65.9% of the artifacts were

associated with sexed skeletal remains; thus more than half of the artifacts used to aid in associations based on sex. (See Appendix E: Analyzed Human Skeletal Remains and Artifact Inclusions in Rated Graves.)

Among the artifacts there were two cases with extraordinary numbers: a male of unknown age with 400+ boat nails (Gr. no. 343) and a young adult of unknown sex with 400+ beads (Gr. no. 313). These two outliers, although the counts are the same, have very different meanings. The former presents a well-defined boat burial, which in itself is quite prestigious. However, the majority of the boat burials are not as well-defined so either through site formation processes and/or early recovery methods, most of the nails have been lost. The *Hringsdalur* grave (no. 343) was excavated in 2007. Grave no. 313, however, reflects the individual associated with the grave. Adornment at this level is, to say the least, uncommon in the Icelandic context and implies a significant level of social status and wealth for this particular individual and his or her family.

The data were standardized to account for the anomalies (see Fig. 4.4 and Fig. 4.5, below), though their effect is still evident. However, the distribution of artifacts is much clearer this way. As expected, male/? graves contained the majority of the artifacts while female/? graves had just under half that amount.

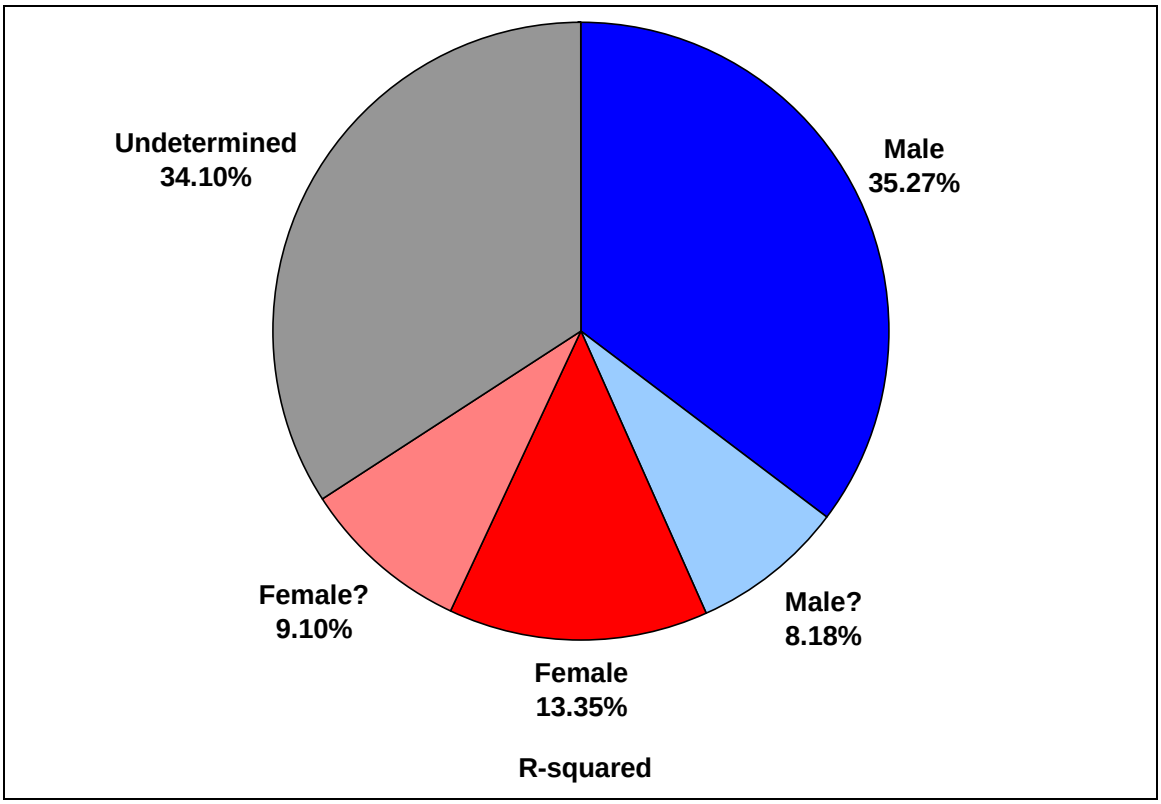


Fig. 4.4 Pie chart showing the 1,762 artifacts associated with 89 osteologically sexed human remains normalized using R-square calculations to account for the outliers with large artifact-type counts. Males/? dominate the artifact assemblage and many unknowns plague the dataset making artifact associations based on sex very complicated.

Approximately 65.82% of the artifacts could be associated with individuals whose ages were determined. Young adults have the majority of actual artifacts (see Fig. 4.5, below), but as a whole the older individuals, 35+, are buried with the majority of artifact types. The young adults are quite impressive in this regard though, because even after standardizing the data to take into account the quantity of beads in this age category there are relatively few individuals in this group compared to the older middle adults and mature adults. The Older Middle Adults have 16.62% of the artifacts in 47 graves; and the Mature Adults have 14.33% of the artifacts in 45 graves. Clearly older adults were revered in death by the form of burial as well as by grave goods, indicating an achieved status. However, as the outliers as well as the presence of grave goods with younger

individuals indicates, an ascribed status was attached to certain individuals.

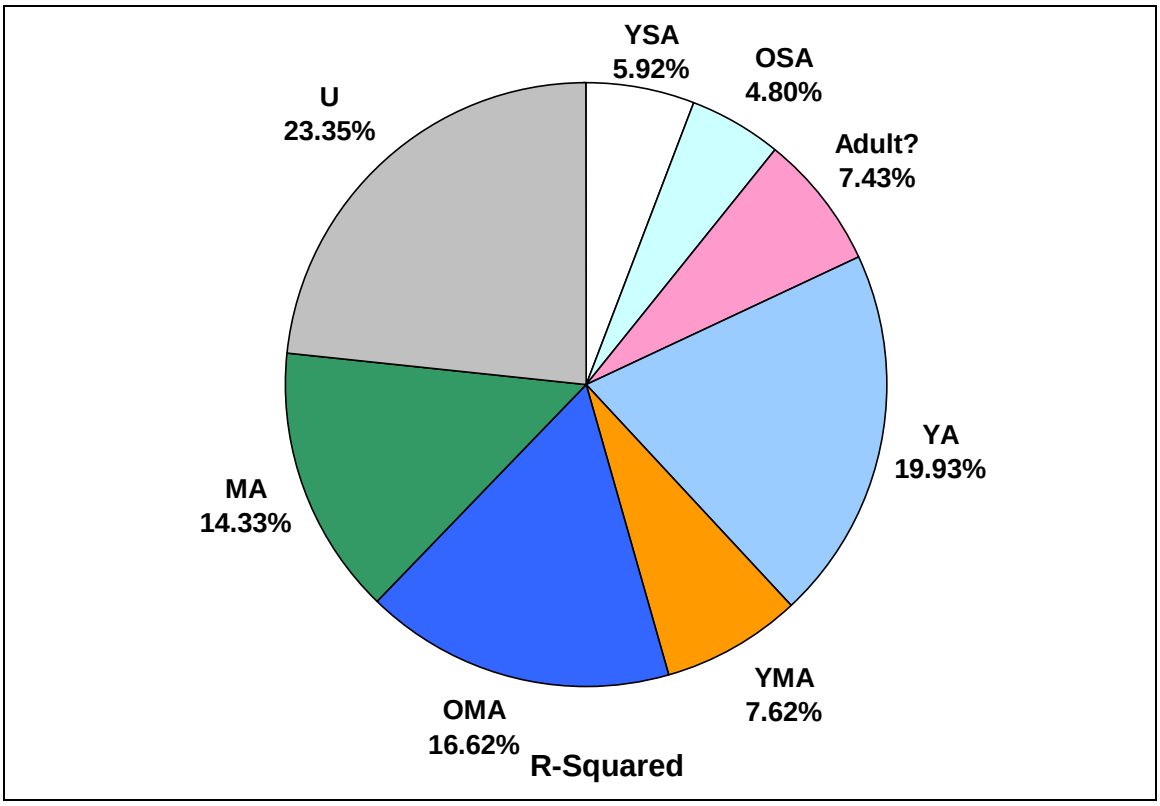


Fig. 4.5 Pie chart showing the 1,762 artifacts associated with 89 osteologically aged human remains normalized using R-square calculations to account for the outliers with large artifact-type counts. Mostly an achieved status is projected, however notable anomalies such as the YA with 400+ beads indicates certain individuals had an ascribed status.

4.3.1. The Artifact Categorizations in this Project

Similar to Hedeager (1992), the artifacts were analyzed using two different methods: qualitative analysis and quantitative analysis. A qualitative approach illuminated Icelandic trends, brought out the gender differences and stressed the status symbols and ritual traditions evident in the assemblages. The quantitative approach, on the other hand, was used to explain the social positions of the individual graves. This was done by allocating artifacts to categories and then counting the category, not the artifacts – defined by Hedeager as "NAT" (Number of Artifact Types). In this way, if a

grave has two spear heads, a sword and a shield, it is only one NAT value of weapons; or if a grave has two oval brooches, a trefoil brooch and fifty beads, it is only one NAT value of adornment. (Hedeager 1992:96-138) Also, artifacts were recorded in the database by assemblage, not artifact count. For instance, in the case of the 400+ beads in Gr. No. 313, the artifact no. is 706 (not artifact nos. 706-1106).

Here, the artifacts were placed into ten categories based on their purpose or function: adornment, weapons, boat remains, commerce, domestic, fishing equipment, horse equipment, miscellaneous/fragments, non-utility objects and unidentified objects. By using this categorization, the artifacts included with individuals aid in understanding their roles and position within the society expressed not only through direct associations, but also through the indirect symbolic associations of the artifacts with the deceased, the living and their landscapes. (See Appendix D: Complete List of Artifacts in the Icelandic Burial Record.)

Adornment and Weapons

Dress is a social construct which conveys many messages within a culture as well as about a culture. It communicates wealth, status, gender roles and identities as well as background, loyalties, and group membership. Within a burial context, dress might indicate the decedent's role in the society, it might reflect the perceived image of the decedent, the image that the decedent wanted to convey, or social customs. (See, for example, (Arnold and Wicker 2001; Chapman and Randsborg 1981a; Parker Pearson 2001; Saxe 1971; Tarlow 1999) Dress includes more than jewelry, clothing or weaponry. It goes beyond them to include skin art, piercing, scarification, and any other modifications of the body that reflect societal values and express different kinds of identities in different social contexts (Schildkrout 2004:320-22). Here it was decided to

include only jewelry and accessories in the adornment category; thus all rings, pins, beads, brooches, armbands, pendants and items used for fastening clothing or for attaching such accessories were included in this category. Adornment has 985 artifacts divided into seventeen types found in at least 67 graves with or without analyzed human skeletal remains. It was decided that weaponry would be separated into its own category, rather than adornment since it served a particular function as well as being a part of a style of dress and includes both defensive and offensive weapons such as spear heads, swords and shields. By creating this division in dress, this project was better able to address themes often used to separate males and females in many societies. The weapons category has 122 artifacts divided into eight types found in at least 64 graves with or without analyzed human skeletal remains.

Boat Remains

In Iceland, no entire boat has been found in boat burials. There were a few excavated burials with clear remains of boats including many boat nails and wood fragments as well as definite impressions left in burial sites while others had vague impressions with only a few such nails and other materials suggestive of a boat burial. These remains were placed into the category of boat remains. However, such remains do not always indicate that a boat was found at the site. Boats were separated from the fishing category due to the fact that in a burial context, they were removed from their natural function and became symbolic artifacts of ritual and are therefore prestige items rather than conveyances for fishing. As of 2009, there are eight boat burials recorded in the Icelandic context (BR. nos. 37, 54, 88, 89, 120, 134, 163 and 164). Although BR. no. 134 is not a confirmed boat burial, it seems highly likely from the description of the grave (remains of wood as well as 30 rivets) that it was – Eldjárn also thought it could

possibly be a boat. (Friðriksson 2000:222-223) Burial Site no. 163 cannot be quantified at this time as analysis is still underway, but altogether about 223 fragments of nails and wood all associated with the remains of a large boat were found there

Commerce

Trade, in all parts of the Norse World, was an important aspect of the Viking period culture. Instead of focusing on the traded items, this project focused on the business itself, thus determining those individuals who were identifiable on the basis of their regular participation in areas of commerce. The Icelandic assemblage does not contain a large amount of information about this category, only 71 artifacts divided into four types were found in at least 23 graves with or without analyzed human skeletal remains. Lead scale weights make up 87.32% of the finds in this category. A purse found with a wealthy warrior in the east (Gr. no. 286) is in the record along with one coin and four lead weights. The only scale pan was found with a wealthy female (Gr. no. 135) in the north whose grave contained no other items from this category. The seven coins in the record came from five different graves. Cufic coins were found in three of these graves (gr. nos. 79 (2) and 211 (2); and BR No. 54 (1)). Grave no. 286 contained an English coin from between AD 955 and 978, either from King Eadwig (AD 955) or King Eadgar (AD 958). The final coin in Gr. no. 203 has been lost but is believed to also have been English from about AD 924 to 940 (King Ædelstan). All coins were silver, except the coin from BR. 54 which was silver-plated and fragmented. The majority of weights are of lead. Only one was made of copper-alloy (Gr. no. 20).

Domestic

The domestic category is made up of 244 artifacts divided into 32 types found in at least 94 graves with or without analyzed human skeletal remains. Of the 244 artifacts,

208 fall into the Utility sub-category and the rest fall into the other sub-categories such as agriculture, blacksmithing, cooking and weaving. The domestic category is made up of various types of mostly household artifacts that are non-specific; however, they were a part of everyday life and had many functions which formed the sub-categories of utility, cooking (food preparation), agriculture and blacksmithing. Although all these objects are called domestic because they were usually associated with household events that occurred in or around the home, some are objects that were carried with a person, almost as adornment, though they do not fit into that category. Such items as combs, ear spoons, knives and even whetstones fit here. Also, there are items which, in a burial context, become prestige items, such as cauldrons and vessels.

Fishing

Despite the well-established Viking maritime skill and the well-documented diet consisting, to a large extent, of fish (Amorosi, et al. 1997; McGovern, et al. 2000; Morrison 1973; Vésteinsson, et al. 2002), fishing equipment is rarely found in the Icelandic burials. The fishing equipment category is made up of seven artifacts divided into two types – hooks and line sinkers – found in at least three graves with or without analyzed human skeletal remains.

Horse Equipment

This category contains 115 artifacts divided into 9 types found in or associated with at least 46 human graves with or without analyzed human skeletal remains. The largest group is buckles with twenty-six singles, twenty-two pairs and one grave with three buckles; there are twenty-two bridle bits; there are twenty-six nails in nine graves, five bosses in two graves, three loops, two iron rings, two hooks, one set of hobbles and one crampon in this category.

Miscellaneous and Fragments

The category of miscellaneous and fragments contains at least 282 fragments of at least 10 different materials found in at least 75 graves with or without analyzed human skeletal remains. Because fragments are often left unrecorded, especially in the sites investigated earliest, this is very likely an under-estimation. When fragments are described, it is often said that `a few iron fragments' were found. In English we tend to see the term *couple* used with two objects, the term *few* used when there are at least three objects, but the rest is rather subjective unless a specific number was provided. Even more subjective is *numerous* or a *large quantity*. Fortunately, for the most part, the descriptions used here were usually recorded in the singular, with the word *some* or a specific number given. Fragments make up the largest part of this category, totaling 166, and 139 of these are of iron. The rest include small amounts of bone, wood, shells, lead, charcoal and copper-alloy. Finally, there are miscellaneous items which include various types of stone and pebbles. They are quantified and counted in this analysis because this is sometimes the only category that was found with some of the burials and indicates that grave goods were included, but due to a multitude of factors, including, for instance, erosion, grave robbing, borrowing and field and road construction, they no longer exist or could not be collected. Although quantified here, the information that items from this category provided was limited and did not contribute much to the analysis.

