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Pernil Alto: an agricultural village of the Middle Archaic Period in Southern Peru

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16 The society of Pernil Alto

The diachronic distribution of the burials (n = 33) and the buried individuals (n = 35) in the settlement phases (Figure 121) shows that burials were irregularly represented. This was especially the case for Phases 0 and 2, each represented by only 5.71 % (n = 2) of the burials. The irregular diachronic distribution could be connected to the fact that part of the Middle Archaic settlement was not investigated due to the immense superimposed cover of remains of the Initial Period, such that some burials of the mentioned phases could not be detected. Or, perhaps there was also a concrete population decrease in Phase 2, because in addition to fewer burials there are fewer dwellings, botanical remains, and artifacts from this phase, in comparison with other Middle Archaic settlement phases. The small number of burials of Phases 0 and 2 and the irregular distribution hamper the possibility to identify possible diachronic changes within the burial rites of the inhabitants.

The paleodemography (Figure 122) of the buried individuals reflects a population in which all ages from prenatal to mature individuals are represented. About two-thirds of the population (65.71 %) died before or during the youngest age (prenatal and infans 1). But there were only very few individuals who died during infans 2 or early adult age (n = 2). An adult or even mature age was reached by 27.7 % of the population. Therefore, the most critical age was early childhood, in which the probability of death was the highest. This would be the case under the assumption that the burials at Pernil Alto are representative of a living population and that adult individuals were not part of a special burial practice in which they were buried outside the settlement. The detection of burials of adult individuals strongly supports this assumption. An individual had good chances to reach an adult age after this critical age was survived, because the probability of death was relatively low after the earliest child age and before an adult age. However, a mature age was only reached in exceptional cases.

It was only possible to determine the sex of 11 individuals due to the age distribution because sexual characteristics are not very pronounced before adult age, and thus a determination is often not valid. The distribution of the sexes (Figure 123) of the determined individuals indicates that females (n = 7) possibly formed a slightly larger part in the population than males (n = 4). However the overall dataset is too sparse to formulate a valid interpretation of "missing men".

It can be assumed that the detected individuals are representative for a Middle Archaic population and that a specialized burial pattern which only applied to a certain group of a living population can be excluded. The paleopopulation—even though originating from differ-

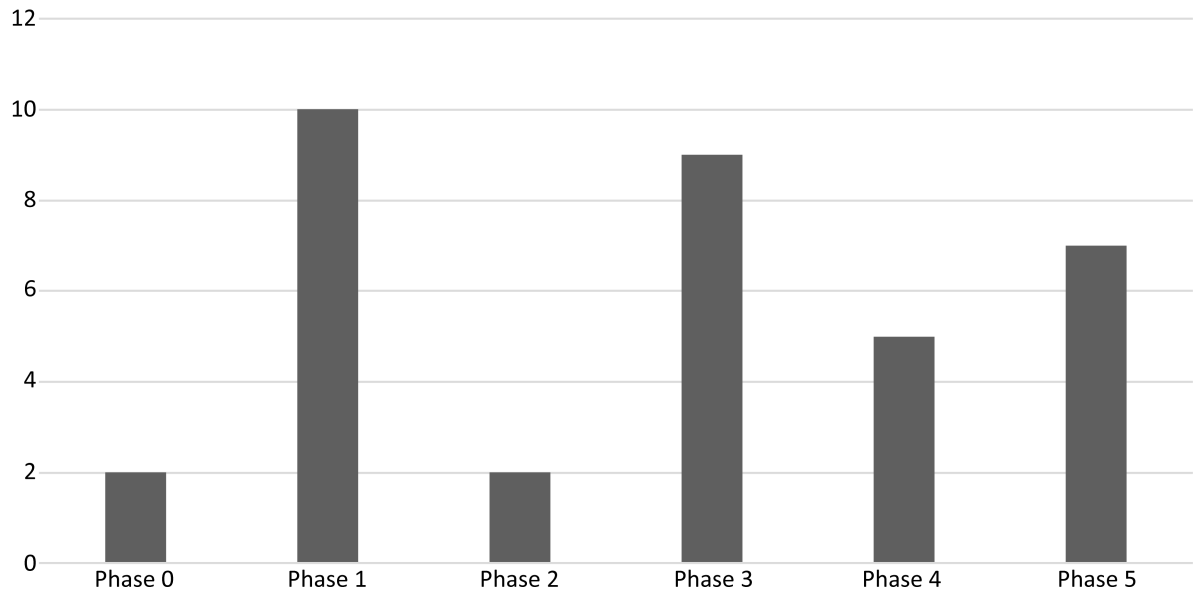

Figure 121: Burial frequencies by phase.

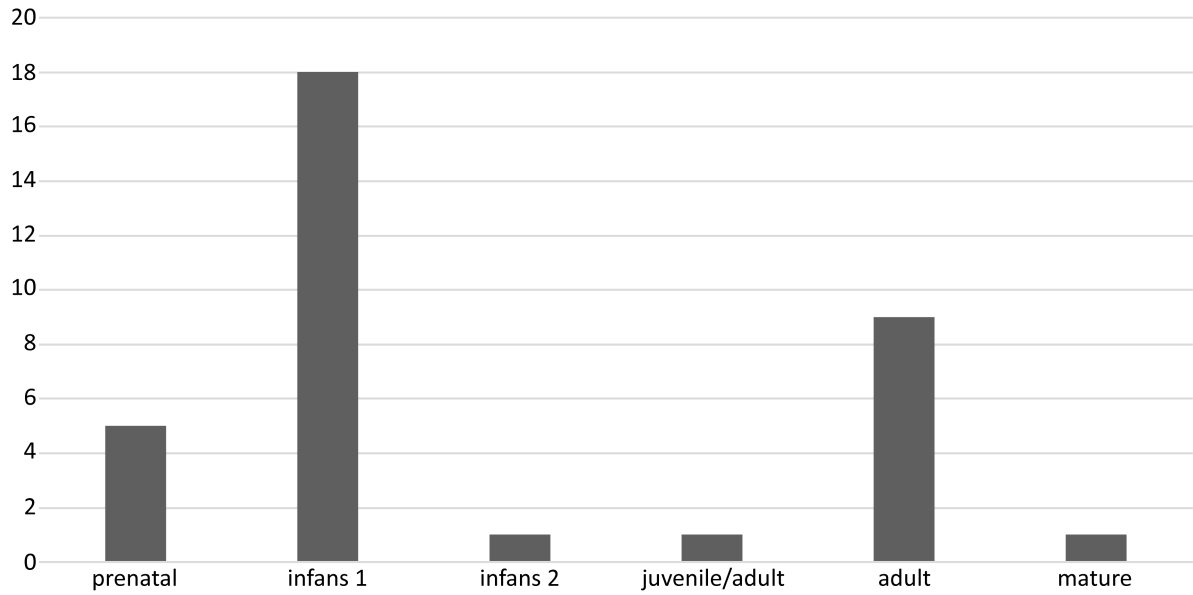

Figure 122: Paleodemography at Pernil Alto.

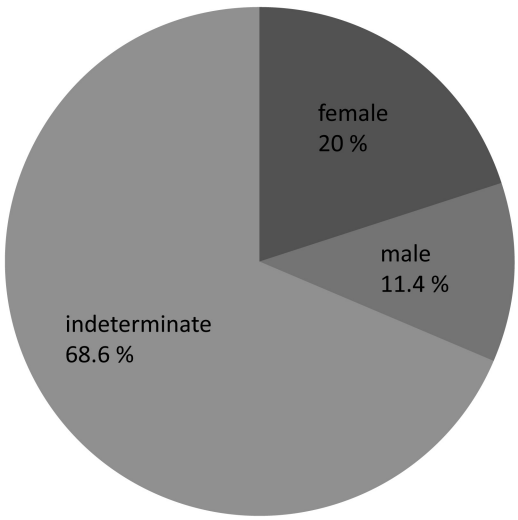

Figure 123: Distribution of sexes at Pernil Alto.

ent occupation phases—can therefore be used to analyze and identify burial rites and/or social differences of the inhabitants.

16.1 Burial rites

Burial locations

The most important pattern in the burial rites is the fact that the individuals were buried within the settlement. This pattern is common in the Middle Archaic Period and was detected in other sites in Central and Southern Peru (Benfer 1999: 232–233; Engel 1981, 1988a; Isla 1990). The burials at Pernil Alto were not deposited after the abandonment of the settlement, but during its occupation and preferably within abandoned dwellings. However, some burials from Phase 5 could have been deposited in the settlement after the abandonment of the site by inhabitants of nearby settlements. Areas for the living were thus not distinctly separated from areas for the dead. Furthermore, no transformation from an area previously for the living into an area for the dead took place. It seems that the inhabitants were buried where they had lived before (see Figure 124 for the distribution of the burials by phase).

The majority of individuals were buried inside abandoned dwellings (n = 24), whereas a smaller amount (n = 11) were buried outside the dwellings but still in the settlement area. The age of the individuals at the time of death was related to their placement. Thus, all adult or mature individuals were buried inside abandoned dwellings, but younger individuals were either buried inside dwellings (n = 13) or in the rest of the settlement area (n = 11). This pattern cannot be explained as only a result of reduced space and higher death rates for younger individuals, because some dwellings were never used to bury individuals. This indicates that even though there was enough space in "empty" dwellings, young individuals were still buried outside, thus reflecting an age-related burial pattern.

The position of the individuals within the dwellings is furthermore remarkable and may be related to sex and age. Thus, young individuals and female individuals were always placed on the edges of the dwellings, whereas three of four males were placed in the centers of the abandoned dwellings (see Figure 125). Furthermore, the

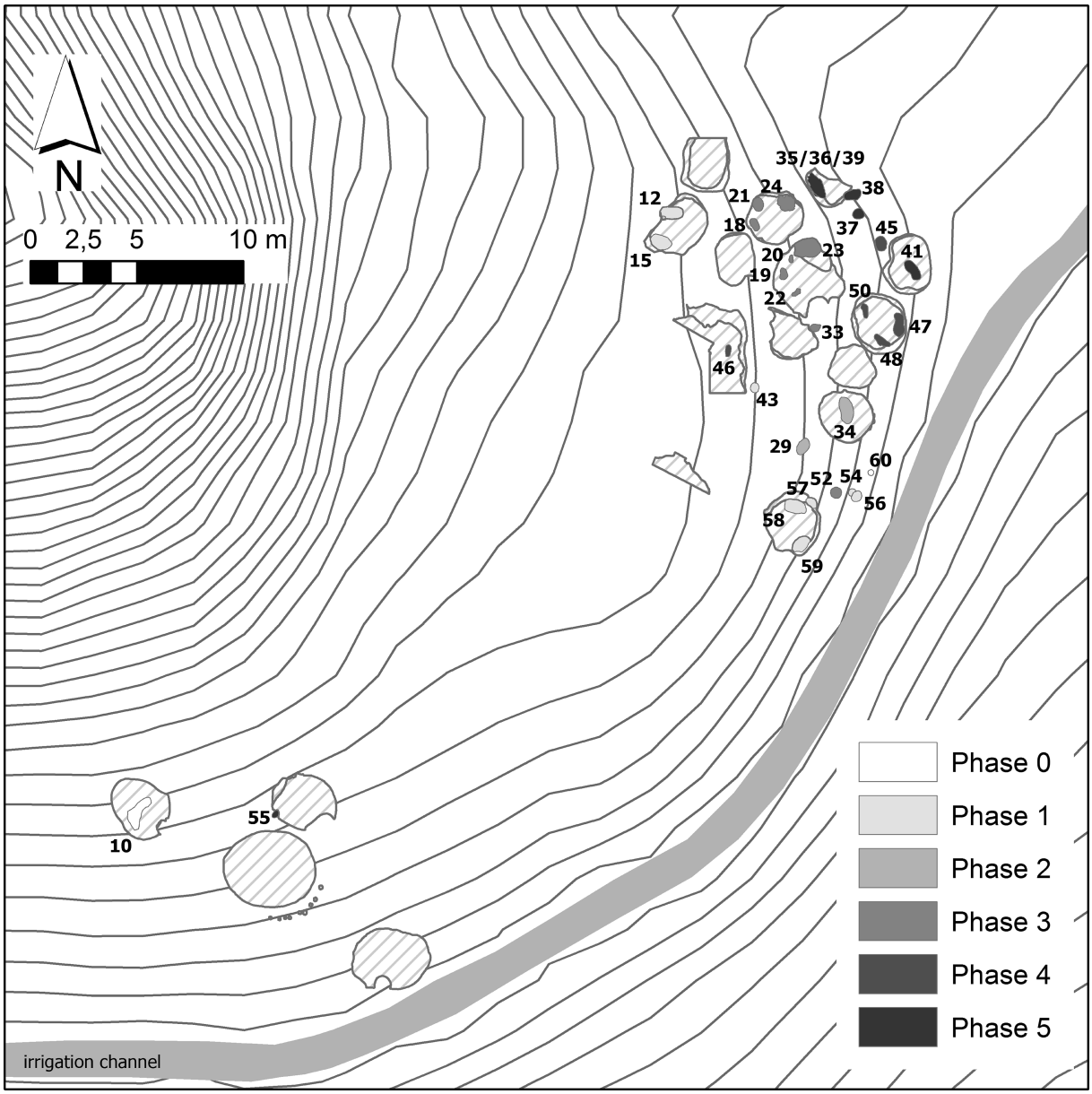

Figure 124: Distribution of the burials on the site by phase.

three males in central positions in dwellings were buried alone, whereas all other dwellings (except the incompletely excavated dwelling 12) which contained burials always contained more than one burial. One male (of burial 15) was, however, not placed in the center of a dwelling and a female individual was buried in the same dwelling. However, in contrast to the centrally placed males, which were adults, the male individual from burial 15 was of mature age.

The pattern of burying adult males alone in central positions in abandoned dwellings in contrast to adult females and mature males in groups placed on the edges of dwellings, reflects a sexual division of males and females and, furthermore, a possible division between adult and mature individuals. This sex-specific pattern could indicate a special role held by the buried adult male individuals. This assumed special role cannot be specified further, because no sex-specific burial goods accompanying the different sexes could be identified, as will be shown later. There are some possibilities: due to particular sex-specific tasks like hunting, there may have been a high rank in the social structure accorded to "big men" or heads of extended families, or even to male individuals within polygynic family structures. The last possibility would furthermore explain the imbalanced distribution of male and female individuals, but this distribution cannot be tested statistically and could therefore be just random. Analyses of aDNA clarifying lineages of the in-

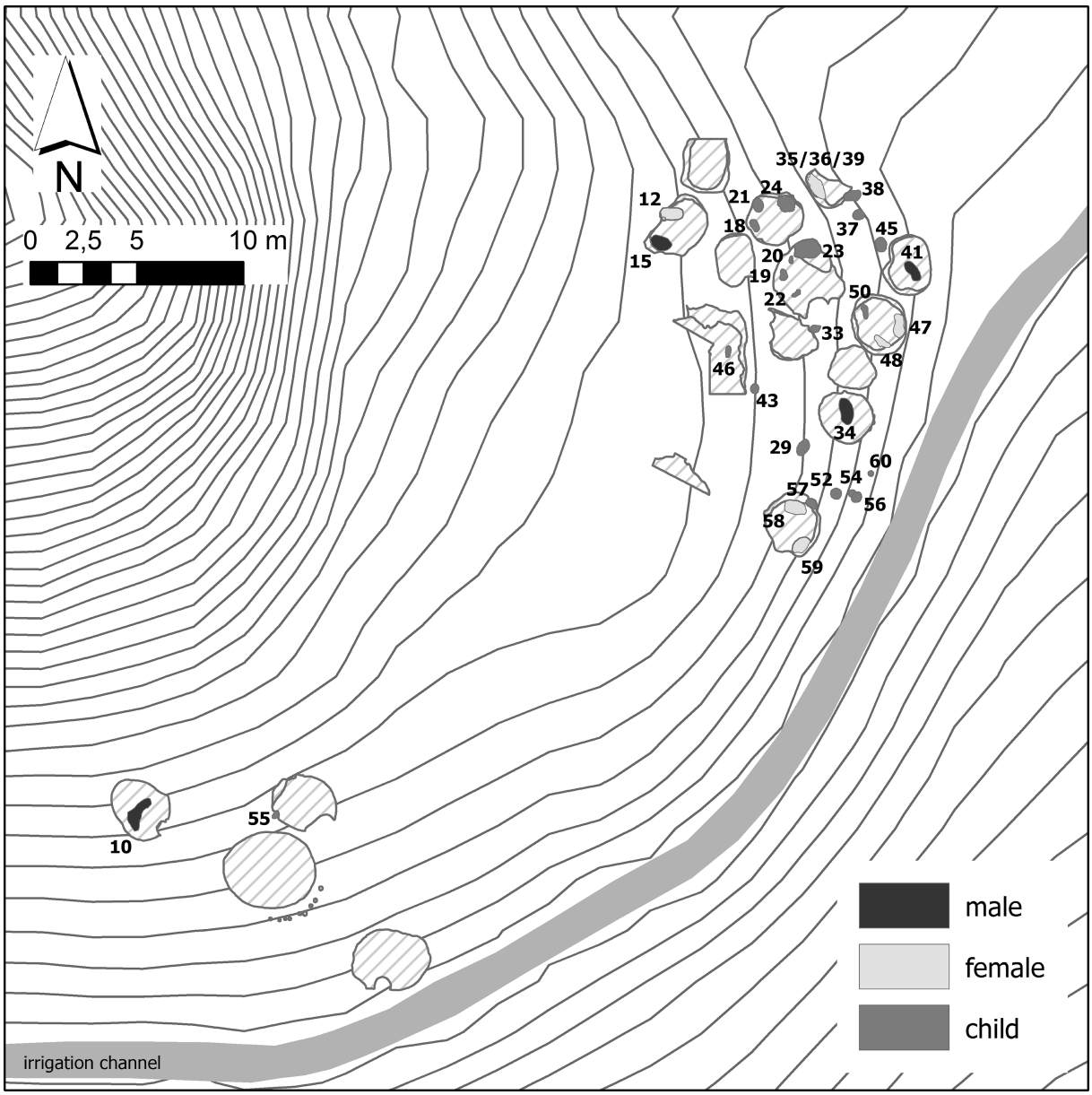

Figure 125: Location of buried individuals by sexes.

dividuals would help to identify such family structures, but would require a nearly ideal database and good preservation conditions. Neither are given at Pernil Alto. The sex-specific differences can therefore only be observed to a certain degree, but not explained.

Even though only a very small number of male individuals was detected, it appears that males had a special role—whatever it might have been—only during an adult age and not in older ages. This comment should be understood as a supposition, as it is based on very little data and needs further investigation on other Archaic populations.

Interestingly, practically no burials were destroyed during the Archaic occupation of the site and the recovery of human remains outside of burials was very exceptional. This indicates that the burial locations were generally known by the settlers and that the dead were left in peace.

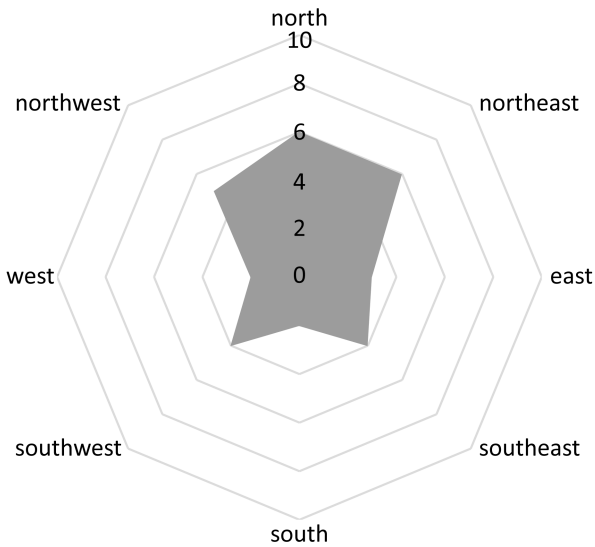

Figure 126: Orientation of the head of the buried individuals (n = 32, 3 orientations were nd).