Non-Utility

The non-utility category contains 56 artifacts divided into six types found in nine graves with or without analyzed human skeletal remains. This category is made up of items which do not serve a working purpose. Instead they denote leisure and/or prestige. The so-called prestige items include plaques made of copper-alloy or decorated whale-

bone as well as decorated objects with no straightforward use other than symbolic: decorated bone, (BR no. 9), a small lead object with an engraved cross (BR no. 54), and a small whale tooth decorated in Mammen style. There is one boss made of copper-alloy (Gr. no. 83) which is decorated as well. No further description of the boss is given; however, such bosses were sometimes used on dress shields not intended for battle or affixed by rivets to the cheek piece of horse bits in order for the horse to be presented fully dressed as well. Either way, this is a prestige item intended to indicate status.

Unidentified objects

There are only eight artifacts in this category, divided into four types found in five graves with or without analyzed human skeletal remains. There are not many unidentified objects in this assemblage and the majority of the few listed here can almost be identified. However, since the identifications are not certain, they were placed into this category. The five wooden shafts (gr. nos. 44 (4) and 139 (1)) are all probably the shafts of spears. The flat iron object (Gr. no. 130) was thought to belong to a saddle. The corroded iron object (Gr. no. 22) was thought to be part of a weapon and the length of iron found (Gr. no. 42) was possibly a sword. All these are unconfirmed.

Now that the categories have been defined, it is time to describe the artifact data in context with the data on the analyzed human skeletal remains.

4.3.2. Adornment

The term *jewelry* tends to be associated with female burials rather than male burials. Such assumptions have led to errors in the Icelandic literature since assumptions regarding the sex of the individual were at times, before the advent of osteological analyses and in lieu of skeletal remains, based on artifact inclusions. Therefore it seemed appropriate to use the term adornment so as not to subjectively classify or label such

artifacts. There are 714 artifacts of adornment found in 32 graves with analyzed human skeletal remains. The majority (56%) of the graves with adornment are of persons confirmed as older than 35 years of age. There are only two that are confirmed to be under the age of 18.

As can be seen in Fig. 4.6, 19 of the graves with adornment have only one type while another five have two types, thus 75% of these graves have very little diversity within this category. On the other side of the spectrum, there is one grave with seven types of adornment and one grave with five types, thus 6.3% have great diversity. The remaining six contain four types, two have three types, and make up about 18.7%. The two individuals with the most categories are both over 35 years of age. One is male and the other is of undetermined sex. However, the majority of these individuals are female/? (43.8%) while males/? make up about 28.1%. Therefore it is possible to say that female/? graves are more likely than males? to contain artifacts of adornment and as will be shown throughout this study, a diversity of artifact types and categories relates directly to social position within gender identities and sex.

It is clear that beads dominate the adornment category overall, and even after standardizing the data, the spectacular quantity of beads from one particular grave (Gr. no. 313) which had 400+ beads is visible. A long-standing understanding in Icelandic archaeology is that a few beads can belong to a male grave, however, more than that must be female. When only considering the beads included with analyzed human skeletal remains it can be seen that the evidence is not completely accurate. There are females/? with very few beads and males/? with more than a few. Also, there are a number of skeletal remains of undetermined sex with amounts that if subjectively placed into the

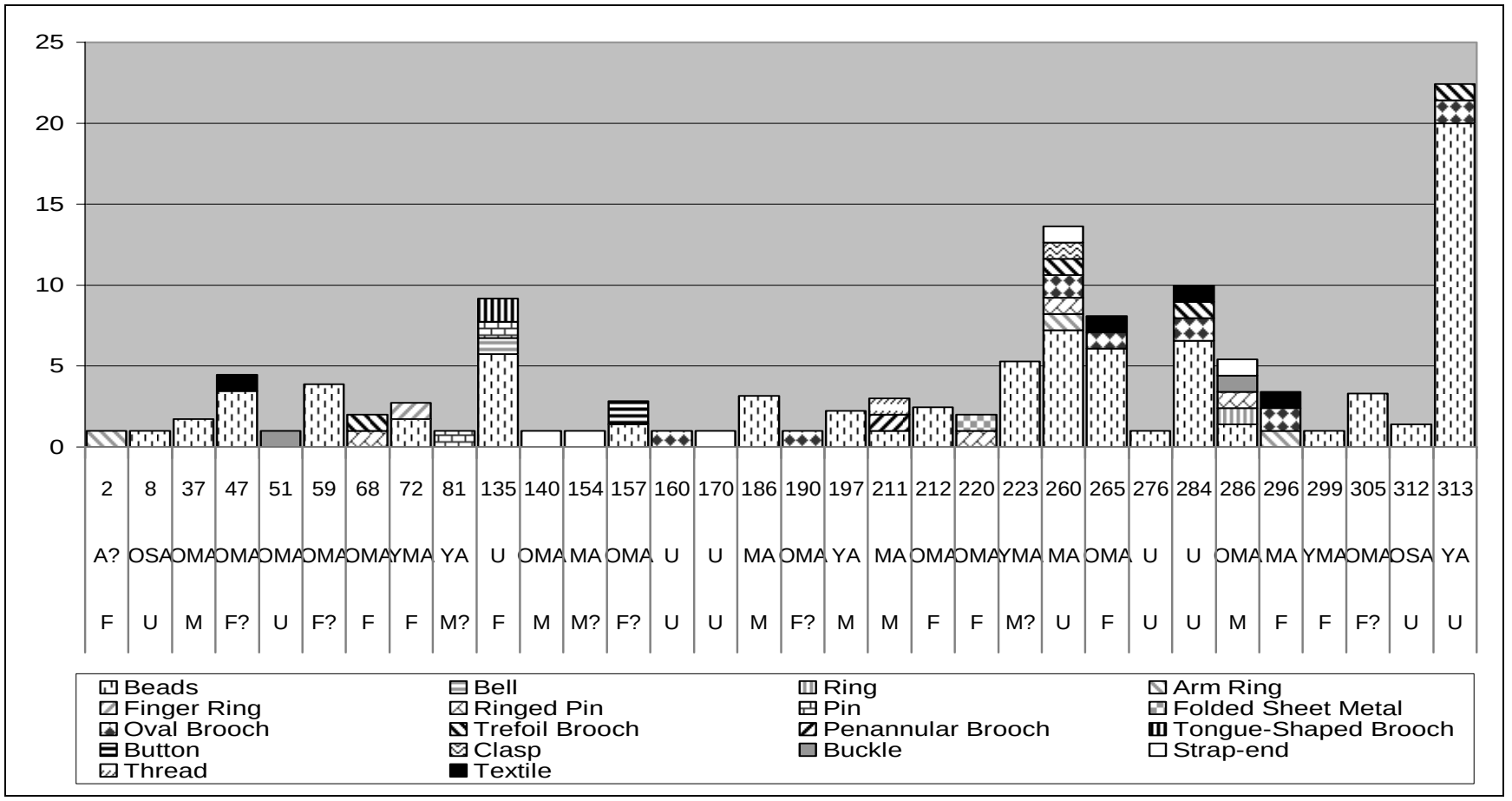


Fig. 4.6 Graph indicating distribution of artifacts from the adornment category with analyzed human skeletal remains. The data was standardized using R-squared calculations. Numbers of adornment by type may indicate social hierarchy, not simply by the quantity of each type, but also by the various types of adornment. As can be seen Gr. no. 260 has seven types of adornment, Gr. no. 286 has five, but Gr. no. 313 only has three, so even though it has many beads, it could be of a lower status.

male or female category based on the number of beads included within their graves, have an even chance of being inaccurately sexed. Similar results were obtained by (Hreiðarsdóttir 2005:119-125) and (Smith 2004:64-65). Clearly, although there is some correlation between having a larger quantity of beads (more than 10) and being female, the same cannot be said of males having fewer beads since the likelihood of being either female or male is equal.

Females/? (9)		**Males/? (6)**		**Undetermined (6)**	
Gr. No.	*No. of Beads*	*Gr. No.*	*No. of Beads*	*Gr. No.*	*No. of Beads*
47	12	37	3	8	1
59	15	186	10	260	52
72	3	197	5	276	1
135	33	211	1	284	43
157	2	223	28	312	2
212	6	286	2	313	400
265	37				
299	1				
305	11				

Tab. 4.2 Distribution of beads among analyzed skeletal remains divided by sex, indicating the males could easily have larger quantities of beads and females could have very few. making it difficult to place the undetermined sex individuals using such an arbitrary quality.

Arm rings are common to female Viking burials, but are also described in sagas as worn by males. The data cannot support the literature here as the three arm rings with analyzed skeletal remains are found in two female graves and one undetermined.

Brooches were used as clothing fasteners for both males and females. Here, Jesch´s (1991) very detailed description of typical female dress during this period warrants a lengthy quote:

> *"These brooches...served the highly practical purpose of keeping a woman's dress up!… [A] woman would wear an outfit consisting of two or three layers. [A] shift...[with] the neck opening...held together by a small*

> *disc brooch. Over the shift...a strapped gown.... Holding the gown up were looped straps over the shoulders...which were joined...by means of two oval brooches.... The strings of beads found in many women's graves could be hung between the oval brooches. Pendants of amber, jet or silver could be strung between the beads at intervals...[or] a small silver cross. Useful implements, like scissors and knives, could also hang from the brooches on straps or rings. Another garment...worn in addition to the basic shift and gown was a tunic worn between them.... Over all these garments...a woman might wear a sleeved caftan or a cloak...[fastened by] a disc brooch, a trefoil brooch [or] an equal-armed brooch…." (Jesch 1991:17-18)*

Disc, oval, tongue-shaped and trefoil brooches are predominantly associated with females and penannular brooches with males. Round brooches have been associated with both sexes. The oval or tortoise brooches functioned more like buckles than brooches as they passed through loops to fasten clothing, however, they are considered brooches all the same. (Jesch 1991:69; Smith 2004:69) Although there are no round brooches associated with analyzed human skeletal remains here, there was one found in Gr. no. 62 along with two oval brooches, a trefoil brooch and beads. Women wore round or circular brooches instead of oval Brooches in the more Northern reaches of Scandinavia, most notably in Finland. (Edgren 2000:112) Men also wore round and circular brooches, regardless of cultural background. Buttons are usually associated with the presence of caftans. However, buttons were also known to be a part of purses and other items that needed fastening. (Ewing 2006:60-1, 126)

4.3.3. Boats

As of this writing, five burial sites where analyzed human skeletal remains were connected with the remains of boats, were included in the project. One of these burials is the unconfirmed burial mentioned above in section 4.3.1. If this is indeed a boat burial, it contained a Young Sub-adult of undetermined sex. Burial site no. 54 was interpreted by its excavator as being "originally a woman´s grave, with the bones of other individuals being added at a later time." (Friðriksson 2000:564) If this is the case, there are only two females identified among the human skeletal remains, however, it is not possible to determine which female he was referring to at the time. Three of the four are Adults, one is over the age of 45 while the other two cannot be assigned to an age group. Still, there is the younger individual in a possible boat burial (Gr. no. 250). Thus, it would appear that age is not necessarily a factor in the ritual of burying people in boats. Also, with two of the individuals being of undetermined sex and with another grave lacking positive provenience, we cannot know for certain if the boat burial was indeed a female. All that can be said at this time is that there were two boat burials belonging to males/? and another is assumed to belong to a female, more than likely based on artifact inclusions.

The best way to look at these burials is not simply through the individuals buried within, but by their associated grave goods. Grave no. 189 contains an adult of undetermined sex. Along with the remains of a boat, this individual did not possess much more than the boat, a buckle and the remains of dog and horse. Similarly, grave no. 250 had only a fragment of a spear-head and other iron fragments, the likely remains of a small boat and dog remains. Also, Gr. no. 343 had only the remains of a boat and the individual – however, this is a newly discovered burial and more information may be revealed after the 2009 field season. While the remaining two graves had more grave

goods, they were obviously from different social strata. In Gr. no. 271 there was a small axe, a lead weight, two pebbles and a knife; and BR no. 54 contained, among other things, various adornment: 30 beads, a silver Thor´s hammer pendant, another pendant, two arm-rings, a finger-ring, a bell, a wooden pin; domestic items such as at least three bone combs, a comb-case, a knife; and items of commerce, including fourteen lead weights and a Cufic coin and remains of a dog – from the inclusions, especially the types of adornment, it is easy to see why this was interpreted as a female grave.

Having considered both the human skeletal remains as well as the grave goods, it can be seen that the ritual of including a boat in a burial can be very prestigious. In Iceland boats are no less valuable than in other areas of the Viking World. However, since the materials were not indigenous to Iceland, they may signal a higher level of prestige for the more common graves. (See, for example, Ballard, et al. 2003; Kobylinski 1995; Schjødt 1995; Wamers 1995) However, including a boat is more than a representation of wealth and social position. From the data, it appears that such an inclusion goes beyond the material and into the area of ritual symbolism as will be discussed further in Chapter 5.

4.3.4. Commerce

In other areas of Scandinavia during this period, there was a high correlation between females and commerce (Stalsberg 2001), however, here the connection is not certain due to the size of this category. As can be seen in the graph below, the majority of objects of commerce are found in male graves. Although it would be nice to be able to put the 14 lead weights and Cufic coin (discussed in section 4.3.3 above) onto this chart, as that would suggest the possibility of a female associated with a large number of artifacts of commerce, as previously mentioned, it is not possible to definitively associate

the artifacts with any of the individuals. As seen in Fig. 4.7, however, the provenienced skeletal remains with artifacts show that, as at Stalsberg, the only scale pan in the Icelandic record is connected to a female. With respect to age, a single lead weight is associated with each of the youngest age groups represented (YSA and OSA); the remainder of the artifacts are predominantly associated with individuals 35 years of age and older (OMA-four, MA-five).

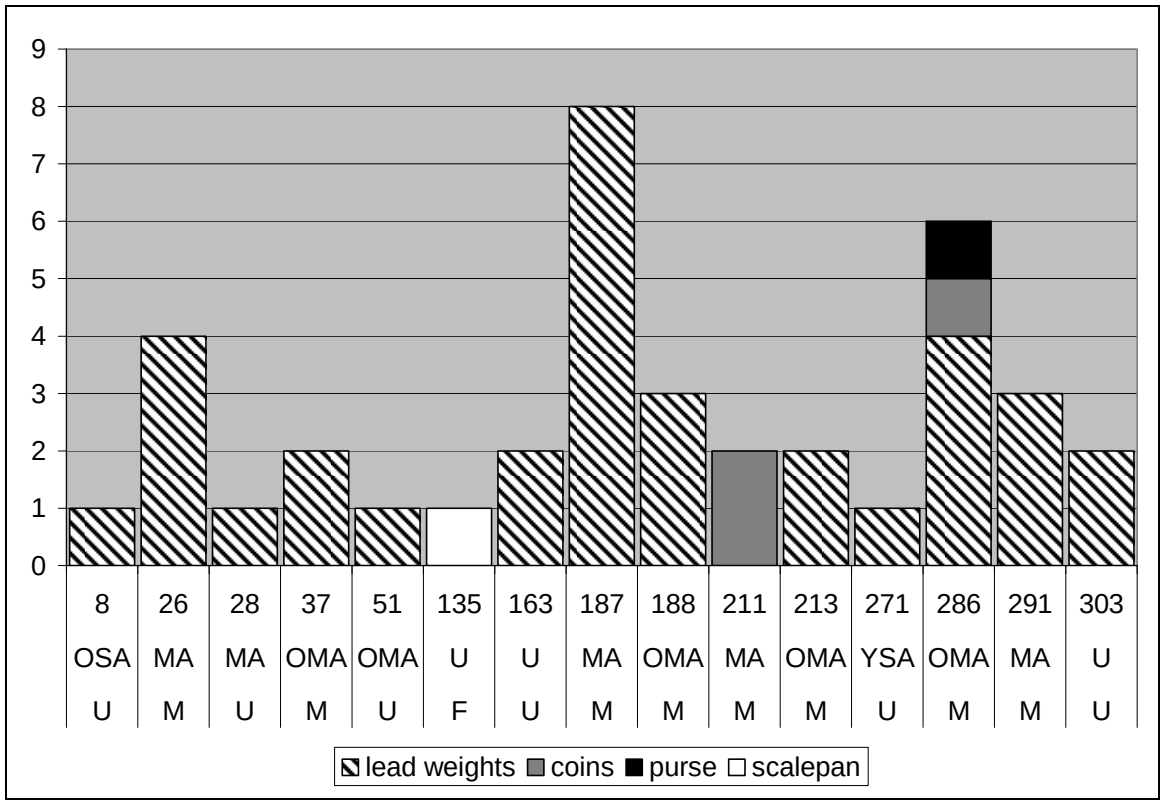


Fig. 4.7 Artifacts of commerce associated with the results from analyzed human skeletal remains showing that males/? are more typically associated with items of commerce than are females whose association with scale pans is similar to other parts of the Viking world.