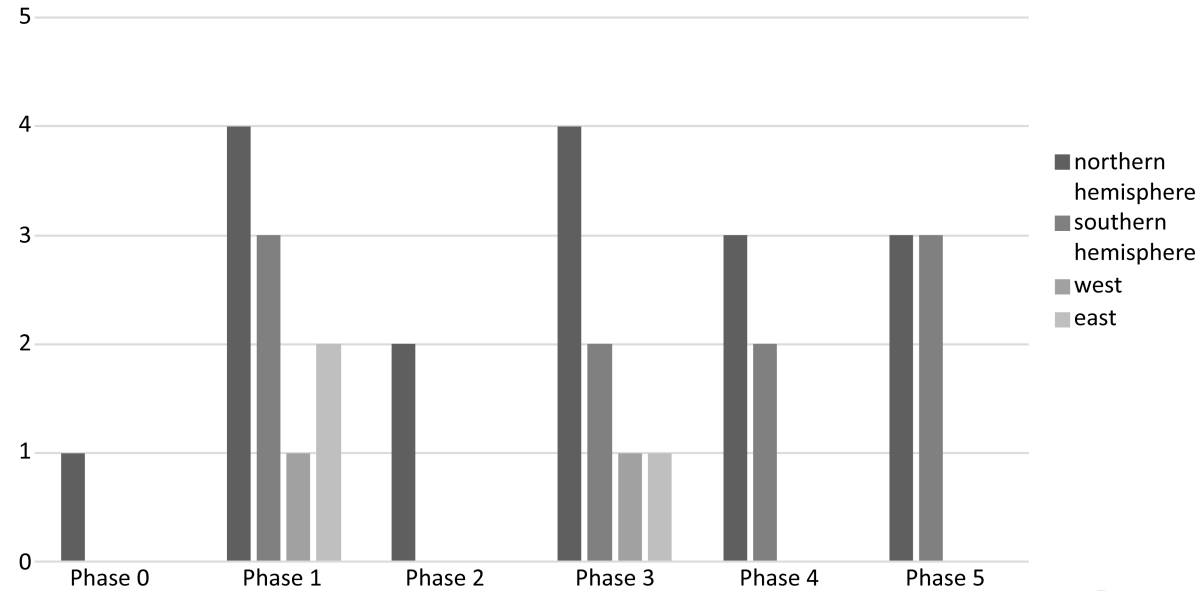

Figure 127: Orientation of the head by phase (n = 32).

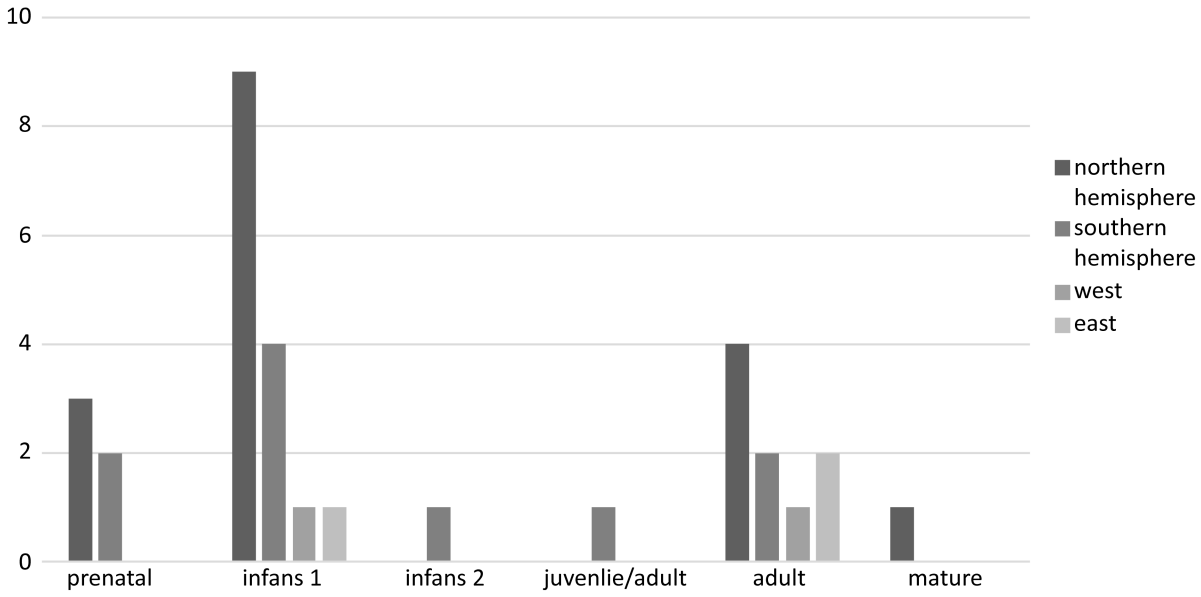

Figure 128: Orientation of the head by age (n = 32).

Body orientations

The orientation of the bodies was identified by the position of the crania of the individuals (Figure 126). The orientation was not determinable with three individuals. There seems to have been a general trend in the orientation towards the northern hemisphere. However, this trend is not very strict. It is, however, a general orientation towards the course of the sun.

A diachronic development or chronological changes of the orientation of the bodies are not detectable (see Figure 127). The northern hemisphere (including northwestern, northern, and northeastern orientations) exceeded other orientations during all phases and reflects the general trend.

The same is the case for the age classes (Figure 128). The orientation of the body was not influenced by the age of the buried individual, and there is no age class to which a certain body orientation was connected.

The interpretation of the influences of both factors (diachronic developments and age classes) is hampered by their unequal distribution. Another factor that might have influenced the body orientation was the sex of the buried individuals. Thus, male individuals were

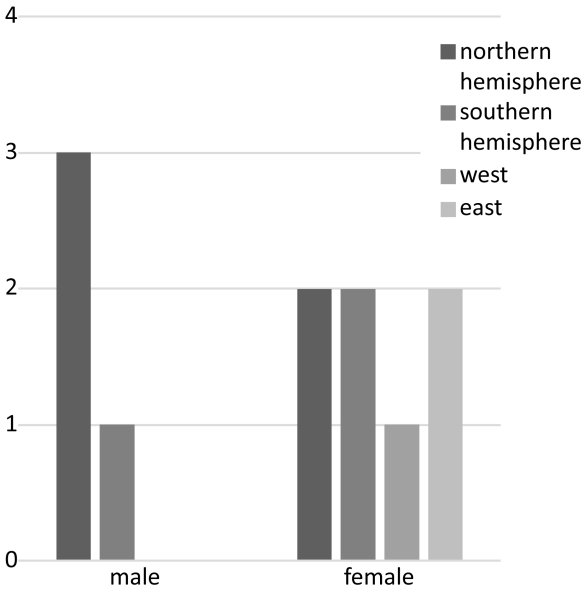

Figure 129: Orientation of the head by sex (n = 11).

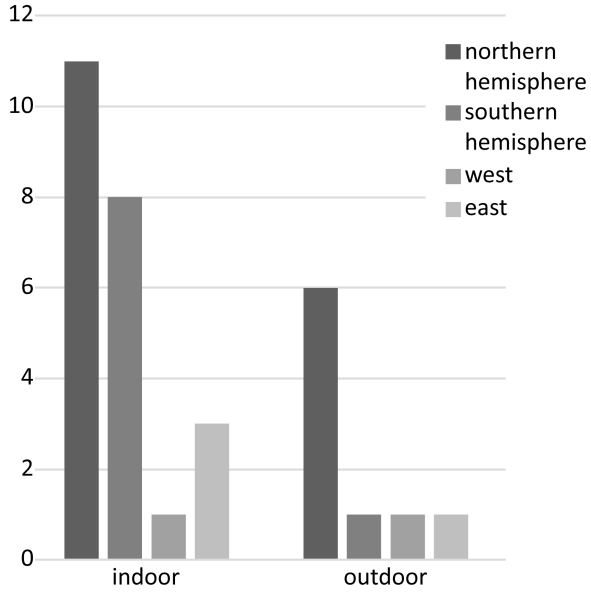

Figure 130: Orientation of the head by burials inside and outside of dwellings (n = 32).

in most cases (n = 3) oriented towards the northern hemisphere, whereas female individuals were less strictly oriented (Figure 129). However, the data basis is very sparse and includes only 11 individuals. Therefore, a connection of body orientation to sex is only slightly indicated, but not certain.

When looking at differences between burials deposited inside dwellings and those deposited outside dwellings, the trend of an orientation towards the northern hemisphere becomes more visible (Figure 130). Thus, the individuals buried inside dwellings are less strictly oriented, even though an orientation towards the northern hemisphere is slightly prevailing. The individuals buried in the free areas between the dwellings were, in comparison, more frequently oriented towards the northern hemisphere. The reason for this difference could be the limited space inside the dwellings with restricted possibilities of orientation for the buried individuals. In contrast, the possibilities of orienting individuals in outdoor burials are less restricted.

Therefore, the orientation of the bodies towards the northern hemisphere and the course of the sun seems to have been an ideal part of the burial rites of the inhabitants, even though it was not very strict, nor connected to age or sex of the individuals, and was less important than other factors—especially the preferred placement of burials inside dwellings.

Direction of views

The direction of views (Figure 131) of the buried individuals are connected to the body orientations. However, the trends in the direction of views are even less pronounced and therefore were even less strict than the body orientations. Three individuals were buried with a direction of view downward, and three other individuals with a direction of view upwards. The direction of view of five individuals was not determinable. In general, there seems to have been a slight trend to a direction of view towards the northeastern hemisphere (including north, northeast and east). This is on the one hand the direction towards the sunrise but also the direction towards the catchment areas of the Río Grande, following the overall run of the river.

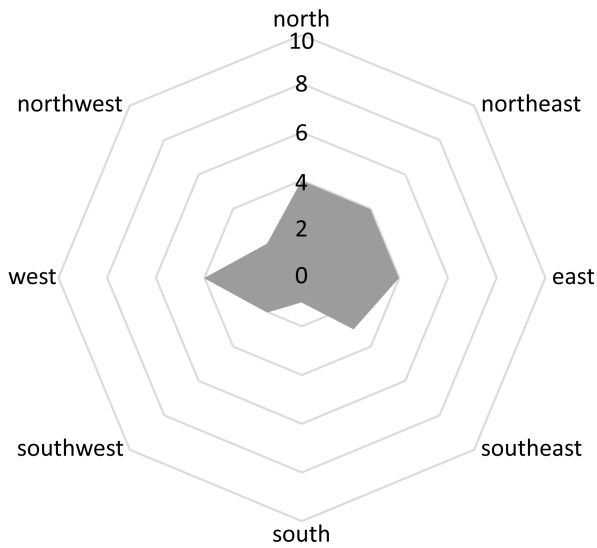

Figure 131: Direction of view of the buried individuals (n = 24)

As with the body orientations, the direction of views were not influenced by the age of the individuals and

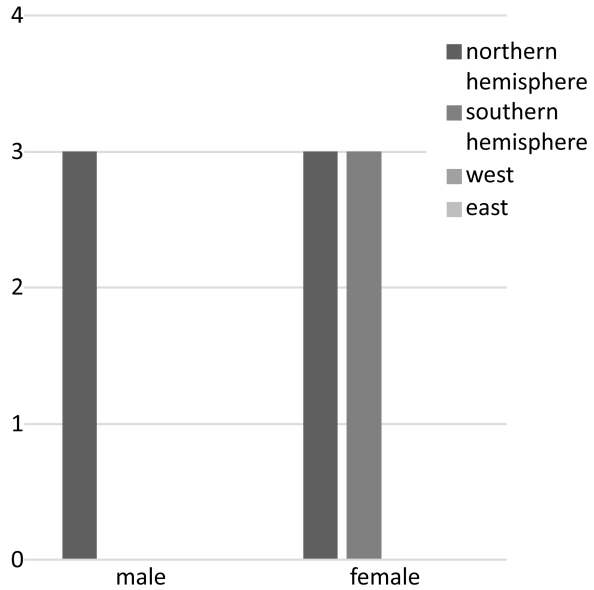

Figure 132: Direction of view by sex (n = 9).

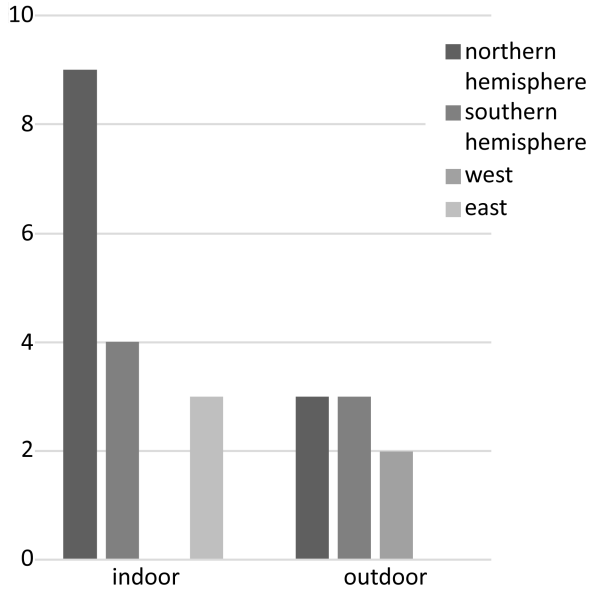

Figure 133: Direction of view by burials inside and outside of dwellings (n = 24).

show no diachronic differences. However, the sex and the location of the buried individuals seem to have been connected with the direction of views. Thus, the preferred direction of view for male individuals was the northeastern hemisphere, whereas female individuals had direction of views either to the northeastern or the southwestern hemisphere (Figure 132).

Individuals buried inside of dwellings had direction of views mostly towards the northeastern hemisphere, whereas individuals buried outside of dwellings showed no preferred direction of view (Figure 133). This preferred direction of view of individuals buried inside dwellings towards the northeast could reflect a compensation for the restricted possibilities for the body orientations. That is, when individuals could not be oriented towards the north, at least a direction of view towards the northeast was sought.

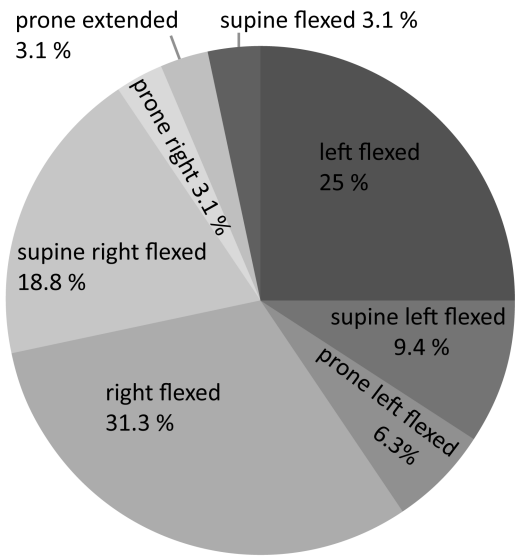

Figure 134: Body positions of the buried individuals (n = 32).

Body position

The detected body positions show—as with the body orientations and the direction of views—a very high variation and reflect the idea that burial rites that were not very strict. Figure 134 gives an overview of the detected body positions and amounts among 32 individuals. The body positions of three individuals were not determinable due to poor preservation. A general similarity of the buried individuals was a preferred flexed position, which was detected with 93.75 % of the individuals. The individuals in prone right or prone extended positions were exceptions. The individuals buried on the right side of their body (n = 17) prevailed over the individuals buried on the left side of their body (n = 13).

There were no diachronic changes in the preferred body positions. They were not related to the sex of the buried individuals. Some very slight trends are detectable in relations between the age of the individuals (Figure 135) and the location of the burials inside or outside of dwellings (Figure 136). Younger individuals were slightly more often placed on their right side as compared to older ones. Furthermore, individuals buried outside of dwellings were placed more often on their right side than those buried inside of dwellings. However, the preferred placement of the right side is again only a slight trend, and not a distinct characteristic of burial rites.

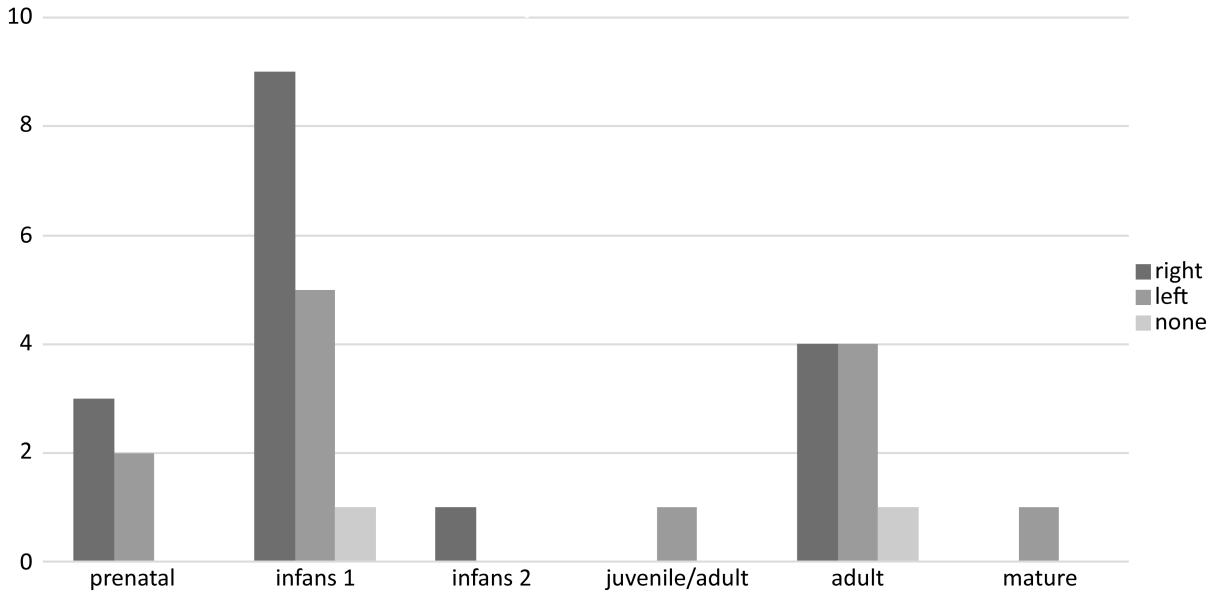

Figure 135: Body position by age (n = 32).

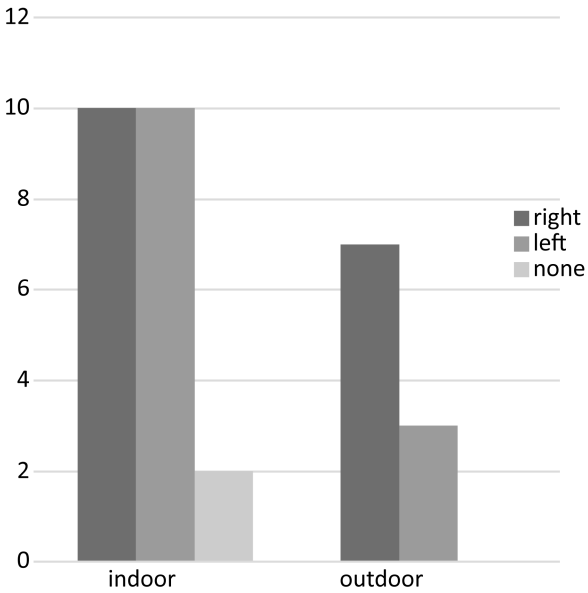

Figure 136: Body positions of individuals buried inside and outside dwellings (n = 31).

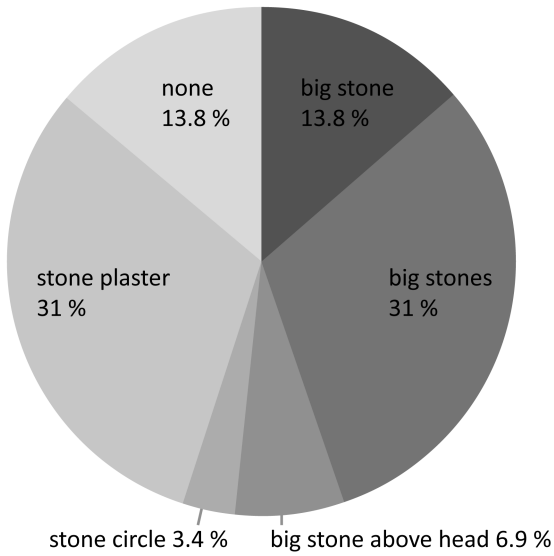

Figure 137: Burial markers (n = 29).

Burial markers

As with the orientations and positions of the buried individuals, the markers associated with burials show a wide variety (Figure 137). They include one big stone on top of the burials (n = 4), a group of big stones (n = 9), a big stone above the position of the head of individuals (n = 2), one stone circle, and stone plasters (n = 9). Some burials had no mark (n = 4). The markers of three disturbed burials are unknown and Burial 10 was an exceptional burial representing a burned down dwelling.

The stone circle seems to have been an exceptional form and will not be included in the following analyses. The burials marked with big stones can be subsumed to one group. The two other groups are represented by burials covered with stone plasters, and those without markers.

The burials marked with big stones represent the largest group (53.57 %), whereas the burials with stone plaster represent 32.14 %, and burials without markers represent only 14.29 %.