The data suggest that, for the most part, those in the business of trade may have achieved success over time, thus the association with older individuals. Although a highly subjective interpretation, in Iceland it appears that males/? were more involved in commerce on a regular basis than females/?.

4.3.5. Domestic

There are 140 domestic artifacts in 54 graves. As can be seen in Fig. 4.8, below, the majority are found in male/? graves and a considerable amount of artifacts in this category are with the undetermined sex group, therefore it is difficult to label this as a private sphere category and also, difficult to label this as female. Certain artifacts in this category are more common to one sex than the other, for instance combs are found with both males and females, but are more common in female graves. Knives are found in both. Vessels and spits seem to belong to male and female graves equally. On the other

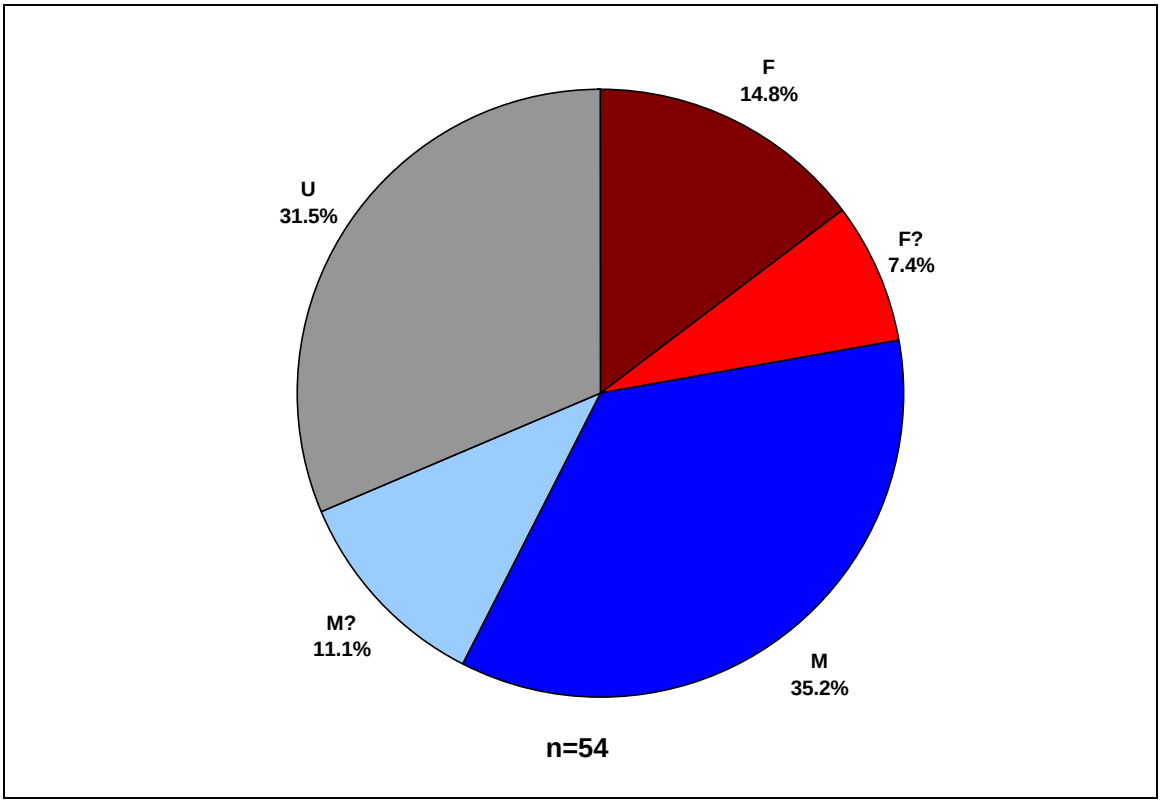


Fig. 4.8 Pie chart representing percentages of analyzed human skeletal remains with determined sex associated with artifacts from the domestic category. Regardless of contemporary ideas, males/? clearly dominate this category, therefore the public sphere is more than a female domain.

hand, fire starters are found in both male and female graves but more common to males and strike-a-lights, which are directly related to the fire starters are found only in male

graves. Although whetstones would seem to be of use to both sexes, there is only one from a confirmed female grave and the rest are found with males.

Age also seems to be a factor (see Fig. 4.9, below) as 51.8% of the artifacts are found in the 35+ graves (OMA and MA) while the other age categories only represent about 20.4% of the dataset altogether and the rest fall into the undetermined age category.

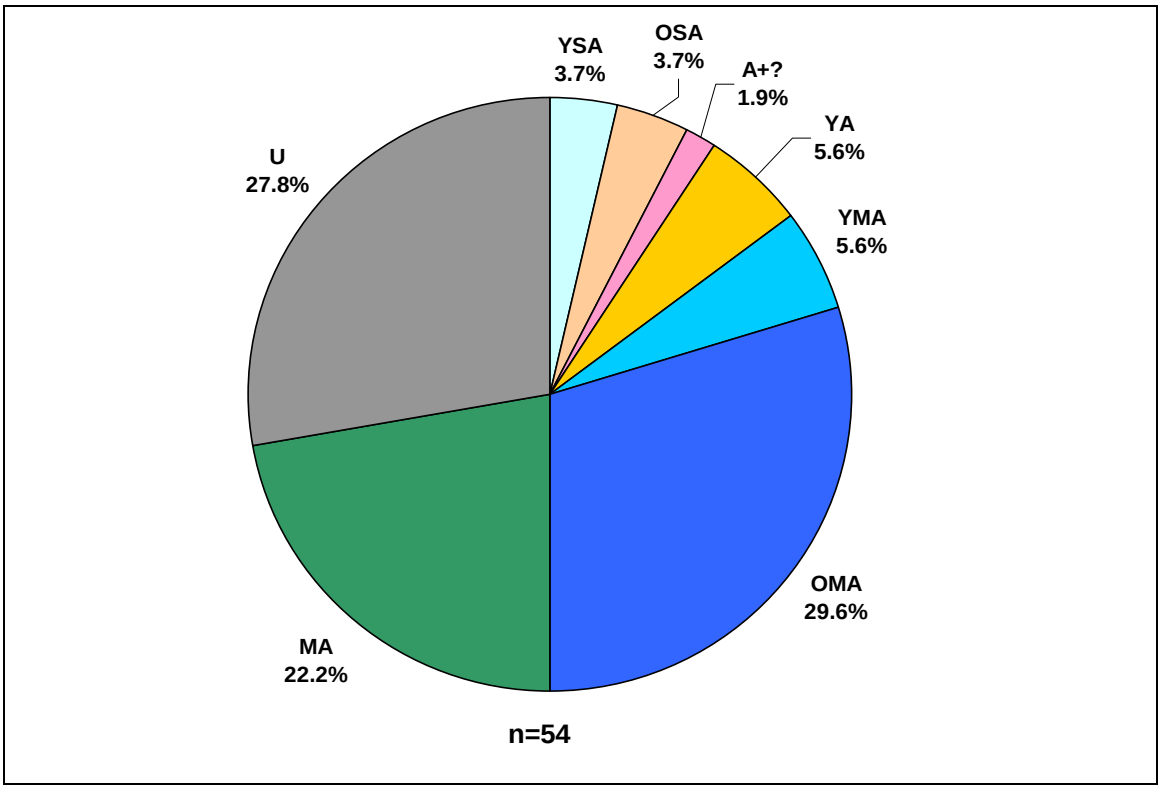


Fig. 4.9 Pie chart representing analyzed human skeletal remains with determined age associated with artifacts from the domestic category. Those over 35 possess the majority of Domestic items.

With so many of the artifacts included in the older categories, it is interesting to note which artifacts were included with the younger individuals. The youngest group represented here is the younger sub-adults. There are only two individuals in this category and both have knives (Gr. nos. 177 and 271). There are another two individuals in the next age group, older sub-adults, and again knives are represented in both of these graves as well. Although one grave is marked with only one artifact (Gr. no. 312), the

other seems to be rather wealthy with four artifacts, a knife, whetstone, fire starter and a comb (Gr. no. 8). There are seven adults under the age of 35 with domestic artifacts. Three adults are in the 18-25 (YA) category, all three with knives (Gr. nos. 290, 253, 81). The YA group is all male/male?. There are three adults in the 25-35 (YMA) group, one female with a comb (Gr. no. 72), one female? with a whetstone (Gr. no. 196) and one female with a nail, which may not have any major significance (Gr. no. 299). Finally, there is one adult over 18, with both a comb and a fire starter (Gr. no. 2) who cannot be placed into a more age-specific adult group.

Bone combs are included in twelve graves: six female, three male and three undetermined. The females are of differing ages, all adult while the males are over 35 years of age. Combs appear to be interred more often with females of various ages, but in general it appears that combs were included with young and old, males and females.

There are twenty-three artifacts in this dataset that are typically used to start fires. Strike-a-lights are metal objects which, contrary to common use, are striking a rock. The strike-a-lights are carried about by their owners. There are only a few found in Iceland. There are four in this dataset, all found in graves with igniters (Gr. nos. 26, 27, 211 and 303). The strike-a-light found in Gr. no. 303 is the only one intact. The igniters are rocks of varying material, but mostly of flint and jasper though sometimes quartz is used. The majority of these are found with males/? over the age of 35. Two female adults and an older subadult grave are found with them, also. Fire starters are used in connection with strike-a-lights.

Knives are quite common and are found in thirty-five graves. Four are female, three female?, fourteen male, four male? and ten undetermined. Therefore, knives are not

indicators of sex in any way. Knives are found in two Younger Sub-Adults and two Older Sub-Adults, three Young Adults, thirteen Older Middle Adults, nine Mature Adults and six of undetermined age. It is interesting that they are lacking in the YMA group, however it does seem that age is not a determining factor either. More than likely knives are included because they were a common implement with multiple uses. A bone needle case was found with a mature adult, female (Gr. no. 25). As mentioned earlier, such items were commonly suspended from belts and/or even brooches as part of female accessories. Shears were also commonly worn in this fashion. There are shears found in five graves (Gr. nos. 135, 162, 260, 284 and 296). Two of the graves (135, 296) are female, the rest undetermined. Two of the graves (260, 296) are mature adults, the rest undetermined. There is one pair of tweezers, also commonly suspended from belts, found with grave no. 135.

There are three sickles in the dataset. The first was found with an older middle adult female? (Gr. no. 47), the other two were found with individuals of undetermined sex. One is located with a mature adult (Gr. no. 260) the other with a person of undetermined age as well (Gr. no. 162).

There are three spindle whorls in two graves (260(2) (MA), 284(1)(U)) both of undetermined sex. One "weaving implement" (Gr. no. 24 (U/U)), one weaving sword in the northern quarter (Gr. no. 135 (F/U)) and two wool bone combs (Gr. no. 260 (U/MA)) are also included in the dataset. A vise and slag were both found in male graves (26 and 290, respectively). The vise was with a mature adult and the slag with a younger adult.

Whetstones are found in fourteen graves (Gr. nos. 8, 26(2), 27, 28, 70, 164, 187, 196, 210, 211, 248, 284(2), 286(2) and 288). Only one belongs to a probable female (Gr.

no. 196), while seven of the graves are male (Gr. nos. 26, 70, 187, 210, 211, 248, 286, 288) and one probable male (Gr. no. 27). The only young individual with a whetstone is an older sub-adult (Gr. no. 8), while the rest are over 25 years of age: one YMA (Gr. no. 196), five OMAs (Gr. nos. 70, 210, 248, 286, 288), four MAs (Gr. nos. 26, 28, 187, 211).

Vessels are a sign of wealth and status and are buried with both males and females. In Iceland there are five vessels that can be connected with analyzed skeletons. (gr. nos. 70, 135, 154, 190 and 286) Three of these vessels are iron cauldrons (gr. nos. 70, 135, 154) and two are steatite bowls (gr. nos. 190 and 286). Four of the skeletons were aged and sexed. They are older individuals (gr. nos. 70, 190 and 286 were OMA; Gr. no. 154 was MA), and there are two males (gr. nos. 70 and 286), one probable male (Gr. no. 154), one female (Gr. no. 135) and one probable female (Gr. no. 190).

4.3.6. Fishing

There was only one grave containing both analyzed human remains and artifacts relating to fishing in the dataset. As mentioned in section 4.3.1 above, there were not many from this category to begin with. This grave (Gr. no. 26) contained a mature adult male with three fishing hooks.

4.3.7. Non-Utility

There were three graves in this category. Grave no. 68 had a female (OMA) with a whale-bone plaque. Grave no. 196 also contained a female (YMA) with nineteen bone gaming pieces. The third grave (no. 164) contained skeletal remains that could not be sexed or aged with a decorated whale-bone object.

4.3.8. Weapons

There are 61 artifacts in thirty-three graves in this category that are associated with analyzed human skeletal remains. Weapons do indeed have a positive correlation

with males. Of the 61 artifacts, there is only one female associated with any type of weapon, a spearhead (Gr. no. 72). Forty-two of the weapons are associated with male/? skeletal remains and twenty are found in unsexed graves. Approximately 68.9% of the weapons are found with males/? and 67.21% are found with individuals over the age of 35 years, it appears that older males were more commonly buried with weaponry.

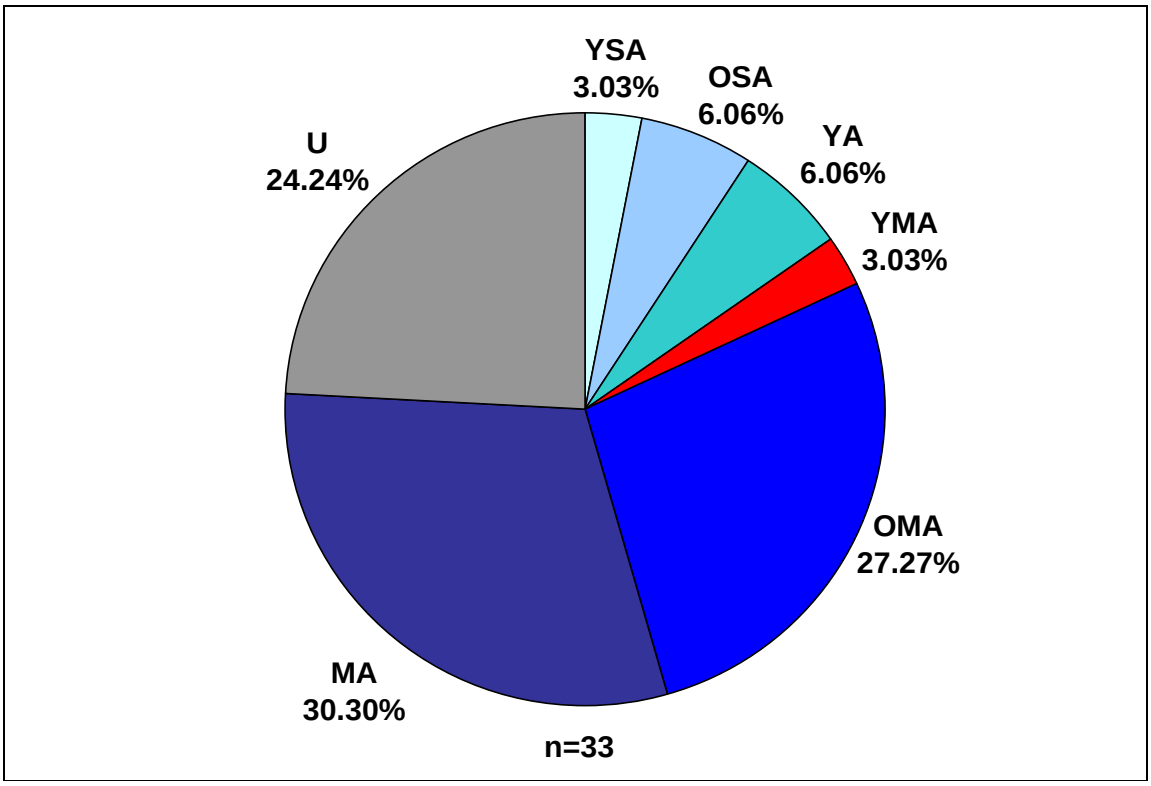


Fig. 4.10 Pie chart indicating the number of osteologically aged analyzed human skeletal remains with weapons. The only female/? in this category is also the only Young Middle Adult. It is evident that the weapon burial rite is achieved as there are more adults over 35 years of age with weapons.

As can be seen in the following graph, the spear-head was the most common and is found in 81.8% of the graves with weapons. There were only a handful of well-equipped graves (Gr. nos. 286, 70, 210 213 and 286) all males and all with swords. There is a second level with two to three weapons and of the 21 single-weapon graves, the majority had only spearheads.

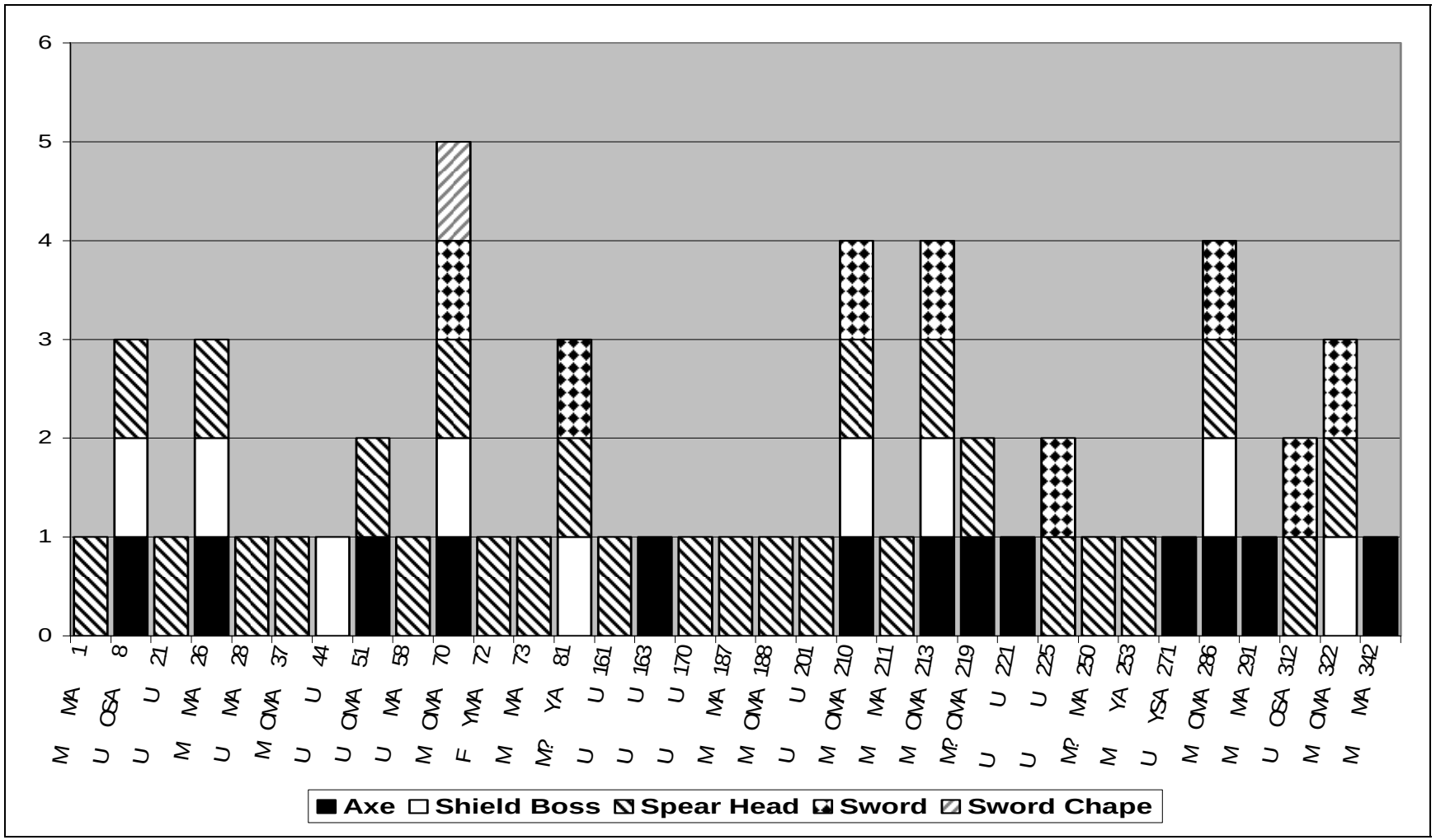
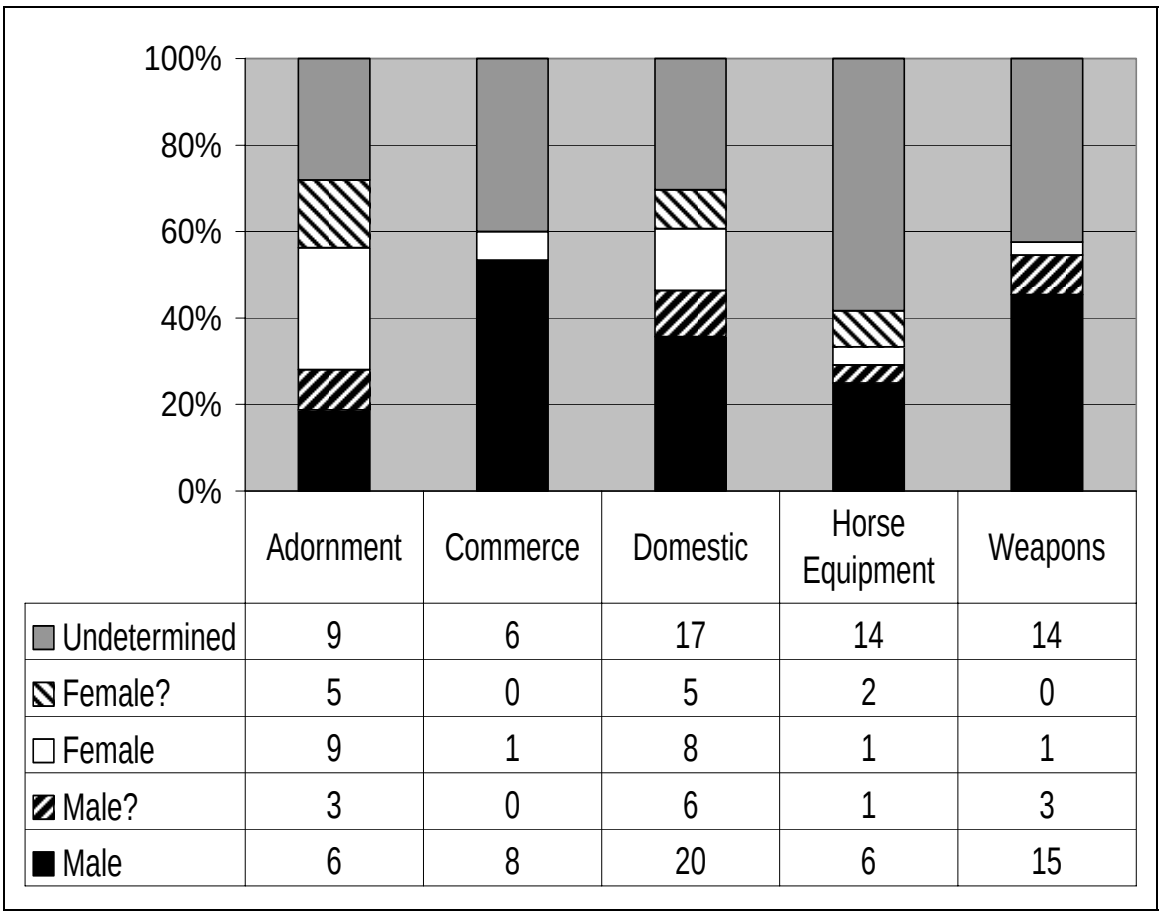


Fig. 4.11 Graph indicating the NAT value for weapons included in graves with analyzed human skeletal remains. The spear was a common weapon in the Viking period as is clearly evidenced here; while having a complete toolkit is not at all common. This could be due to borrowing or robbing or may indicate social status.

4.3.9. Concluding Comments for Section 4.3

Of the 89 graves with 162 individuals, there are five categories that are able to provide some insight into artifact association by sex. By using NAT values for the overall categories denoting differences in sexual designation and using a proportional graph, artifact associations are presented in an interesting light. First of all, although it is common to say that particular artifacts usually belong to a certain sex, the chart below indicates otherwise. As can be seen, from the adornment, when only comparing male to



	Adornment	Commerce	Domestic	Horse Equipment	Weapons
Undetermined	9	6	17	14	14
Female?	5	0	5	2	0
Female	9	1	8	1	1
Male?	3	0	6	1	3
Male	6	8	20	6	15

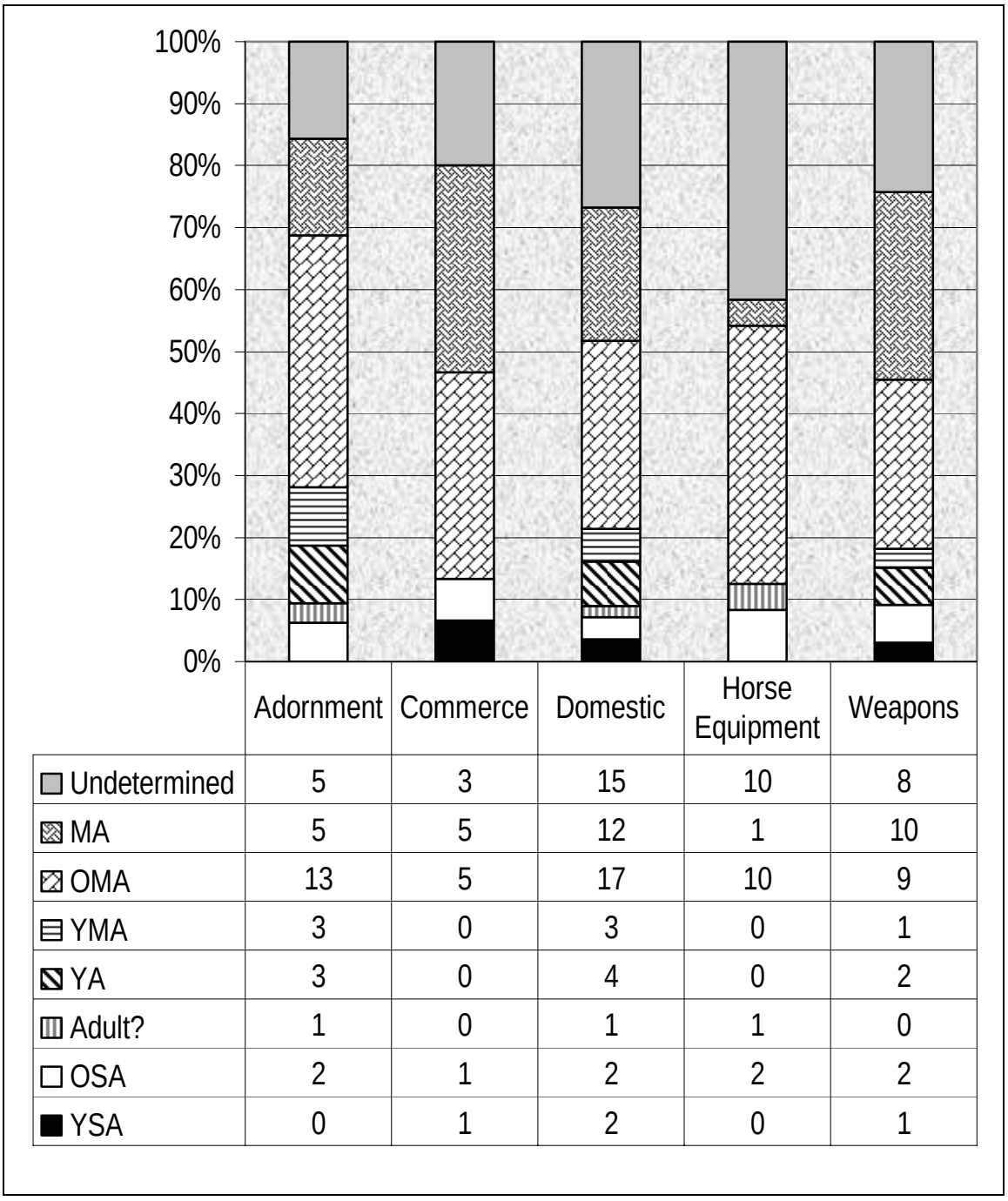
Fig. 4.12 Proportional distribution of artifact categories by sex using NAT values, showing that the large proportion of undetermined sex individuals makes it very difficult to attempt sex-based generalizations of artifacts.

female graves, the data do favor female graves, however, almost 30% of the graves with adornment have an undetermined sex. Horse Equipment is found with almost 60% of

undetermined sex. With such high numbers of unsexed individuals, it is very difficult to show any truly positive correlations between the sexes when there are too many unknowns. Commerce does seem to be predominantly male as well as weapons, however, there is a female presence in both. Domestic has a ratio of 2:1 for males/? to female/?, which is slightly better than the ratio of the skeletal dataset in this project. Although the numbers are too few to bring to light any patterns, it is interesting that the only fishing equipment in this portion of the dataset is associated with a male and the three graves that contain non-utility artifacts have two females and one undetermined. With a closer look at each category, even more light is shed on the dataset. (See Fig. 4.12, above.)

By looking at the breakdown of the artifact categories associated with the various age groups, it can be seen that the older groups, OMA and MA, have the greater number of artifact inclusions. There is an obvious connection between age and artifact inclusion, clearly indicating an achieved wealth or status for most of this society. Though, it would seem that younger individuals of a higher ranking family may indeed have artifact inclusions as well, this is not as common as their association with aging.

Overall, certain individual and communal images have been drawn from the data as it developed using the two variables discussed thus far, analyzed skeletal remains and artifact inclusions, in connection with the specific graves. There are indeed differences in social position clearly evidenced by this data as well as age and gender differences which were brought to light by drawing out the data on artifact associations by age and sex.



	Adornment	Commerce	Domestic	Horse Equipment	Weapons
Undetermined	5	3	15	10	8
MA	5	5	12	1	10
OMA	13	5	17	10	9
YMA	3	0	3	0	1
YA	3	0	4	0	2
Adult?	1	0	1	1	0
OSA	2	1	2	2	2
YSA	0	1	2	0	1

Fig. 4.13 Proportional distribution of artifacts by age using NAT values. Similar to those by sex, the undetermined make generalizations complicated, however, achieved status in the burial rite is indicated..