A slight diachronic change is visible in the development of the burial markers. Big stones gained impor-

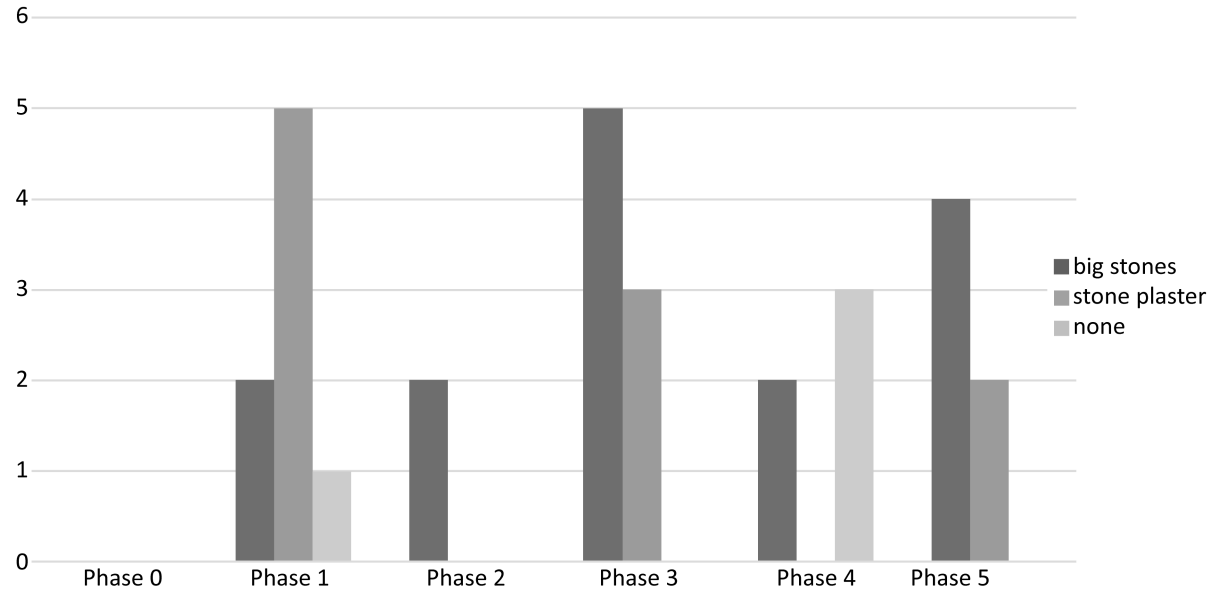

Figure 138: Burial marker by phase (n = 29).

tance through time in comparison to stone plastered burials (Figure 138).

Furthermore, some less pronounced differences among burial markers were associated with male and female individuals. Male individuals were more often covered with big stones, whereas female individuals were more often covered with stone plasters (Figure 139). However, those differences are visible only on the basis of very few data and are rather hinted at than validly detectable.

More distinct seems the relation between the age classes and the applied burial marking (Figure 140). Younger individuals, especially those of the infans 1 age class, were thus preferably covered with big stones, while the burial marking in higher ages was more multi-variant.

Differences in the burial markers between indoor and outdoor burials are a bit more distinct (Figure 141). Burials inside of dwellings were more frequently covered with big stones than with stone plasters. Burials outside of dwellings were covered with big stones or stone plasters to the same extent.

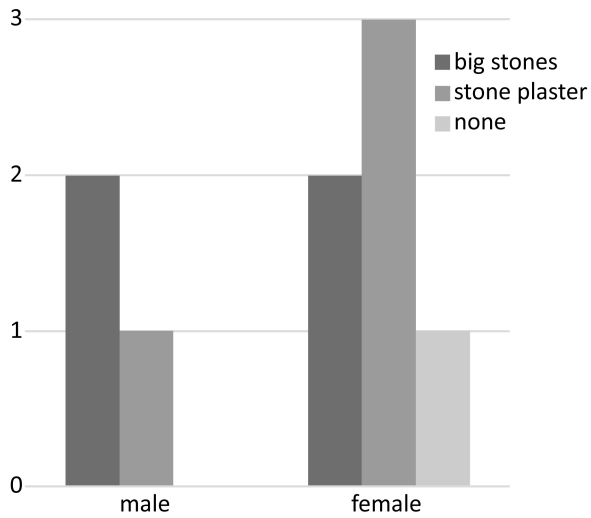

Figure 139: Burial markers by sex (n = 9).

Memory of the dead

A few patterns in the burial rites indicate a certain degree of memory of the dead. First, no burial of the Middle Archaic occupation was disturbed during this occupation (only afterwards), and only very few human remains (one single bone) were found outside of burials. This indicates that the location of burials was—even when no burial marker was applied or archaeologically detectable—known by the population and burials were not touched. The locations would have been transmitted over the generations.

It is possible that—as already mentioned in Chapter 15.3—the individual buried in burial 10 was a kind of "founder individual" which would have been a ritually worshipped ancestor, because this burial is exceptional, very old in the occupation of Pernil Alto, and was never touched. However, more information is needed from the site itself and from other contemporaneous sites to investigate this hypothesis.

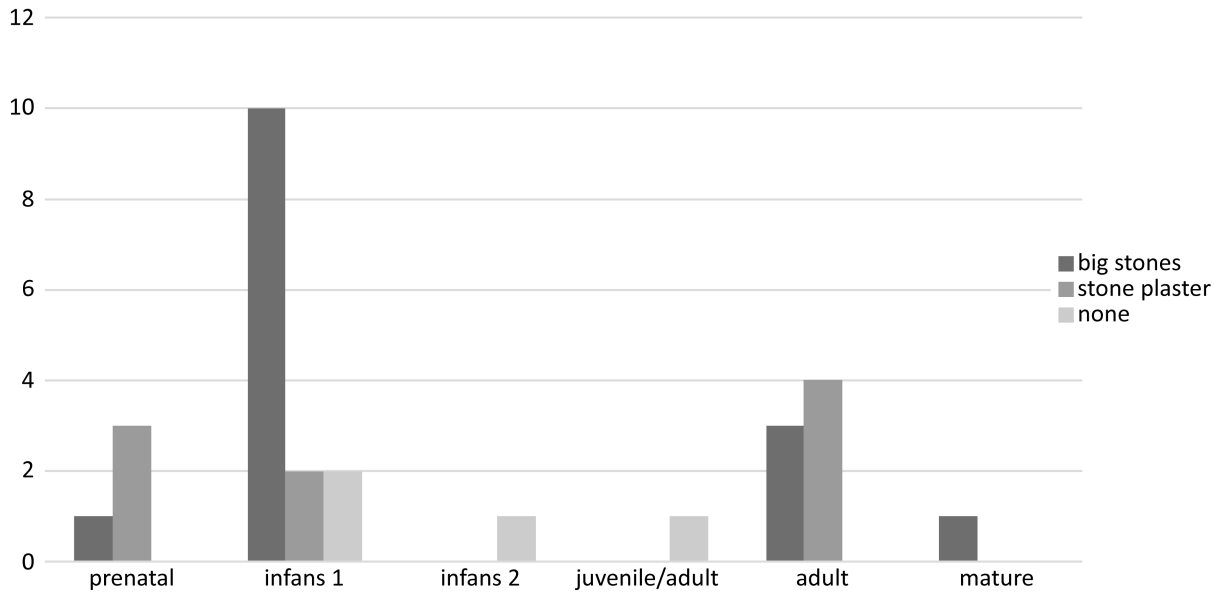

Figure 140: Burial markers by age class (n = 28).

Figure 141: Burial markers of individuals buried inside and outside dwellings (n = 28).

Rituals

The remains of rituals conducted during the burials were difficult to detect at Pernil Alto. The remains of some edible plants and a few animal bones within some of the filling materials in the burial pits could possibly indicate some food consumption as part of rituals during the burial. However, it seems more probable that those remains were part of the original filling material of the occupation layers into which the burials were carved. The same material was used to fill the burials. Therefore, the food remains were probably not related to rituals but originated from waste in the filling material.

Some burials (10, 29, and 34) indicate the application of fire within the ritual. This ritual burning is difficult to interpret. In the case of burial 10 it is probably related to a special treatment of the buried individual, above which a dwelling was burned down. This is an exceptional case in Pernil Alto. The remains of fireplaces were located above the locations of the individuals 29 and 34 and could indicate a ritual related to some memory activities. But as the burials were placed within the settlement, these fires could also originate from domestic activities on the site.

Therefore, ritual activities related to burials during the burial or on the later location of the graves are not clear.

Conclusion of the burial rites

The main result of the analyses of the burial rites of Pernil Alto is that they were not very strict. Apart from the basic pattern of simple inhumations of mat-wrapped individuals in a flexed position in shallow pits that were usually covered with a burial marker, there are no strict patterns visible which were applied to all buried individuals, nor which were applied to definable groups (like age classes or sex), nor distinctly associated with different occupation phases. Instead it appears that the burial practices were variable and that cultural rules of how an individual should be buried nearly did not exist. At least such cultural rules cannot be derived from the archaeological record and could only have existed in the non-material culture of the inhabitants, i.e. rituals, ceremonies, songs, or other, if at all.

However, some trends of possibly ideal burial patterns are slightly indicated in some aspects of the burial

practices. These include a general trend towards an orientation of the bodies towards the northern hemisphere, and a trend of a direction of view towards the northeast. Both trends could possibly be associated with the course of the sun or the direction of the water runoff from the highlands. Furthermore, younger individuals are more frequently associated with big stones as burial markers, whereas older individuals had a higher variation of burial markers. A possible diachronic development towards an increase of big stones as burial markers in comparison to stone plasters is slightly indicated. The preferred side for placing the individuals was possibly the right side of the body, even though a large number of individuals were placed on the left side. The preferred location for burials was generally inside abandoned dwellings, but about one-third of the individuals were buried in open spaces of the settlement. The location of individuals inside dwellings was the only pattern which was relatively strict, as adult individuals were never buried in open spaces. However, children were buried inside and outside of dwellings.

One trend concerning the different patterns associated with male and female individuals is more distinctly indicated than other trends. These different patterns include a preferred placement for male individuals in the centers of abandoned dwellings and a slightly stricter orientation of the bodies. Further, male individuals were preferably placed alone in abandoned dwellings. Female individuals were not so strictly oriented, placed on the edges of abandoned dwellings and buried together with other individuals in the same dwelling. The differences between the sexes are relatively clear, but are based on very little information. More data is needed to clarify if these sex-related differences documented at Pernil Alto are the result of a randomly compound data set, or if they in fact reflect a dimorphism. At the moment it appears possible that males and females were treated differently and thus different roles of men and women in the society can be assumed.

Even though the burial practices at Pernil Alto were in general not very strict, some trends are visible in the record. It is nevertheless not clear if these slightly pronounced trends represent more strict burial patterns obtained by tradition from ancestral groups which had lost importance at Pernil Alto, or if they formed the origins of stricter burial practices of later populations. The lack of data from the Middle Archaic Period about burial practices in Southern Peru hampers the interpretation but offers possibilities for further research. However, burial practices were decidedly less strict than those of later societies in the area (see Isla 2008).