4.4. Human Skeletal Remains with Animal Inclusions

In furthering the overall understanding of the individuals and societal values

represented in the pre-Christian burials of Viking period Iceland, another variable was added to those already considered above – Animal inclusions. (For a complete list of

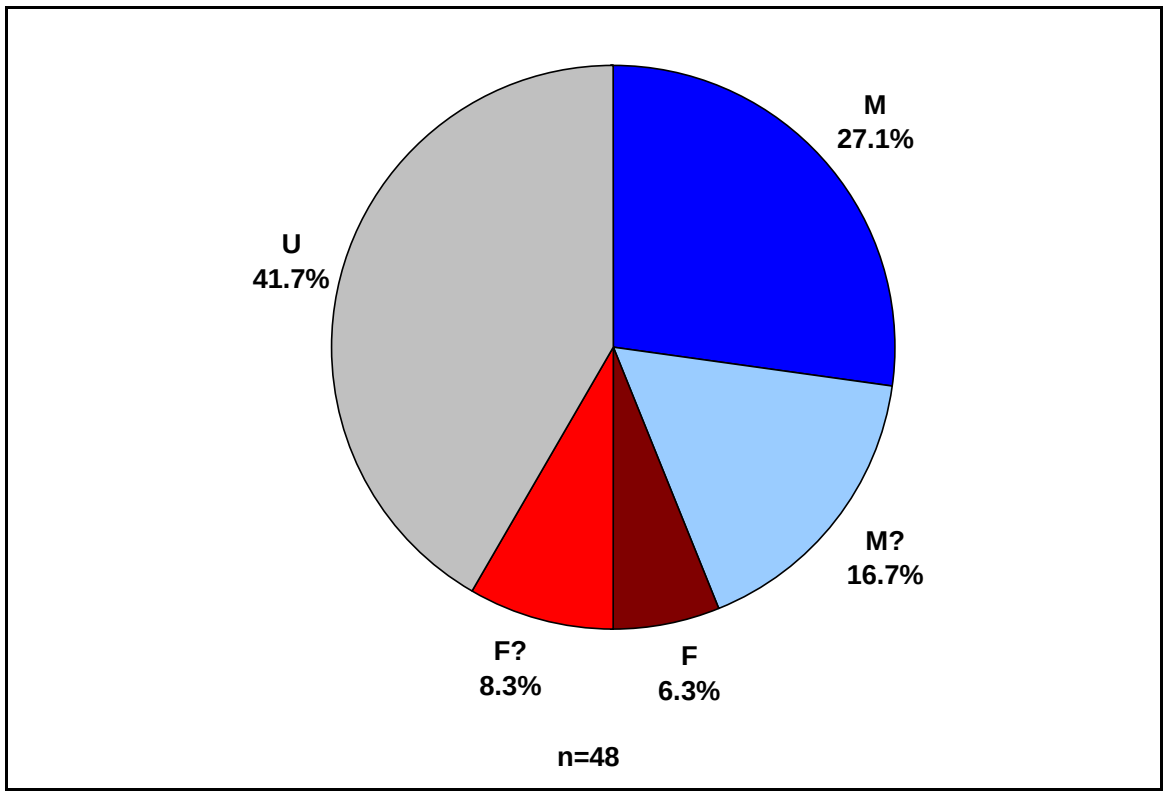


Fig. 4.14 Pie chart representing the analyzed human skeletal remains by sex which are associated with animal remains. The male to female ratio is consistent with the rest of the dataset.

animal remains in the Icelandic burial record, see Appendix F, and Appendix G for Analyzed Human Skeletal Remains with Animal Inclusions) Many of the burials have such inclusions and, although horse was the dominant animal, there were variations in animal inclusions which made this worthy of a more thorough review and incorporation into the analysis. Animal inclusions were evaluated, tabulated and then incorporated into the broader database. Afterwards, only those animal inclusions that were associated with the burial sites being used were considered for the project. Once these data were selected and had become part of the database, the various types were combined with the Analyzed Human Skeletal Remains and then with artifacts.

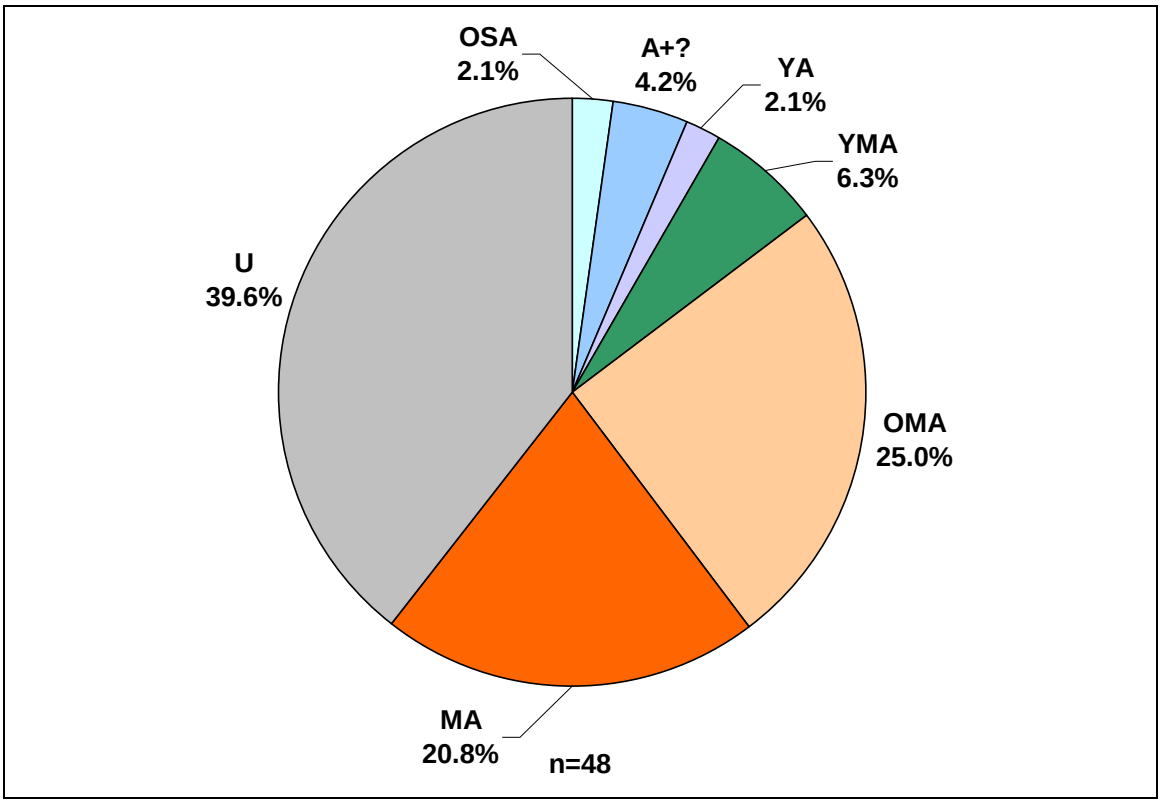


Fig. 4.15 Pie chart representing the analyzed human skeletal remains by age which are associated with animal remains. Age is a factor as there is only one individual under 18 years of age.

Though 48 graves can be matched to 57 animal inclusions, we learn little of interest regarding gender issues from the first combination. Females buried with animals inclusions are outnumbered by males 3:1 (see Figure 4.14, above), their numbers are only slightly below the male to female ratio. Females were as likely to be buried with dogs, horses or both as males.

Figure 4.15 suggests that with the exception of the OSA in grave no. 8 – whose burial inclusions altogether indicate that his or her status was anomalous – there is a distinct bias revealed by the data toward burying both horses and dogs with mature and older mature adults. Tables 4.3 and 4.4 not only support this conclusion, but the burials containing both horse and dog include only one female whose age was uncertain lending

weight to the idea that it was older males for whom both animals were interred together.

Analyzed Human Skeletal Remains with Dog Inclusions				
Gr. No.	**BR No.**	**Sex**	**Age**	**Note**
44	25	Unidentified	U	Both Horse and Dog
70	40	Male	OMA	Both Horse and Dog
73	40	Male	MA	
135	63	Female	U	Both Horse and Dog
154	74	Male?	MA	Both Horse and Dog
189	89	Unidentified	Adult?	Both Horse and Dog
196	89	Female?	YMA	
248	118	Male	OMA	
250	120	Male?	MA	Both Horse and Dog
251	120	Male?	U	
260	126	Unidentified	MA	
288	145	Male	OMA	

Tab. 4.3 Analyzed human skeletal remains which are associated with the remains of dog.

It is known that horses were a status symbol in Iceland as in most of the Viking world as well as transport to the afterlife, so the 6 graves with only dogs raise more questions than the 42 graves with horses. Some of the possible answers to these will be presented in a later chapter.

Analyzed Human Skeletal Remains with Horse Inclusions					
Gr. No.	**BR No.**	**Sex**	**Age**	**Count**	**Note**
5	3	Unidentified	U	1	
8	5	Unidentified	OSA	2	
24	15	Unidentified	U	1	
26	17	Male	MA	1	
27	18	Male?	U	1	
41	24	Unidentified	OMA	1	
43	25	Unidentified	U	1	
44	25	Unidentified	U	1	Both Horse and Dog
45	25	Unidentified	U	1	
50	28	Unidentified	U	1	
70	40	Male	OMA	1	Both Horse and Dog
135	63	Female	U	1	Both Horse and Dog

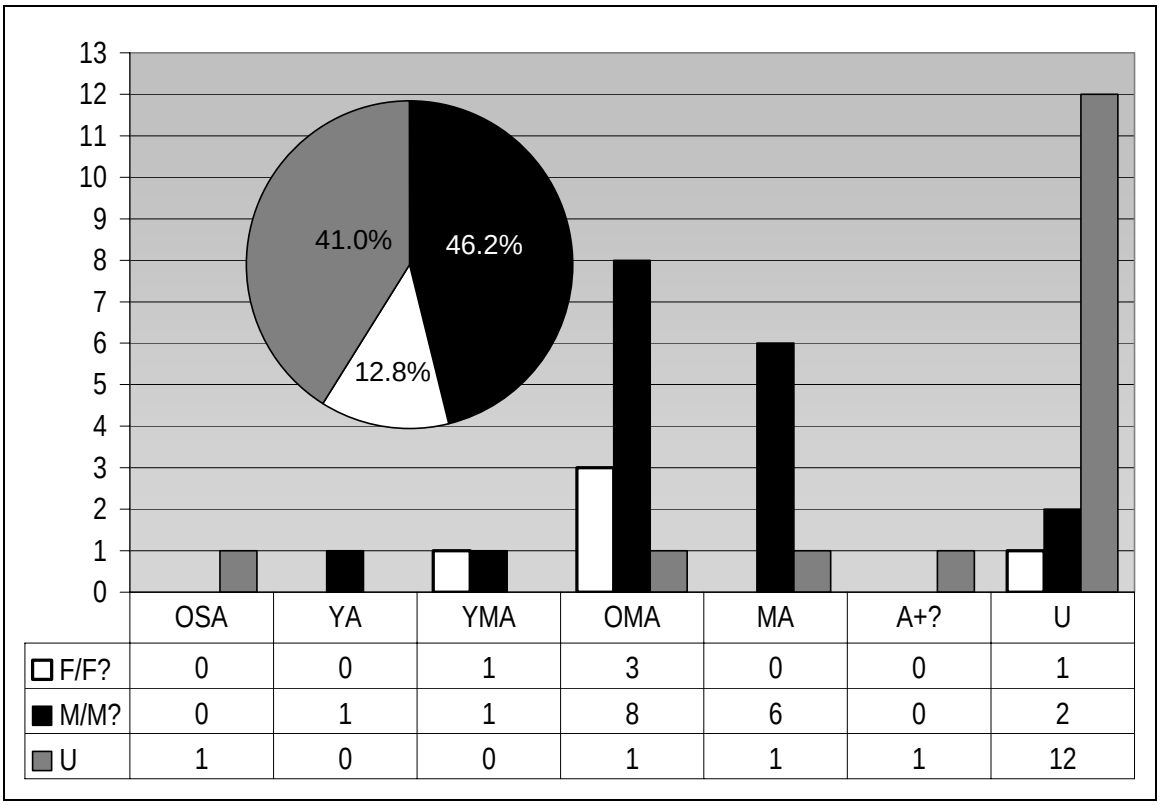
Tab. 4.4 Analyzed human skeletal remains which are associated with the remains of horse (continued).

Analyzed Human Skeletal Remains with Horse Inclusions					
Gr. No.	**BR No.**	**Sex**	**Age**	**Count**	**Note**
140	67	Male	OMA	1	
143	70	Male?	U	1	
144	70	Unidentified	U	1	
146	72	Male	YMA	1	
154	74	Male?	MA	1	Both Horse and Dog
157	76	Female?	OMA	1	
158	76	Unidentified	U	1	
159	77	Male?	OMA	1	
161	79	Unidentified	U	1	
162	79	Unidentified	U	1	
164	80	Unidentified	U	1	
166	81	Unidentified	MA	1	
170	85	Unidentified	U	1	
187	89	Male	MA	1	
189	89	Unidentified	Adult?	1	Both Horse and Dog
190	89	Female?	OMA	1	
191	89	Female	MA	1	
194	89	Male	Adult?	1	
197	89	Male	YA	1	
200	91	Male?	OMA	1	
201	92	Unidentified	U	2	
202	93	Male?	MA	1	
213	98	Male	OMA	1	
221	102	Unidentified	U	1	
250	120	Male?	MA	1	Both Horse and Dog
252	121	Female?	YMA	2	
262	128	Male	MA	1	
265	130	Female	OMA	1	
276	136	Unidentified	U	1	
286	144	Male	OMA	1	

Tab. 4.4 Analyzed human skeletal remains which are associated with the remains of horse).

4.5. Analyzed Human Skeletal Remains, Artifacts and Animal Inclusions

Thirty-nine graves contained all three variables: analyzed human skeletal remains, artifacts and animal inclusions. (See Appendix H, for a list of all three variables



	OSA	YA	YMA	OMA	MA	A+?	U
F/F?	0	0	1	3	0	0	1
M/M?	0	1	1	8	6	0	2
U	1	0	0	1	1	1	12

Fig. 4.16 Age and sex distribution of those analyzed human burials with both artifact and animal inclusions. indicating that older males are more likely to receive differential burial treatment in the form of grave goods.

together.) However, not all contained the same animals. There are twenty-seven graves with horse remains, six with both horse and dog remains and six with dog remains. In Fig. 4.16 above, the male to female ratio increases to 3.6:1.

Women are generally under-represented and even more so when it comes to being buried with both artifact and animal inclusions. Seven age groups are represented in this portion of the data and it was very clear that the predominance of males over the age of 35 years continues. (See Vol. II, Tab. 4.5)

4.5.1. Adornment

Of the 39 graves with analyzed human skeletal remains, animal inclusions and artifacts, there are 156 artifacts of adornment in twelve graves. As can be seen in Fig. 4.17 below, beads continue to dominate the dataset at 85.3% and no other adornment can even come close.

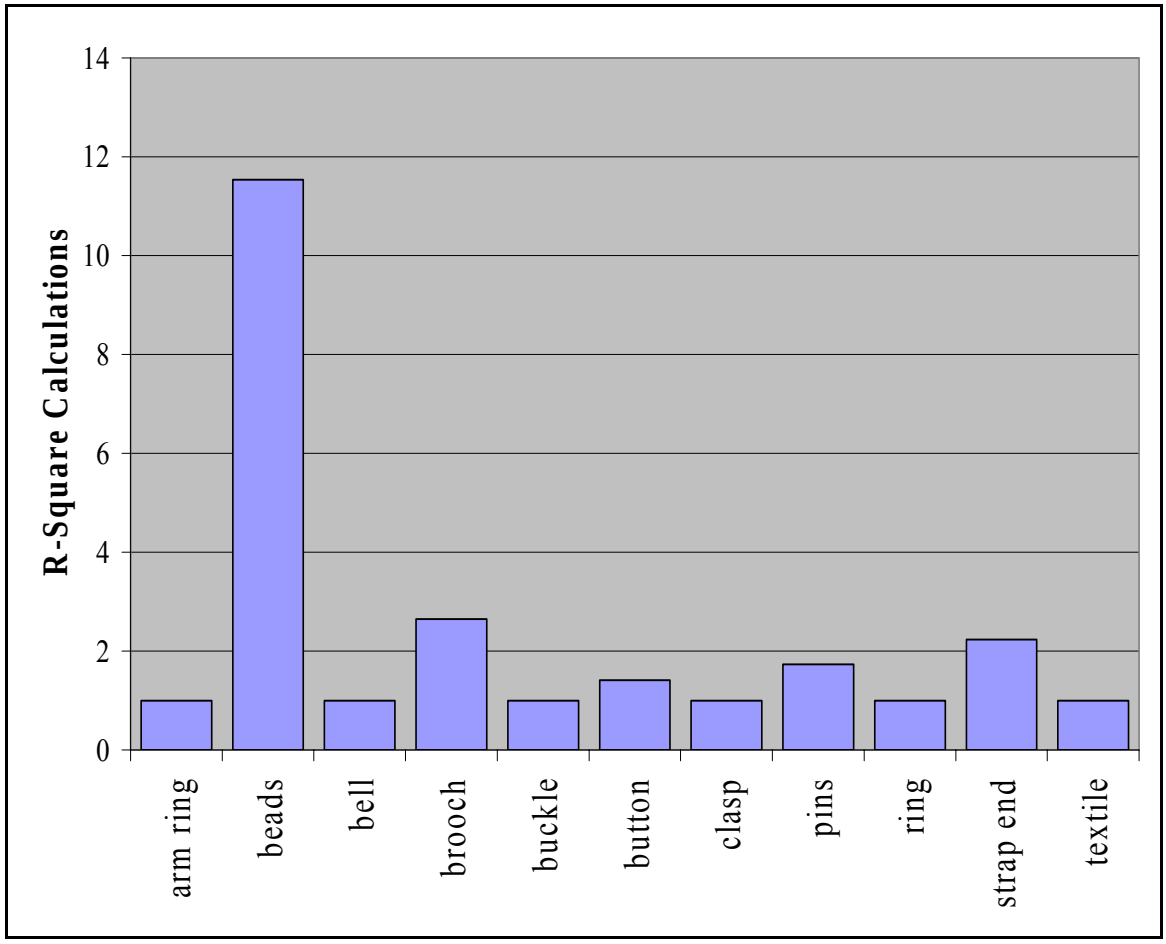


Fig. 4.17 Distribution of adornment in the three-variable set, standardized using R-square calculations. In the twelve graves with adornment, beads are the most common artifact in this category.

There are only eight graves with beads. The higher numbers are in female graves, although the top count is with an individual of undetermined sex. Once again, we see

more individuals over 35 years of age (OMA and MA) with beads. The top two clearly indicate an achieved status.

Three-variable dataset: Graves with Beads				
Grave No	**Sex**	**Age**	**Animal**	**Bead Count**
260	Undetermined	MA	dog	52
265	Female	OMA	horse	37
135	Female	U	horse/dog	33
197	Male	YA	horse	5
157	Female?	OMA	horse	2
286	Male	OMA	horse	2
8	Undetermined	OSA	horse	1
276	Undetermined	U	horse	1

Tab. 4.6 Eight graves which included beads as part of the artifact assemblage in the three-variable data analyses in descending order by bead count.

Brooches (4.5%) and strap ends (3.2%) are the next most common items in this category. Although they haven't the numbers of the beads, brooches are found in four graves and strap ends in five graves. All of the brooches in this portion of the dataset are those types typically found in female graves (Smith 2004:69) so here the data supports the general assumptions. The strap ends appear in three of the five identified male graves. The one grave with both brooches and strap ends (Gr. no. 260) is of undetermined sex. However, this grave includes two oval brooches and one trefoil brooch, which is typically found in female burials.

Three-variable dataset: Brooches and Strap-ends					
Grave No	**Sex**	**Age**	**Animal**	**Amount**	**Name**
135	Female	U	horse/dog	2	brooch
140	Male	OMA	horse	1	strap end
154	Male?	MA	horse/dog	1	strap end
170	Unidentified	U	horse	1	strap end
190	Female?	OMA	horse	1	brooch
260	Unidentified	MA	dog	1	strap end
				3	brooch
265	Female	OMA	horse	1	brooch
286	Male	OMA	horse	1	strap end

Tab. 4.7. Graves of Adornment in the three-variable set: Brooches and Strap-Ends.

As for the remainding adornments, two of the graves have three items each (Gr. nos. 260 and 286). The textile noted in Grave no. 265 was more than likely a small fragment still attached to the brooch, noted above. Grave no. 135 has a pin and a bell, most likely part of the elaborate necklace with the thirty-three beads noted above. Grave no. 157 does not have many items of adornment and with only a few beads and a button is one of the more modest graves in this category.

Three-variable dataset: Less Common Adornment						
Grave No	**Sex**	**Age**	**Animal**	**Count**	**Name**	**Style**
135	Female	U	horse/dog	1	bell	
				1	pin	
157	Female?	OMA	horse	2	button	
260	Unidentified	MA	dog	1	pin	ringed
				1	clasp	
				1	arm ring	twisted wire
265	Female	OMA	horse	1	textile	
286	Male	OMA	horse	1	ring	
				1	buckle	Borre style
				1	pin	ringed

Tab. 4.8. Graves of Aornment in three-variable set with the less common types of adornment in this portion of the dataset.

4.5.2. Commerce

There are twenty-two artifacts of commerce in six graves in this portion of the analyses. The majority are weights which are found in all six of the graves. Grave no. 186 has the most with eight weights. There is only one coin in this category, a silver coin, English, dated to approximately AD 955-75. There is only one female in this category, of undetermined age, and she was buried with a scale pan – the only scale pan in the Icelandic corpus, and she had quite a substantial amount and diversity of grave goods included in her grave, as did all of the graves with artifacts from this category.

Three-variable dataset: Commerce					
Grave No	**Sex**	**Age**	**Animal**	**Amount**	**Name**
8	Unidentified	OSA	horse	1	weight
26	Male	MA	horse	4	weight
135	Female	U	horse/dog	1	scale pan
187	Male	MA	horse	8	weight
213	Male	OMA	horse	2	weight
286	Male	OMA	horse	1	purse
				4	weight
				1	coin

Tab. 4.9 Graves in the commerce category in three-variable analysis.

4.5.3. Domestic

In the domestic category there are 78 artifacts in twenty-four graves. Sixteen of these artifacts belong to the smaller sub-categories. (see Tab. 4.10)

Three-variable dataset: Domestic Sub-Categories							
Gr. No	**Sex**	**Age**	**Animal**	**Count**	**Name**	**Style**	**Sub-Category**
24	U	U	horse	1	weaving implement		weaving
26	Male	MA	horse	1	vise		blacksmithing
70	Male	OMA	horse/dog	1	vessel	cauldron	cooking
135	Female	U	horse/dog	1	vessel	cauldron	cooking
				1	weaving sword		weaving
154	Male?	MA	horse/dog	1	vessel	cauldron	cooking
162	U	U	horse	1	sickle		agriculture
190	Female?	OMA	horse	1	vessel	bowl	cooking
200	Male?	OMA	horse	1	spit	rectangu-lar rod	cooking
260	U	MA	dog	1	cylinder	small	miscellaneous
				1	sickle		agriculture
				2	spindle whorl		weaving
				2	wool comb		weaving
286	Male	OMA	horse	1	vessel	bowl	cooking

Tab. 4.10 Graves in the three-variable analyses containing artifacts from the various Sub-Categories in the Domestic Category.

As can be seen, there are two sickles, one interred with a dog (Gr. no. 260) the other with a horse (Gr. no. 162). There is not much information regarding the individual

in the graves only that the person buried with a dog was a mature adult. Only one artifact represents iron working. A vise is found with a mature adult male and horse remains (Gr. no. 26). One spit remains in the dataset when all variables are combined and it is found with an older mature adult, a probable male, with horse remains (Gr. no. 200). The vessels are still strongly represented when the variables are combined. There are five vessels in five graves, three of which are iron cauldrons (Gr. nos. 70, 135, 154) while the other two are steatite bowls (Gr. nos. 190, 286). All three of the iron cauldrons are among both horse and dog inclusions but only horse inclusions are found with the two steatite vessels. Four of the individuals are over the age of 35 and one is undetermined. Three are male/? (Gr. nos. 70, 154, 286) and two are female/? (Gr. nos. 135, 190). Thus, sex does not seem to be a deciding factor of vessel and/or vessel type inclusion, but age may be. It is difficult to sum up the weaving group as sex and age are mostly undetermined. There is one female present (Gr. no. 135) and one individual is a mature adult (Gr. no. 260). The main three animal inclusion types are present (horse, horse/dog, dog), thus there does not seem to be anything in this variable that can add to an understanding of this subcategory when considered on its own.

The 62 artifacts that remain are all listed under the generic term *utility*. It is difficult to give much meaning to the presence of nails as their use is uncertain. The remaining artifacts are distributed among all these burials with interesting results. There are two rather high ranking burials (Gr. nos. 8 and 26) with quite a few artifacts of this category. Three are middle ranked (Gr. nos. 260, 135 and 27) and the rest seem to be of a more average or common rank with some having just enough inclusions in this category to make a statement. There seem to be more graves with dog inclusions in this category,

five with dogs, and three with both horse and dog remains. However, due to sheer

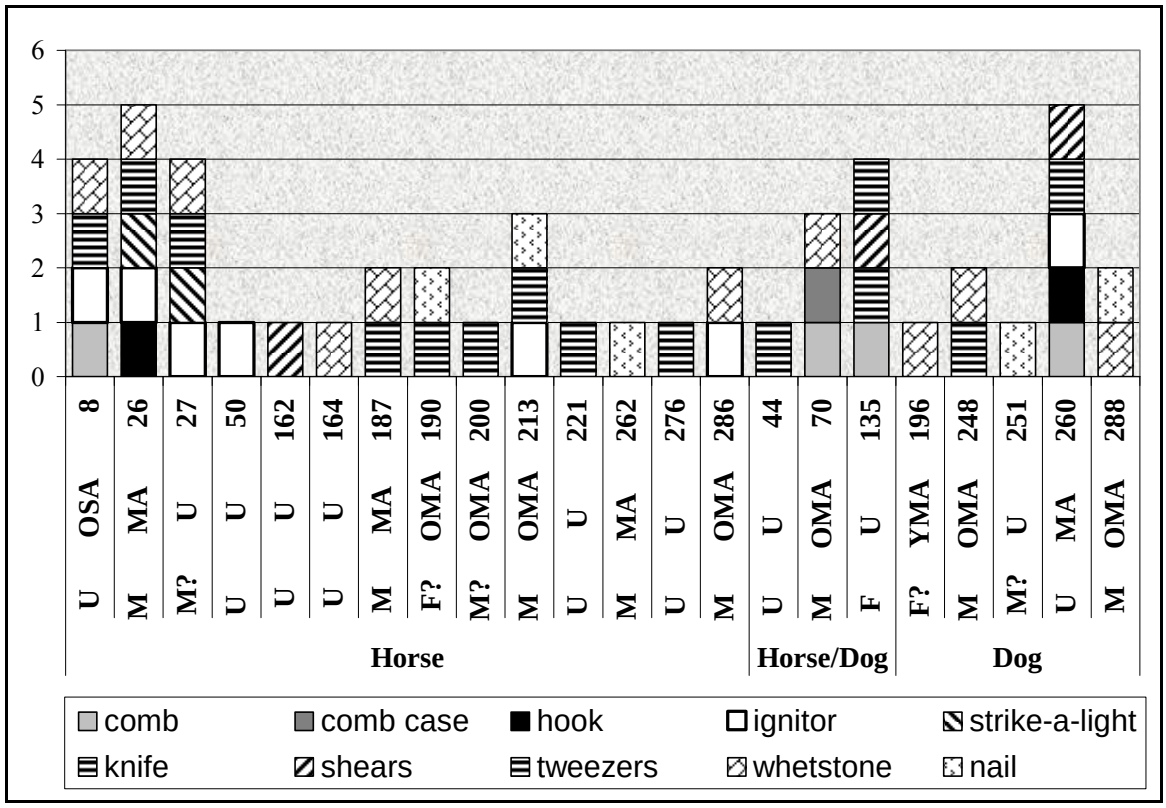


Fig. 4.18 Human graves with artifacts of domestic utility associated with animal remains in the three-variable analyses using NAT values. Males dominate the Domestic utility category almost 4:1.

numbers, the fourteen graves with only horse remains still dominate. Knives are found in thirteen of the twenty-two graves and whetstones are found in ten. These are usually two of the more common items found in graves and tend to be found in those with only one artifact inclusion. Combs also seem to be more common in burials with dog inclusions. Grave nos. 26 and 260 have the highest NAT values with 8, 27 and 135 right behind.

4.5.4. Horse Equipment

There are 47 artifacts in twenty graves. Three graves (gr. nos. 44, 70, 189) have both horse and dog remains, the other seventeen contain only horse remains. Grave no. 8 contains the remains of two horses. Half of the graves were sexed and contained seven

males/males? and three females/females?. Eleven of the graves were aged. Eight were identified as older mature adults, one was a mature adult, one an adult+? and one an older sub-adult. The bulk of the artifacts are buckles and bridle bits. There are nineteen buckles in thirteen graves (gr. nos. 44(4), 190(2), 221(2), 286(2)). There are eleven bridle bits in eleven graves (gr. nos. 8, 24, 26, 43, 44, 50, 70, 161, 213, 276, 286). There are thirteen nails in four graves with grave no. 286 having the majority (eight nails). Nails were more than likely a part of a saddle, thereby indicating that the saddle may have been included in the burial. Grave no. 221 included two copper-alloy bosses. These were a bit extravagant and represented formal dress for the horse. Found also was one hook and one iron ring, each part of the horse equipment.

4.5.5. Non-Utility

There are twenty artifacts in two graves for this category. The first artifact is a whale-bone object of unknown use decorated in Mammen Style which was buried with an individual of unknown sex and age and the remains of a horse (Gr. no. 164). The other nineteen artifacts are bone gaming pieces which were found with a probable female younger middle adult and the remains of a dog.

4.5.6. Weapons

The burial ritual includes the act of dressing the dead in clothing befitting the person's status in life. Warriors were placed in full dress with weapons, horse, companions, food and any other objects necessary for the journey to Valhalla. (Brown 1981; Frye 2005; Gräslund 2001; Härke 1997a, 1997c)

There are twenty-eight artifacts in thirteen graves in this category in this portion of the analysis. The majority of these individuals are over the age of 35 (OMA and MA), with the exception of the individual in grave no. 8 who, as noted above, is somewhere

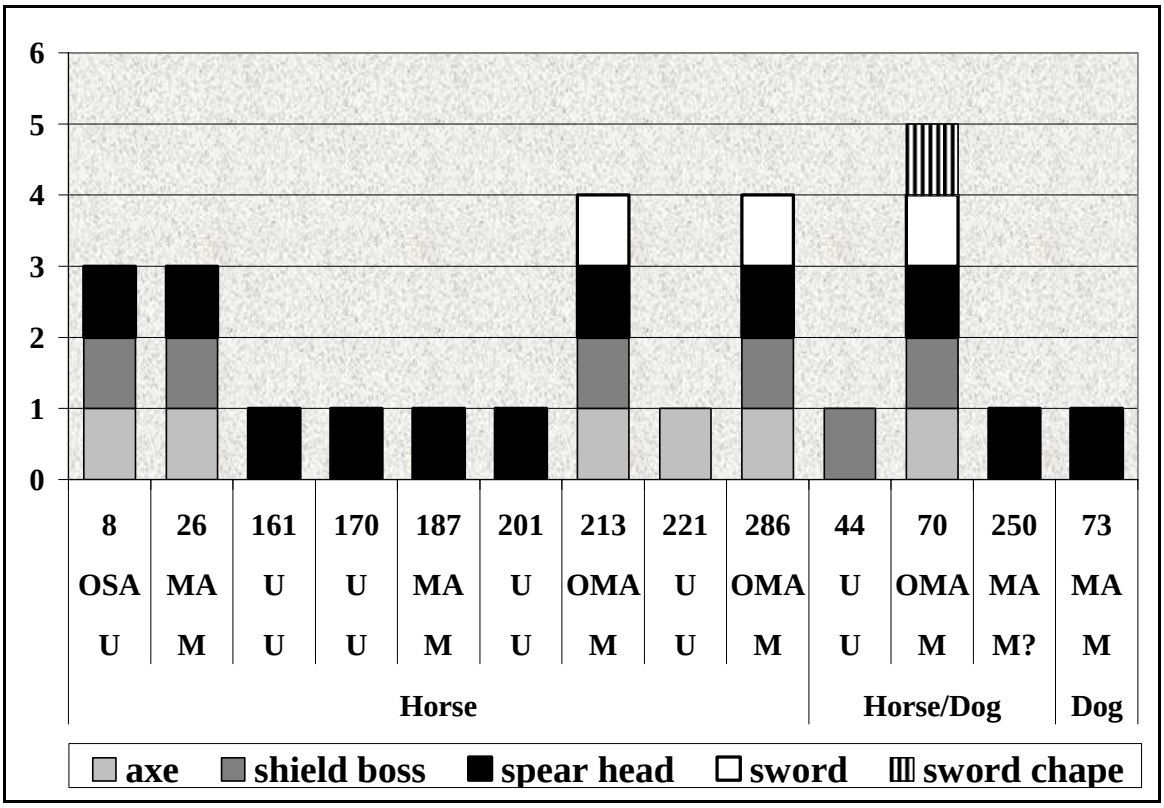


Fig. 4.19 Graves in the three-variable analysis which include artifacts from the weapons category, organized by animal inclusion using NAT values.

from 13-18 years of age. Three graves stand out as being exceptional (Gr. nos. 70, 213 and 286) with a more diverse and better equipped weapon assemblage included. Grave nos. 8 and 26 are close behind with three artifacts of weaponry each. Grave no. 73 is somewhat different as it is the sole grave here with dog remains in the burial. However, it is very similar in other respects to five other graves containing only spear head.