Some special traits of the burials of Pernil Alto were exceptional even in the vague burial rites. Burial 10 was exceptional not only because of its grave goods, but especially due to the fact that the male adult individual was placed in a dwelling that was burned down above him. This is the only case of such a practice at Pernil Alto. Some comparable burials were detected in La Paloma, where they were interpreted as representing male chief individuals with high social status in the population (Benfer 1999: 224). The practice is thus not unknown in archaic contexts, but was in general not important at Pernil Alto and only associated to Phase 0. It is possible that it reflects older traditions that went out of use in the later occupation phases, thus reflecting cultural changes on the site. Second, two burials were double burials (54 and 58). As burial 54 contained two prenatal individuals, it can be interpreted as the inhumation of stillborn twins who were buried together. The interpretation of burial 58, which contained two adult female individuals, is less clear. Double burials are known, for example, from the central Peruvian coast from the Early Archaic Panalauca cave in the highlands (Rick/Moore 1999: 272) and the site of Asia 1 from the Late Archaic Period on the central Peruvian coast (Engel 1963a: 66–76). It therefore seems, that double burials were—even though infrequent—not absolutely exceptional in archaic contexts. The interpretation is, however, difficult. It seems probable that both individuals died at the same time and were therefore buried together since the context is secure and does not show any indications for re-openings. A third exceptional practice at Pernil Alto is associated as well with burial 58, and concerns the missing skull of the lower individual. Missing skulls of individuals are known from two burials at Asia 1 (Engel 1963a: 66–76) and from the Middle Archaic highland cave site of Telarmachay (Julien et al. 1981). In the latter case, the individual was a female individual, like at Pernil Alto. Therefore, missing crania of buried individuals were rare but not exceptional in archaic contexts and could possibly be related to ritual uses of the heads of dead group members.

Burial 29 has to be mentioned again because of its exceptionally good preservation, including soft tissue and skin. The good preservation is most likely the result of the location below a subsequently established fireplace, which left dense charcoal remains that could have hampered micro-organisms from affecting the organic remains (see Chapter 8). Individuals with preserved skin were found on the Paracas peninsula and were interpreted in those cases as the result of natural preservation and not of artificial mummification (Engel 1981; Beynon/Siegel 1981). The good preservation of the individuals from the Tres Ventanas cave in the upper Chilca valley of central Peru were, in contrast, interpreted as being a result of artificial mummification produced by desiccation (Wann et al. 2015). A detailed

anthropological study of the individual of burial 29 has not been completed yet, but due to the available information, an interpretation of the individual as exceptionally well preserved and not artificially mummified is most appropriate at the moment. This interpretation is based on the fact that natural preservation of skin is possible under good conditions, the burial and position of the individual fit the overall practices on the site and is not exceptional, and no other individual shows any indications of artificial mummification, which would make a single application of such techniques improbable.

16.2 Social structure

The social structure of Pernil Alto can be analyzed using the information of the burial locations in relation to one another and the information of the structure of the settlement. The social structure included the individual and the entire group, but it is possible that some family relationships built an additional entity between the before mentioned ones.

Kinship

Family relationships were not directly detectable in the individuals of Pernil Alto, because the aDNA of the individuals was too poorly preserved and therefore no valid results could be produced by the application of this method (see Chapter 2).

Nevertheless, family relationships can at least be assumed based on the archaeological record of the site. The location of the burials 35, 36, and 39 in structure 6 distinctly indicate family relationships. All burials were primary burials meaning that they were not placed together, but were buried one after another and they were placed on top of each other. The two lower burials (36 and 39) contained young individuals, whereas the uppermost burial (35) contained an adult female individual of about 20–25 years. The placement of the bodies on top of each other and the sex of the adult individual suggests that the adult individual could have been the mother of the two children. The children died before her or at the same time, and thus the mother was buried in direct spatial relation to her children. At least strong kinship is suggested in this case. Furthermore, the double burials 54 and 58 indicate strong family relationships. The two prenatal individuals of burial 54 were most probably stillborn twins. The interpretation of the two adult female individuals of burial 58 is more difficult. However, both individuals were placed together in one burial pit on top of each other, which probably reflects a family relationship of these two individuals which possibly died at the same time and were buried together. In general, the pattern of placing the burials within the remains of dwellings can be interpreted as the expression of family relationships wherein families placed their deceased members in the dwellings they used to share.

A further indicator for family relationships comes from the structure of the settlement and the distribution of activities (see Chapter 15). The general settlement plan was that of a central open space with dwellings arranged around it, but further compounds consisting of four dwellings each were located in the north (n = 2) and the south (n = 1) of the site. These compounds showed some slight differences in the activities conducted on site. Plant use and fishing were a bit more pronounced in the northern two compounds than in the settlement average, and hunting was more pronounced in the southern compound than in the settlement average. Even though the general pattern in the overall settlement was that every-day activities were conducted in the open air and reflected generally community activities, these slight differences could indicate that a separation into families following their own organizational logics had begun at Pernil Alto, even though they were not very pronounced.

Based on the mentioned indicators, the kernel or extended family (which is not distinguishable because of lacking aDNA information) can be assumed to have been a social unit within the society structure of Pernil Alto. In general, this social unit was structured around individuals who were closely-related affines, which together formed a band-like society which conducted necessary activities in a generally communal way.

Relations between the individual and the group

The analyses of the activities (Chapter 14) showed that some activities were related to personal expression (by personal items) and some were related to communal expression (rituals). Whereas the activities related to personal expression probably have emphasized the individual, the rituals in contrast can be interpreted as activities which emphasized the community. Interestingly, the ratio between both—individual and community expression—develops throughout the occupation phases. While individual expression was very high in comparison to communal expression during Phase 0, communal expression in comparison to the individual gained importance throughout the following phases. This is however, a trend which sporadically declines during Phase 2 and 4. However, it can be derived that the importance of the individual was higher during the beginning of the occupation and especially during Phase 0, when the

economy was still a foraging economy with some additional low-level food production of plants (see Chapter 17 for details). In contrast, the importance of rituals increased in comparison with individual expression when the economy became agricultural. It is likely that the importance of the individual during the beginning of the occupation—in comparison to later phases—was based on the fact that individual performance was more important in an economy based on hunting and collection. In contrast, the performance of the community becomes more important when communal tasks related to the agricultural production (see Chapter 17) had to be fulfilled. The higher importance of communal tasks—including tilling, seeding, harvesting, etc.—were expressed through more emphasis on the community than before. With the beginning of a food producing economy, planning and organization became more important than they were before, or at least the nature of this planning and organization shifted to a more communal emphasis.

Furthermore, a permanent occupation on the site definitively begins with Phase 1, whereas during Phase 0 a higher logistical mobility can be assumed (see Chapter 18 for details). With a higher concentration of people throughout the year in the settlement and the necessity to plan and distribute the produced resources, it had probably become more important to counteract potential internal group conflicts. One possibility to integrate the individual into the community was the role of rituals, which could strengthen social coherence and reduce conflicts.

Therefore, the internal development of the activities at Pernil Alto can be interpreted as increasingly communal coherence which was related to the beginning of more communal tasks. This development is expressed in the form of rituals in the archaeological record, however some interpretations are difficult (see Chapter 14). The individual was more important in comparison to the community during the beginning of the occupation, but then, the community became more important than the individual. This was most probably related to changes in the subsistence economy and changes in mobility. However, the individual gained more importance in contrast to the community again during Phase 4. Maybe social conflicts—which had their origin in internal or external factors—could not be solved by rituals anymore. Whatever the reason for the increasing importance of the individual was during Phase 4, the social structure—which emphasized the community and had developed during Phases 1–3—began to crumble. This social disintegration could be one factor for the abandonment of the site which took place at least at the end of, but maybe already during, Phase 5.

Social differentiation

It can be assumed that the population of Pernil Alto was a small group of people which was composed by one or more extended families. This estimation is based on the size of Pernil Alto and the number and structure of dwellings and burials, although not the entire area of the estimated settlement has been excavated. Even though the entire settlement remains are not known, it is clear that the settlement did not expand to the south and east. Furthermore, expansion would have been restricted by the rock face to the west and probably the Quebrada to the north (see Chapter 5). Thus, the maximum expansion of the settlement of the Middle Archaic Period can be estimated as about three times as large as the excavated part. Furthermore, not all parts of the area of the settlement were settled contemporaneously (see Chapter 15.3). For these reasons it is impossible to give an estimation of the concrete number of inhabitants. Only a small group can be estimated.

A hierarchical structure of society is indicated by the exceptional burial 10, which can—in accordance with comparable burials known from La Paloma—be interpreted as the burial of a "big man" (*sensu* Benfer 1999: 224). However, this burial dates to Phase 0 and no comparable burials are known from later occupation phases, which indicates a social change. Thus, social hierarchy seems to have been more pronounced during Phase 0 than in the following phases. However, male individuals seem to have maintained their high status in the society since their burials—even though few in number—differ distinctly from those of female individuals. These differences are not expressed in the grave goods, but in differing burial practices (see Chapter 16.1).

Because of the small size of the population, and because other sites from the area which could provide more insights into the overall social structure are so far unknown, a band-society can be assumed, which was based on family relationships and in which male individuals might have had executive functions. These executive functions were, however, held apparently during an adult age and were then lost or passed on to following generations.

A further indication for the structure of the society can be derived from the structure of the settlement (see Chapter 15). The settlement is characterized in the northern excavation area by a central area which was surrounded by several cyclically successive dwellings and two smaller adjacent areas each composed of four cyclically successive dwellings. The main activities were conducted in open air in the large central area, which formed a settlement center (see Chapter 15.1). The arrangement of the settlement and the distribution of the activities can be used as indicators for social structures. Thus, the ac-

tivities conducted in the center were generally communal activities and did not serve single individuals or smaller groups but the entire group. This can be interpreted as an indicator for a principally egalitarian society, with no specialized division of labor and not very pronounced hierarchies. In addition, there were also subordinate areas: the smaller areas formed by four cyclically emerged dwellings. These probably represent extended group members or initial social distinctions. A clear distribution of richer or poorer areas is not identifiable, but some first indications for possible specialization within the inhabitants are (see Chapters 14 and 15). The assumption of less-pronounced hierarchy within the group is opposed to the assumption of high social status of male individuals. This status was not expressed by material remains in the archaeological record, and therefore probably concerned only a small basis of power and immaterial tasks without the acquisition of goods. This might include soft skill tasks like special influence in group decisions, organizational tasks, conflict resolution, and the representation of the group against other groups.

A social differentiation based on wealth or access to goods is hardly detectable within the burials. A canonic correspondence analysis of the burials can only detect very slight differences. The analysis was conducted using the program CAPCA 2.11 (Madsen 2007). It calculates similarities of objects (in this case burials) based on variables (in this case grave goods, burial configuration, and body position) and graphically displays these similarities. The closer the objects are in the graphic display, the more similar are they in the assemblage of their variables. For a detailed description of the method see (Müller/Zimmermann 1997).