4.5.7. Discussion of Analyzed Human Skeletal Remains, Artifacts and Animal Inclusions Combined

As more variables are combined, the sample size decreases. Each section thus far has a different sized dataset. There are 163 burials with 328 graves from which our data are derived. Since a large portion of the data needs to be correlated, it is more relevant to the study to connect the variables to the graves. Therefore, of the 193 analyzed human

skeletal remains 144 could be provenienced with the graves, 2,460 artifacts were able to be connected to 163 graves and 113 animals were associated with 96 graves. Once Analyzed human skeletal remains were connected to artifacts, there were 1,314 artifacts in 85 graves with analyzed human skeletal remains. When animals were added, the dataset had 57 animals in 48 graves containing analyzed human skeletal remains. When artifacts were connected to animals, the dataset had 987 artifacts in 76 graves with animals. Once all three of the variables are connected to a grave, the dataset has 555 artifacts with 47 animals in 39 graves with analyzed human skeletal remains. Clearly, there is enough variation between these graves to indicate differences in social position. There are also obvious differences based on sex and age as well as gendered roles and identities.

Using NAT values for the presence of artifacts from particular categories, Fig. 4.20 below, provides quite a bit of information regarding the dataset that now remains once all three variables are combined with the graves. Overall, the graves are ordered according to animal inclusions. As can be seen, it is quite obvious that horse inclusions are the most common (69.2%), while a combination of horse and dog burials and the burials with only dog remains are equal at approximately 15.4% each. In this portion of the dataset, burials with dog remains do not include any horse equipment at all. The dataset is dominated by domestic items. Of the thirty-three graves that include horses, only 63.6% have horse equipment. Thus not all burials with horse remains also included equipment.

It is interesting that in the three-variable portion of the analysis there are only two graves with non-utility items, yet these two graves are not the wealthiest graves. Indeed,

they are simply average in this regard and they are both quite similar.

It is not surprising that Miscellaneous and Fragments are found in the majority of the graves as many of the material remains have greatly deteriorated during these past 1100 years. It is also not surprising that not much information can be gained by studying this category, except that they show how much cannot be known. The number of artifacts in the Horse equipment category is not surprisingly high either since, as noted earlier, the majority of the Icelandic graves with animal inclusions contain horse inclusions. The domestic category is also an unsurprising category as many of these items are every-day-necessities which would be extremely useful for an individual of any rank to take with him or her into the afterlife: knives, whetstones, shears, etc., are common everyday items. It is interesting that adornment and weaponry are so very close. (See Fig. 4.21, below.) These are two of the more status-oriented categories that are symbolic of wealth and position in the society. Although adornment is not specific to females, weaponry in the Icelandic corpus is more specific to males thereby indicating a gender difference in the society.

Another interesting point in evaluating these variables together is the amount of graves with numerous artifact categories included. Clearly, graves with more artifact inclusions from many differing categories are fewer (see Fig. 4.20, below).

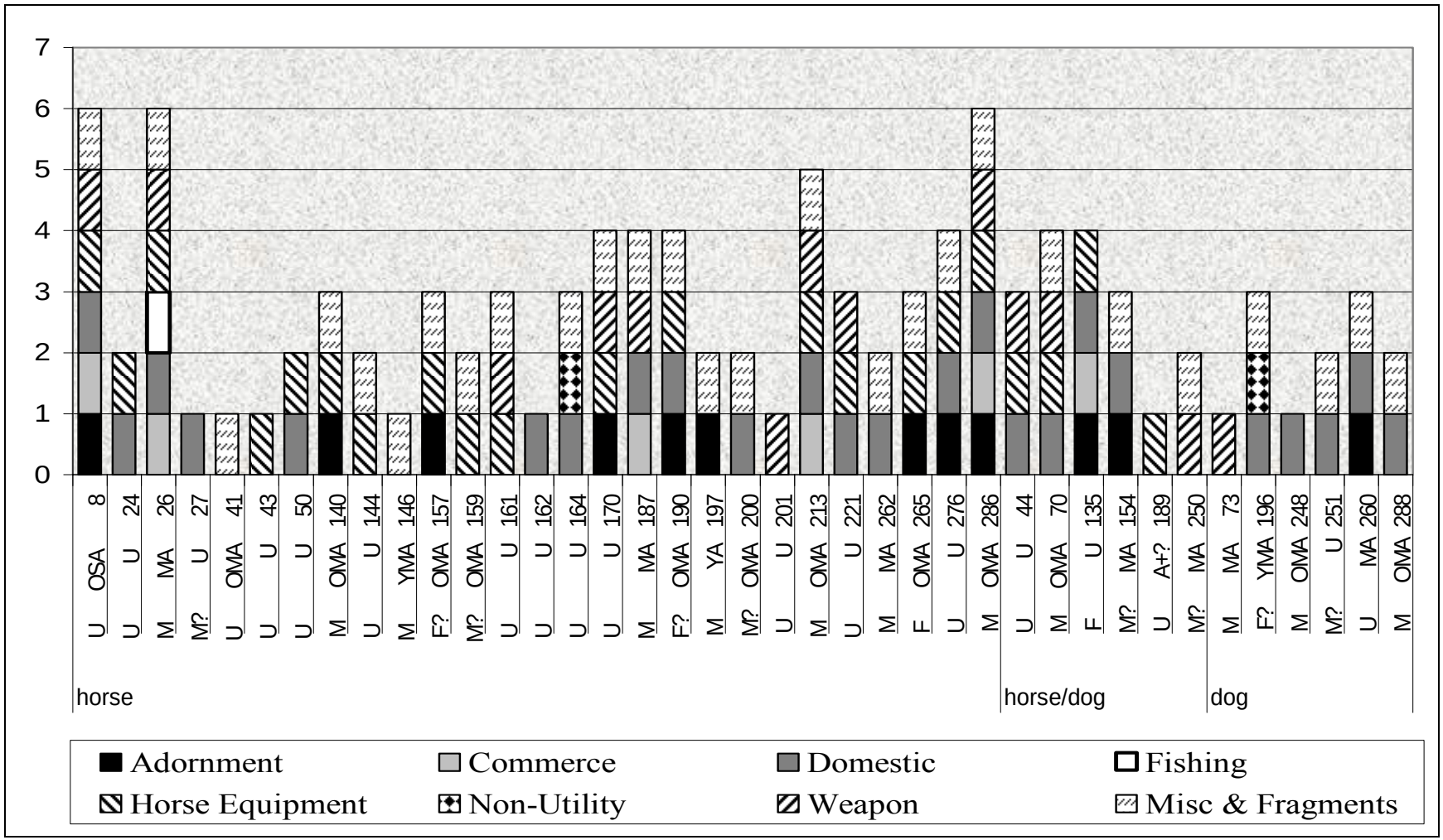


Fig. 4.20 Graves in the three-variable analysis broken down by NAT values based on category showing status by diverse category inclusion. as well as between horse or dog inclusions.

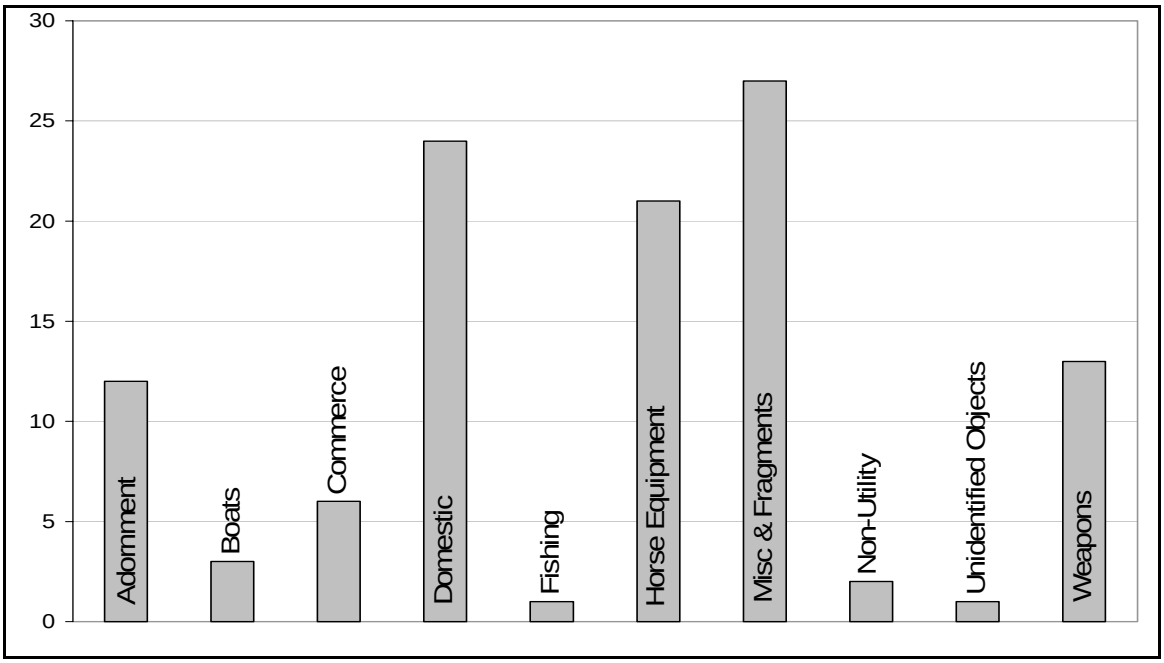


Fig. 4.21 Graph showing the number of graves in the three-variable analysis that have artifacts from each category. In this structure, the pattern of artifact inclusions is visible and commonalities evident.

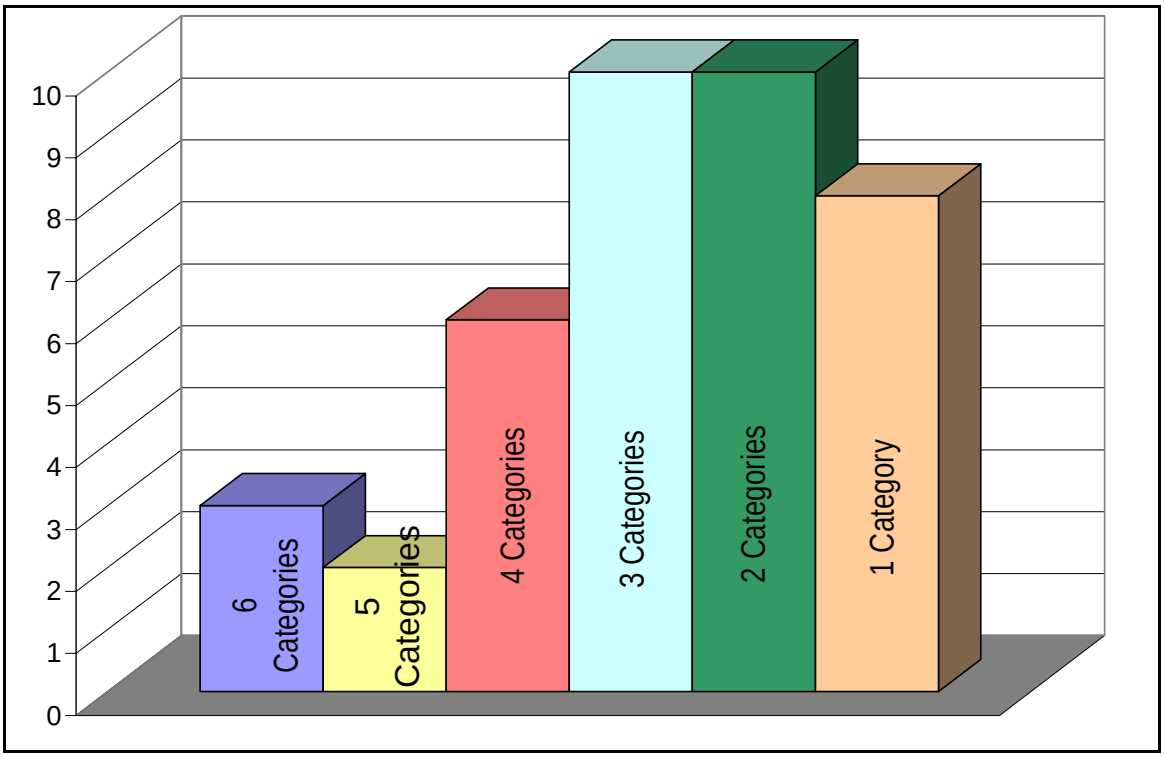


Fig. 4.22 Graph indicating categories in the three-variable set using the variety of artifact inclusions based on NAT values. Interestingly, those with fewer categories are not largest which argues that less does not necessarily mean poor and we do not know who is selected for burial.

4.6. Conclusions

4.6.1. Introduction

This chapter focused on the quantitative and qualitative nature of the internal data. In this way, it was able to describe the gendered differences in the dataset – indicating social stratification not only between the sexes, but within the sexes as well. Also, such an analysis began to open up the potential for making differences based on age visible. The following will further outline the results of the analyses in this chapter.

4.6.2. What do the Artifacts Tell Us about the Sex and Gender Roles?

Artifacts have a long history of being associated with particular gender roles which were considered to be based on biological differences between the sexes. (Conkey and Spector 1984) A binary system was constructed where artifacts were associated by sex and males were associated with "tool-making, hunting, trade and warfare" and activities that were considered female were ignored, such as "food-gathering, food-processing and parenting." (Brumfiel and Robin 2008:2) Other artifacts were also assigned based on modern social norms.

The following shows how the categories defined in this study were distributed between the sexes. In the past, jewelry tended to be associated with females, but adornment is often a utility associated with the form of dress and as such a functional necessity for both sexes, which is why the use of the analytical category Adornment was used here, instead. There were only slightly more female graves with Adornment than males but those artifacts that were particularly associated with one sex or the other fell into the clear categories as was noted in Smith (Smith 2004:69) and outlined again in this chapter. Items from the Non-Utility category tended to be those of leisure indicating status without a designation based on sex. However, in the small sample here, such items

were found with females and not males.

Artifacts of trade or commerce were usually seen as male, but there is a female with a scale-pan and again, if the Vatnsdalur burial artifacts belonged to the female, lead weights can be associated with females. Domestic items appear in the graves of both. However, within the domestic category, subcategories were developed to distinguish between and sometimes counter the stereotypes of sex-based artifact associations as with agricultural, blacksmithing, cooking and weaving tools. To view agricultural work and cooking as women's duties has been somewhat countered by the data as artifacts from each of those subcategories were found with both males and females, leading one to believe that the inclusion of certain categories were symbolic rather than functional. Cooking has been divided between the sexes as in the case of the Iron Age Israelite societies where cooking was indeed done by females while communal feasts or activities were prepared by males. (Faust 2002:59) Artifacts for fishing were deemed tools of hunting; and as such, were associated with males. Horse equipment could be considered either way. In the United States, prior to modern times, horses were ridden almost exclusively by males while females often used carriages or carts for transportation. Thus, it would be fair to say that many interpretations of horse equipment were based on the western attitude toward this equipment and its role in the household. However, in the burial record, horses were interred with both sexes so such assumptions need to be reconsidered.

Weapons were associated with males because of their use in warfare and hunting. For the most part, they were found only with males in the burial record.[2] There is only one instance in Iceland where a spear head was recovered from a female burial. The

assumption made when this spear head was found was that it could not really be associated with the female because she would not have a weapon. (Friðriksson 2000:561) Any number of reasons could account for a spearhead being found with a female. For instance, it could indeed have been part of another grave and during excavation was somehow mixed-up. Or, she could have been killed by that weapon. It could also have been an item that the individual owned and used herself. It will never be known and for the most part is not relevant because regardless of how unusual it may be, it was still in a female grave. Its presence there means that in the Icelandic corpus there is only a 98.4% likelihood that weapons will be associated with males. Therefore, when finding a burial with weapons, it is a reasonable assumption to say that 98.4% of these will be male which means that there is less than a 0.3% probability that the 20 individuals of undetermined sex buried with weapons will be female. The data further support the already established assumption that male burials in Iceland will have weapons and that it is unlikely that female burials will. However, that 1.6% should not be ignored completely and all possibilities need to be considered.

There were too few items from the Non-Utility category that could be associated with analyzed skeletal remains to make any definitive statements, but only females were noted in this category. Such items are status symbols and may indicate household status as well as the elevated social position of the women of these households without indicating a gendered division of the use of these artifacts.

Horse Equipment is found with both males and females in a 3:1 ratio. As this is consistent with the overall ratio of the dataset, it seems that associations with this category are not based on gender or sex roles.

The only analyzed skeleton that could be connected with an artifact from the Fishing category was male. Although the same is too small to make any identifying statements, it is possible that including such an artifact was similar to including weaving implements to represent an individual's success in that activity and again engendered associations could not be confirmed nor denied.

The two artifacts from blacksmithing were identified with males while the spits and vessels were evenly distributed between the sexes. Artifacts of everyday utility, from the Domestic category, show a similar distribution between the sexes. However, of the three sickles, one is attributed to a female? while another was found with various artifacts from the Adornment category and with weaving implements generally associated with females.

Weaving was a very important task in Viking period Iceland. Icelanders needed to trade in order to gain wood, wax, flour and many other items that were not produced there. As already noted, Icelanders subsisted mainly on farming and animal husbandry, and though weaving was probably a domestic activity to meet the needs of the family, it could and often did add to the overall wealth and standing of a household. (Damsholt 1984; Ewing 2006; Jacobsen 1978; Jesch 1991; Jochens 1995) It was also not unusual for women of high status to take part in weaving. As indicated by the small loom weight and many tapestries at the Oseberg ship burial, such an act was a sign of status. Ingstad does note that such high-status women would more than likely only weave quality tapestries while lower status women would use a normal sized loom weight and create the cloth used for clothing and other similar items. (Ingstad 1982, 1995) Wool, called *vadmal*, was used for cloaks, work clothes and even sails. The sails required a high

quality cloth to handle the conditions under which they were used, thus requiring specialized skills. (Andersen 1995) Most likely increasing the value of women who excelled at this task. It was in high demand throughout the Viking period and into the Early Middle Ages, at which point the demand for the wool dropped.

The spindle whorl is one of the most commonly found tools in female graves of the Viking age. In the Icelandic context, four of the eight graves (with or without skeletal remains) in this category had spindle whorls. More than likely the majority of women must have taken part in such an activity; however, it is even more likely that skill varied greatly from person to person and quite likely that it was indeed a specialist task. As can be seen from the textiles from the Oseberg ship burial, proper and careful planning from the beginning stages of choosing the quality of wool to the final product was taken to ensure the finest quality cloth. (Ingstad 1982, 1995; Sjovold 1985)

It would appear that artifacts distinguishing one as a person who produced *vadmal* were a status symbol indicating prosperity, as items of trade do. The sagas indicate that the production of homespun was a woman's domain; the archaeological evidence in Iceland neither disproves nor supports this claim. Four of the five graves that could be matched to artifacts of weaving were quite prestigious and contained a fair amount of jewelry as well as weaving implements. Only two of the five could be confirmed as female. The claim cannot be disproved as the remaining three burials were of undetermined sex. However, one of the graves held a spindle whorl and a sword while another grave had a spindle whorl with a spearhead and an arrowhead. Using the logic above, this would mean that the first could be viewed as either a female or a male grave. Why would there be weaving artifacts in a male grave if weaving was a female domain?

One obvious explanation is that it was the grave of a successful trader of *vadmal*, or of someone from a household which had had great success in creating surplus and quality *vadmal* for trade. What this suggests, is that it is unreliable to depend on only one artifact type to determine sex. What does help to answer the question of sex, are the artifacts included with the weaving implements. It is highly probable that those individuals with a certain quantity and type of jewelry associated with females would be female and those with weaponry or jewelry associated with males would be male. Based on previous studies, especially those presented in Smith's research, certain types of jewelry can be attributed to a particular sex, and others are worn by both. (Smith 2004:69) Unfortunately, although certain artifacts of jewelry can be deemed male or female, such as feminine oval, tongue-shaped and trefoil brooches, bracelets and bells, and masculine penannular brooches and bone pins, too many artifacts in the Adornment category were worn by both males and females.

Artifacts within the Commerce category were found predominantly with confirmed males, however, as in the assemblages in the eastern expansion (Stalsberg 1991, 2001) the only scale pan found in the Icelandic corpus was associated with a female – a quite successful and socially elevated female (Grave no. 135).

At the time of this writing, the artifacts associated with sexed individuals indicate that there are two categories that are male dominant – Commerce and Weapons – but none that are solely male. Due to insufficient information, there are no real female-dominant categories as a whole, but within categories there are particular types of artifacts that are found mostly with females and in combination with artifacts from other categories create an assemblage that demonstrates female associations. Although it is

difficult to make broad statements from the small dataset in some of the categories, what is very clear is that conclusions about sex based on artifact inclusions can be made loosely but only if all the artifact inclusions are considered. However, it still seems that this is not congruent with the textual evidence for the Icelandic culture, and does not consider those who do not fit into contemporary rules of thumb. Overlapping can be seen in the burial record suggesting that this society's social categories cross binary gender lines and are based more on kin groups, households and classes.

What can be ascertained by looking at the sexed individuals with artifacts, is that a broader selection of artifact categories is associated with males/?. Female/? graves contain up to four categories of artifacts. There are only three such graves and eight with three categories. Also, these eleven graves, contained a higher quantity of artifacts than those burials with only one or two categories. Ten of the eleven had artifacts of Adornment, in varying quantities and quality. Nine of the eleven had artifacts from the Domestic category and as expected, the categories of Commerce, Weapons, and Horse Equipment were sparse. This explains the assumptions of artifact-association, but does not make the assumptions argument-proof. Males/? have up to six artifact categories; but there are only two graves with that many. The first grave included an artifact from the Fishing category as well as a vise and quite a few everyday items from the Domestic category; the vise and the fishhook are both relatively rare in the dataset. He also had an axe, a shield and a spear. Therefore, although there were artifacts from six categories, they were not of particularly high quality. The other grave, however, was quite impressive, with many items from the Adornment, Commerce, Domestic and Weaponry categories. Not only does he have ample Adornment, he was successful in trade, was

buried with a high status steatite vessel, and was a well-equipment warrior with a sword. The differences between these two graves are significant and may reflect the differences between a prosperous peasant landowner and a warrior-chief. There are another four burials with five categories and it would seem that these are similar in character to the two above, indicating individuals of an elevated social position. A few of the burials with three and four categories had quality items, such as a vessel in one, many items of Commerce, numerous Weapons in another and even a boat in one of them, but not much else. There can be many explanations for this, including grave robbery, death away from home, either in Iceland or abroad, or this could have been an unsuccessful landowner. The third group, those with very few artifacts and from only one or two categories, may have been among the most unsuccessful or the poorest, but whether they were landowners, tenants or even servants, cannot be determined.

Distinctions in wealth and position are revealed by the analysis of the artifacts. During this time, private sector activities, such as weaving, were high-status and not a mark of oppression. Male-dominated spheres do not necessarily exclude females as evidenced by females entering the public realm of trade. Also, those spheres considered exclusively female were evidently entered into by males as evidenced by the inclusion of artifacts representing activities usually considered specifically female, like artifacts of cooking and weaving. The data suggests that few tasks were ever carried out by only one sex. To uncritically engender an artifact based on a binary scheme, distorts the image of pre-Christian Icelandic society. Often people must respond to changes in the public realm by reorganizing the private. Thus, when males were off raiding and trading or had not returned from such ventures, females were left responsible for all aspects of running

the household and farm. This response of the domestic sphere to evolving economic and political conditions suggests that "household labor is a flexible, adaptive and dynamic element of sociocultural systems and it is best studied in relation to a broad array of environment and social variables." (Brumfiel and Robin 2008:4)

4.6.3. What do the Artifacts Tell Us about Childhood and Adulthood?

The question that still cannot be answered with respect to the Icelandic burials is: What are they doing with their young? Viking period Iceland, is no different from other pre-industrial societies, thus it is very likely that "mortality rates for children, especially those under the age of 10, were high." (Norman 2002:302) However, there are only ten individual under the age of 18 who could shed any light on this question. Five of these belonged to the older subadult category, three to the younger subadult category and two were older neonates. This is a seemingly small proportion considering the size of the dataset, but not completely uncommon. It is very unusual to find burials of children from the Beaker period in Scotland. If they are found at all, they usually were buried with adults. (Small, et al. 1988) At the fifth century C.E. burial site of Yasmina Cemetery, in Roman Carthage, the children were all placed in one area of the cemetery, separate from the adults. (Norman 2002:306) Also, unbaptized infants in Ireland were placed in children's burial grounds which were located in insignificant areas to reflect the perceived nature of their character. Often such burial sites also held suicides. (Finlay 2000:407)

The two Icelandic neonates were both found in cemetery settings, which included adults, and neither grave held artifacts; however, one child was interred in a coffin. Although it could be argued that the lack of grave goods represents a belief that the very

young were accorded a low status in the society (Stoodley 2000:458), the care and preparation of the few on record here could just as easily be interpreted as care and love being expressed in the burial placement. These few burials were placed within a family setting and were treated in the same way as the adults, with the one exception of not having grave goods. Not all graves had artifacts in them, even in the presence of graves with artifacts. This care and symbolism is similar to the Danube burial sites and their treatment of the neonates where the death of pregnant women, children or both resulted in burials showing strong, loving connections between the adult and child, or for the child, when buried alone. (Boric and Stefanovic 2004)

There must have been some rite of passage after infancy and childhood because there was a change in burial custom when the young reach an age somewhere between 7-12 years old. There were three young Subadults in the dataset, all found in the context of cemeteries. The first cannot offer too much information since the artifacts were not provenienced. The other two, however, do indeed have grave goods. Grave no. 177 had one artifact, a knife. The other had artifacts from at least four categories, CDMW. The weapon was a small axe, possibly for practicing a skill, or a toy (serving the same purpose).

Two of the older Subadults have stood out in this project since they were buried with various types and quantities of grave goods (see below). Of the remaining three, two were buried together in the Vatnsdalur burial site (BR No. 54), but there is no provenience for the artifacts to tell us if these individuals had any themselves. The third of these (Gr. no. 243) was also buried with one other individual and again, there is no artifact provenience.

What has become clear in the analysis based on age is that social position, at least as defined in the burial ritual, is earned over time. There are only three exceptions where individuals from younger categories have burials on par with the older adult categories. Two were from the Older Subadult category: the first individual (Gr. no. 8), held artifacts from six categories, including Weapons – a spear, a shield and an axe. This individual was also associated with two horse burials; and the second individual (Gr. no. 312) was buried with four categories of artifacts including a sword and a spear. Based on the likelihood of males having Weapons as well as female graves containing only up to four categories of artifacts, it is very likely that these were male graves. Thus, their status could have been achieved since their ages were somewhere between 13-18 years and more than likely initiation into manhood depended more on skill, maturity and character, than biological age. Although probably not frequent, it was not unlikely for a male in this age group to have the ability to control his own home or even chieftaincy as well as having the ability to travel abroad for any number of reasons, including trading and/or raiding at a young age. This likely depended on which end of the age-range scale the individual was situated as well as skill. If he were closer to 18, then status could have been achieved, but if he were closer to 13, it was more than likely ascribed, though there were always exceptions. For instance, in the fictional tale of the Saga of the Jomsvikings, Vagn is given a company of men and two warships by his father and his maternal grandfather. "No one of those in his company was older than twenty, and no one younger than eighteen except Vagn himself, who was twelve." (Hollander 1955:73) It also seems likely that if these had been female graves, they would have signaled an ascribed social position. We have already discussed the position of females, as opposed to males, in this

society. The same can be said of a very young male.

The third outlier is that of a Young Adult (Gr. no. 313) who was found with two oval brooches and one trefoil brooch along with over 400 beads. Based on the artifacts, this individual has been assumed to be a female of substantial wealth. However, in all three cases, these interpretations are based entirely on artifact associations which cannot conclusively support the assumptions.

Excluding the outliers, Older Middle Age and Mature Adults have quantity, quality and diversity on their side. In all the graves with analyzed skeletons, the majority of the artifacts were found with individuals in these groups; and the average ratio of males and females, 2.5:1, in the over 35 years of age group, reflected that of the entire society. Overall, the most prestigious individuals fall into the male/? category above the age of 35. While the more prestigious females are between 35-45, those between the ages of 25-35 are close behind.

What we see is that women play a key role in this society and although at times they seem somewhat restricted compared to females in contemporary Western societies, some Norse women enjoyed a much higher social position than their peers. Not only were they able to take care of the farm and stores, especially when their male relatives were absent, they were also key to forming and maintaining important political and economic ties. According to the stories of female infanticide, women were devalued as children. However, their scarcity created a fierce competition among men to find suitable female partners, forcing them to go abroad to find wealth and prestige so they would be more eligible to marry the available females back home. This is a significant argument that in practice women were far less restricted and subjugated than the law book implies.

Beyond the burial sites, the addition of the landscape as a variable provides a few possible meanings that the landscape might hold for the Icelandic Vikings, including boundaries, religion and worldview. However, it also reflects gender identities and roles in this community as both age and gender were not only evident in the internal qualities of the pre-Christian burials of Iceland, but also in burial placement. Chapter 5 further explores these differences in the perceived landscapes of the dead as well as explores the cosmology of the burial landscape.

Endnotes

1. The majority of the skeletons used here were analyzed by Hildur Gestsdóttir who followed standardized procedures, as specified in her analysis (Gestsdóttir 2007:5-6), to determine, among other things, the age and sex of the individuals. Osteologically, skeletons under 18 years of age at the time of death are classed as juveniles, and those over 18 years, adults. The methods for determining the age at death of juvenile and adult skeletons differ. To age juvenile skeletons, analysis mostly depends on the development of the bones and teeth: (i) the development of dentition; (ii) state of fusion of the secondary ossification centers and epiphyses of long bones; and (iii) comparative measurements of long bones. The age at death of adult skeletons was determined mainly by degenerative changes to joint surfaces: (i) the auricular surface ageing method; (ii) the Suchy-Brooks method of pubic symphysis ageing; and (iii) cranial suture closure.

H. Gestsdóttir also analyzed the human skeletal remains for the sex of the individuals. Juvenile skeletons could not be analyzed for sex due to the fact that they lack the diagnostic characteristics needed to do so, or the characteristics were not yet fully developed. (Gestsdóttir 2007:5-6). The adult skeletons relied on the comparison of sexually diagnostic characteristics of the cranium and pelvis as well as measurements of the width of several particular surfaces. In cases where preservation prevented some characteristic details to be identified and the results were inconclusive, a probable male (male?) or probable female (female?) designation was given. (Gestsdóttir 1998:3-4, 2004:15-16, 2007:5-6)

2. There is no reason to believe that under extreme circumstances, a female did not take up arms to defend herself, her family or her home. Such an event could indeed account for weaponry in a female burial. As noted in Eirik´s Saga when the Skrælings (barbarians) were attacking the Norse in great numbers, Freydis shouted at the Norsemen for "fleeing from such pitiful wretches," but when no one stopped to resume the battle, she tried to join them. However, since she was pregnant at the time, she could not keep up with the men and when she came across the sword of a fallen Noreman, "[s]he snatached up the sword and prepared to defend herself. When the Skrælings came rushing towards her she pulled one of her breasts out of her bodice and slapped it with the sword. The Skrælings were terrified at the sight of this and fled back to the boats…." (Magnusson and Pálsson 1965:100)