Since the spectrum of the grave goods is very wide, some were summarized. Thus, necklaces and bracelets were summarized, as were all variations of pendants. Even artifacts concerning handcraft or plant production had to be summarized. Furthermore, some characteristics of the burials had to be simplified, like body positions (to left and right side), orientation of the head (to northern hemisphere, southern hemisphere, west, and east), direction of view (to northeastern hemisphere, southwestern hemisphere, northwest, and southeast), and burial markers (to big stones and stone plasters). However, the location of the burials inside or outside of dwellings were included (in and out).

Burials 10 und 29 were excluded in the analysis because they represent exceptional burials which would have distorted the result.

The cumulative explanation of the differences was 14.83 % on the 1st principal axis, 12.86 % on the 2nd, and 10.13 % on the 3rd. The differences expressed as a result of the included variables were thus very poor.

The results displayed on the 1st and 2nd principal axis are shown in Figures 142 and 143. The slight differences in the burials cannot be explained through their relation to the age or sex of the individuals, nor with the related occupation phases in the sense of a diachronic development (Figures 142 and 143a). The only relation comes from the associated burial goods. Some burials were associated with large bracelets, necklaces, and other grave goods and can be considered as *relatively* rich. A further group of burials had one or two grave goods, often in the form of medium groundstones, braiding tools or pendants and can be considered as *relatively* well provided. The remaining burials contained none or only one single grave good in the form of simple beads, and can be considered as *relatively* poorly equipped. Only the relation of the classes of "rich", "good" and "poor" results in a structured distribution of the burials if applied to the results of the correspondence analysis (Figure 143b), whereas the age, sex and phase distributions yield unstructured results. A structured result is also not produced if the grave goods are ignored and only the previously mentioned aspects are considered (Figure 144). Therefore, the only explanation for the differences of the buried individuals are social differences, which were however not very pronounced and can only be made visible if other factors like direction of views, body orientations and burial markers are included.[26]

The social differences are not very pronounced, the interpretation is hampered by the small number of individuals and their unequal distribution throughout the various settlement phases. At the most it can be said that some social differences were possibly starting to develop. This might be important for the understanding of Late Archaic societies in which social differences were more pronounced (Shady Solís 2006c: 79–81). The later social differences began to form during the Middle Archaic Period, as documented at Pernil Alto where they were connected with the onset of agriculture during Phase 1 (see Chapter 17) in a sedentary, village based community (see Chapter 18) but nevertheless were not fully developed. The ongoing development during the Late Archaic Period continued this trend leading to more stratified societies.

Social differentiation was also related to children, but these differences were not only found within the "rich" group but also in the "well" and "poorly" provided

26 The reason is based in the procedure of the correspondance analysis, which requires at least two variables per object.

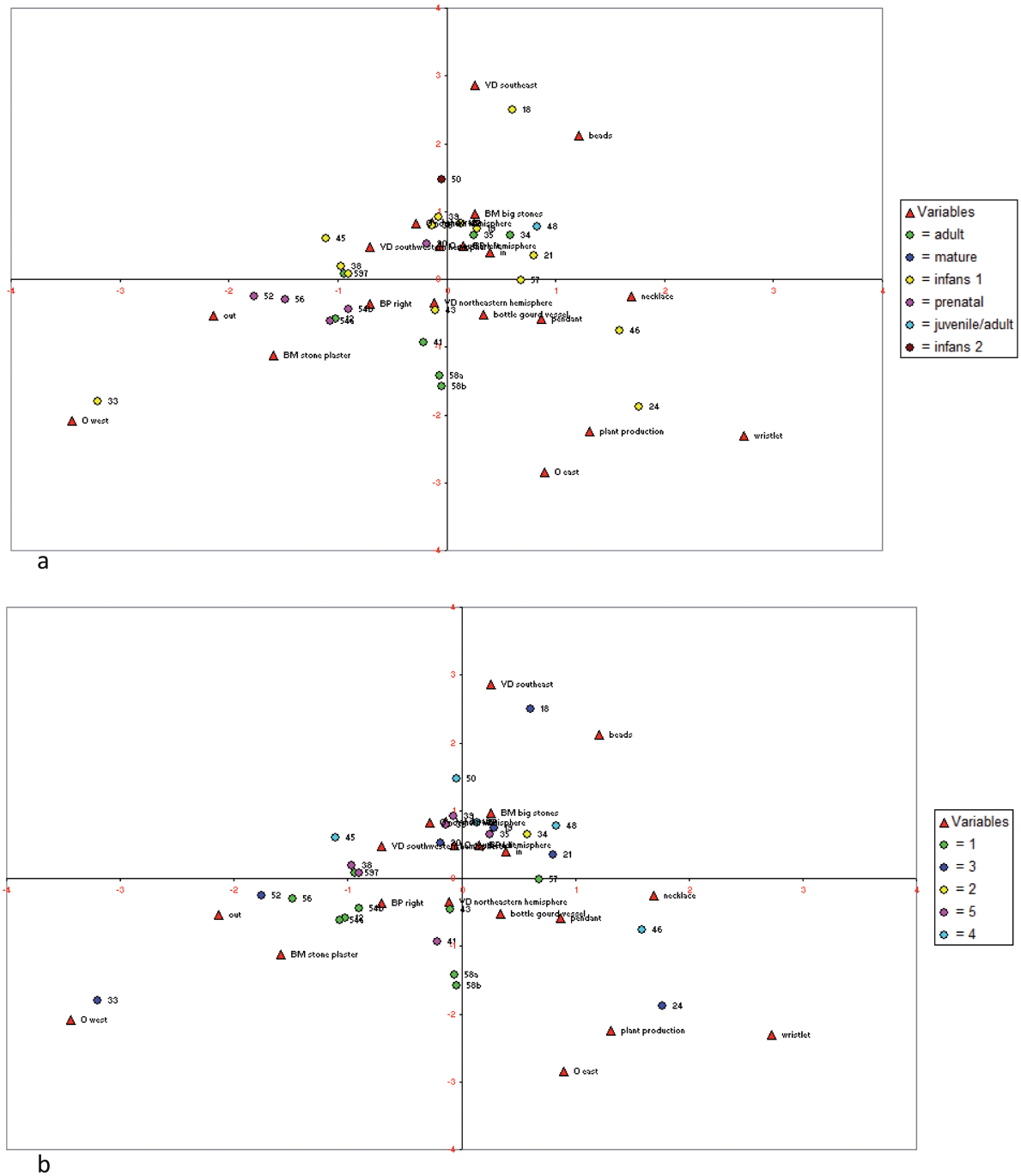

Figure 142: Results of the correspondence analysis on the 1st and 2nd principal axis. a: By age class. b: By phases. (BM = burial marker; O = orientation; VD = direction of view).

burials. Adults are also found in all three groups. However, these differences are only visible if certain variables are summarized. However, as outlined already in Chapter 9, necklaces and bracelets made of discoidal and oval beads were predominantly associated with young individuals of the age class infans 1. Thus, special treatment and an outstanding care for dead children as seen in other sites (Goldhausen et al. 2011) was also the case at Pernil Alto.

The society of Pernil Alto can thus best be described as a band-based society of a small village, consisting of some few extended families. Adult men were probably higher ranking, as their burials differed from those of women. But the high rank was based on social differences rather than economic ones. The influence of men pos-

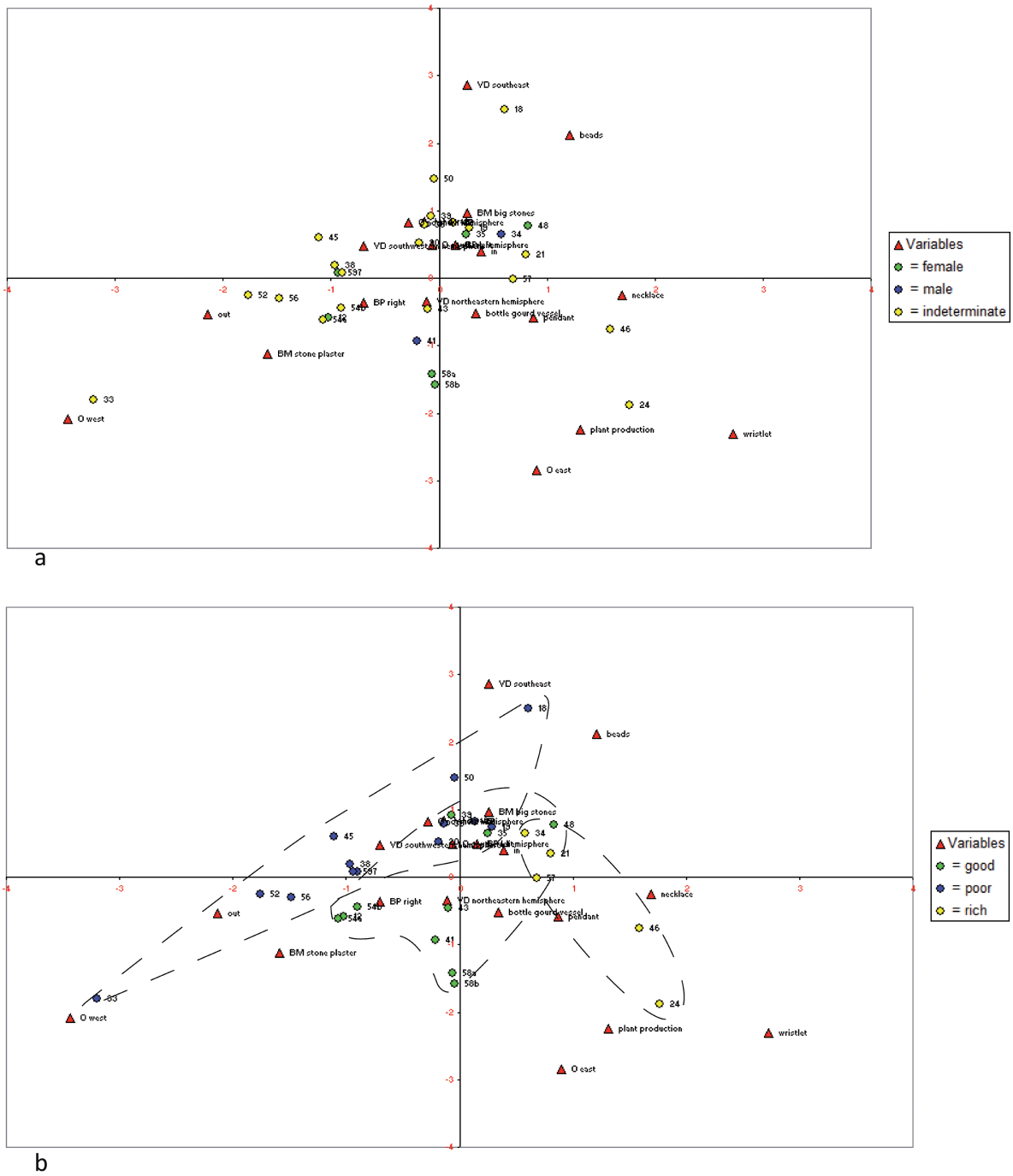

Figure 143: Results of the correspondence analysis on the 1st and 2nd principal axis. a: By sex. b: by assumed class. (BM = burial marker; O = orientation; VD = direction of view).

sibly decreased after Phase 0. Besides this, stratification is only slightly indicated, but in general the society seems to have been egalitarian rather than strictly classified. A specialization is not visible in the archaeological record, but only indicated by some slight differences between some parts of the settlement. In general, all activities were conducted in the public area of the center of the village.

16.3 The burial practices of Pernil Alto in the context of the Archaic Period

The burial practices of Pernil Alto are strongly connected to those known from the Middle Archaic Period of the central and southern Peruvian coast. The prac-

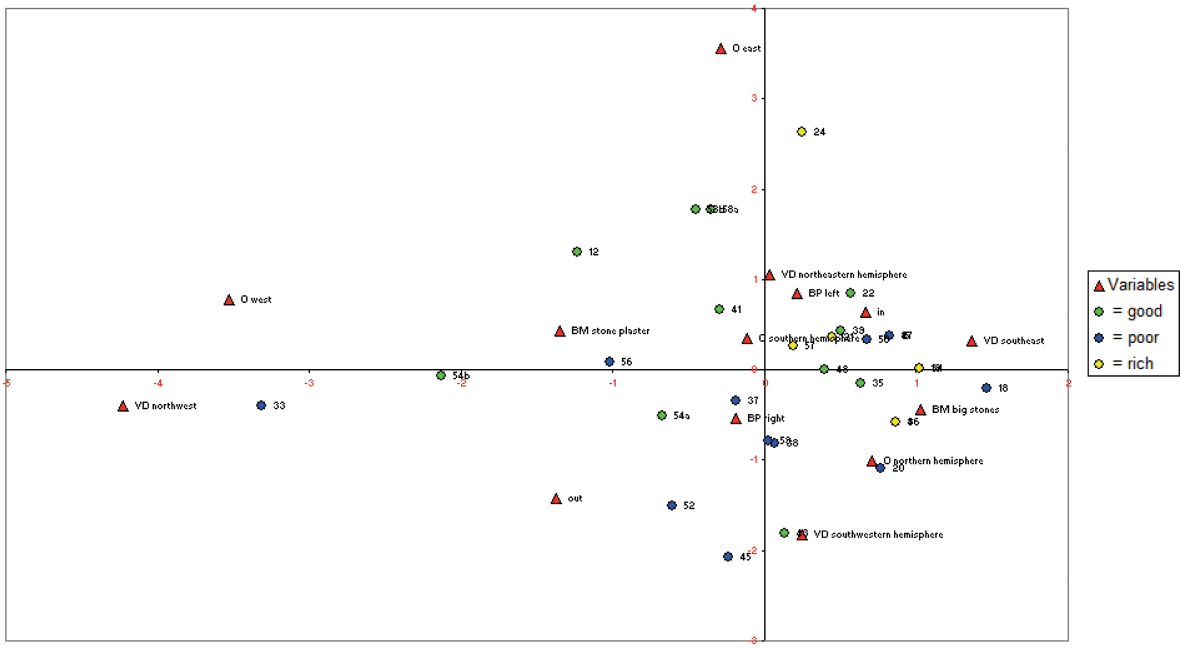

Figure 144: Results of the correspondence analysis on the 1st and 2nd principal axis by assumed classes without grave goods. (BM = burial marker; O = orientation; VD = direction of view).

tices of flexed positions, mat wrapping, non-strict orientations, and placing the dead preferably in dwellings and less in open air spaces of settlements are also known from La Paloma (Benfer 1999: 232–233; Quilter 1989), Chilca 1 (Engel 1988a), and Quipa Pucusana (Beynon/Siegel 1981: 169) on the central Peruvian coast and from Paracas 514 (Engel 1981), Santo Domingo (Engel 1981; Beynon/Siegel 1981), and La Esmeralda (Isla 1990) on the southern Peruvian coast. However, although showing common features, the concrete burial practices of most of the mentioned sites show as well some specific characteristics that distinguish them and reflect possibly local practices. In La Paloma and Chilca 1, multiple burials containing up to seven individuals were found, and in La Paloma a sexual dimorphism of male and female individuals was expressed by the position of the individuals in the dwellings (Benfer 1999: 232–233). The individual of La Esmeralda was placed on the skin of a sea lion, a practice that was never documented at Pernil Alto.

The archaic burial practices in highland contexts are less known and differ in the placement of the burials within caves like in Panalauca (Rick/Moore 1999: 273; Bocek/Rick 1984), Lauricocha (Cardich 1958, 1964) (both from the Early Archaic) and the Telarmachay (Julien et al. 1981). Differences are noted even in the treatment of the individuals, as parts of the individuals in Lauricocha were possibly extracted after burial and children were not buried in Panalauca. However, some general features—including flexed, not strictly oriented individuals in simple pits and wrapped in mats—were found as well in the highlands. A special case are the burials from Tres Ventanas in the highlands of the Chilca valley, which match the burial practices of Pernil Alto and the central and southern Peruvian coast, but were possibly artificially mummified (Wann et al. 2015).

All together the burial practices were not strict and highly variable in the described area from central to southern Peru. Even within this area, some exceptional burial practices were documented at Cabezas Largas (Engel 1981) on the Paracas peninsula, where the remains of about 70 individuals were recovered in correct anatomical formation from secure burials or in the form of single crania and bone remains without a concrete connection to a settlement. The site was therefore interpreted by Engel (1981) as an ossuary.

Even though variable, the burial practices of central and southern Peru can be distinguished from other practices father to the south and to the north. An influence of the Chinchorro tradition is notable in the lower Osmore drainage in the extreme south of Peru in sites such as Villa del Mar and Kilometro 4 (Guillén/Carpio 1999; Wise et al. 1994). The Osmore drainage possibly formed the northernmost expansion of this tradition, which did not have any influence further to the north. The treatment of the dead in Northern Peru, as documented in the Zaña and Jequetepeque valleys, was very different. Only one intact burial containing an individual in correct anatomical formation was found in CA-

09-28 (Rossen 1991: 581–587; Verano/Rossen 2011). The individual was found in a flexed position facing west and the burial was covered with stone pavement. This burial dated to the Las Pircas phase in local chronology and is thus distinctly older than Pernil Alto and the mentioned sites of the central and southern Peruvian coast. During the Tierra Blanca phase—but also already beginning in the La Pircas phase—in the Zaña valley which widely parallels the later Middle Archaic Period, human remains were recovered in very fragmented form in middens, showing cut marks, and mixed with and treated like faunal bones, which led to the interpretation of non-ritual cannibalism (Rossen/Dillehay 2001; Verano/Rossen 2011). Therefore, the "burial practices" or treatment of the dead in northern Peru differed greatly from southern areas.

The burial practices of the Middle Archaic Period of the central and southern Peruvian coast continued during the Late Archaic Period on the central and northern Peruvian coast. Individuals in simple body burials in flexed positions and wrapped in mats were documented in settlements such as the Huaca Prieta (Bird/Hyslop 1985: 59–76), Asia 1 (Engel 1963a: 66–76), Polvadera (Goldhausen et al. 2011), and Rio Seco (Wendt 1963). Possibly, some aspects of the practices became stricter since all four buried infants of Polvadera were found in flexed positions on the right side of the body and were oriented from east to west. An orientation from east to west was also preferred—although not exclusively practiced—at Asia 1. One burial of a child in a flexed position, wrapped in mats and covered with stones, was reported from Los Gavilanes (Castro de la Mata/Bonavia 1980; Bonavia 1982: 203–214). This example fits with the general burial practices of the Late Archaic Period reported here. However, 445 fragmented human bones were recovered in Los Gavilanes (Bonavia 1982: 201–203), but those were interpreted as the remains of disturbed burials.

Burials associated with monumental structures are known from Aspero and Caral. The seven burials from Aspero had a "Burial pattern […] similar to that of Los Gavilanes" (Feldman 1981: 286). The burials known so far from Caral had a higher variation. One male individual was found in a construction filling of a pyramidal structure (Shady Solís 2006a: 58). Another special burial was located in a circular structure where the remains of a shock of hair were found in an internal pit (Shady Solís 2006c). However, most of the burials of Caral were burials of infants buried under walls and floors in residential (Shady Solís 2000b) and other structures (Shady Solís 2006a: 58, 2006c: 80 f.) which were interpreted as building sacrifices. Their general treatment seems to continue the practices of other Late and Middle Archaic burials mentioned previously, even though depictions are rare. Shady Solís (2006a: 58; 2006c: 80 f.) noted social differences in the population based on the varying quantities or values of the grave goods associated with different burials of children.

Towards the end of the Late Archaic Period the burial practices became stricter on the central Peruvian coast as indicated by more standardized burials with a north to south orientation and a change from flexed to extended body position at La Galgada (Grieder et al. 1988: 103–124).

The burial customs prevailing during the Middle Archaic Period on the central and southern Peruvian coast were generally not very strict. Common characteristics are expressed by burying within settlements and, in particular, within dwellings. In addition, the dead were wrapped in mats and were buried mostly in simple pits which were afterwards often covered with stones. The preferred—but not exclusively practiced—positioning of buried individuals was that of a sideways flexed position which was strengthened in many cases by cords. A preferred orientation or direction of view of the dead is however not noticeable. In addition, some local traditions—like multiple burials—were also initiated. A further characteristic was that male individuals were in some sites buried in special burial contexts that indicated a high social status, which was also the case in Pernil Alto. Moreover, in some sites the heads were taken from single female individuals or were not buried with them, which points to some ritual connections with these body parts. The often reported careful burying of children is also a characteristic of the funeral customs. Pernil Alto is set in this complex distributed across the Peruvian north and south coast. Other burial customs prevailed in contrast to those seen in areas further north and south, where cannibalism played a role or which were influenced by the Chinchorro tradition.

The Middle Archaic burial customs on the central and north-central Peruvian coast formed the basis for those of the Late Archaic Period during which they were pursued. However, they seem to have become stricter, especially regarding the orientation of the buried individuals. Furthermore, a functional change appeared in Caral, where the burials not only served to bury the dead but also formed building sacrifices.

The burial customs of Pernil Alto have to be seen in the context of the development of burial customs from the Middle Archaic Period to the Late Archaic Period, which was characterized by monumental structures on the central Peruvian coast. The site was connected to this cultural development or formed a part of it. Pernil Alto was therefore not isolated, but well embedded in a wider cultural context.