

Site comparisons

5.1. Introduction

By comparing sets of data retrieved from various archaeological sites, the archaeologist aims to identify significant similarities and differences between them. Similarities would indicate relationships in time and space between sites, although differences may also be activity related. The artefacts of several sites in the Northern Cape are to be compared to the BB5 and BB7 results. These sites were selected predominantly because they fall within the same time range as those on Bloubos as can be seen in Appendix C. Thus in case of artefactual similarities, it would be possible to place the Bloubos results within a broader geographical context. The sites selected for comparison are the following:

Wonderwerk cave situated some 50 kilometres south of the town of Kuruman in the Kuruman hills. The cave that was inhabited during much of the stone age, is rich in archaeological deposit dating from long before the advent of the LSA in South Africa. This site was chosen for comparison because of its prominence in LSA research in the Northern Cape.

Klein Witkrans shelter just outside the village of Buxton. The shelter was chosen for comparison because its lithic artefacts seemingly belong to a single industry, namely the Wilton Industry (Humphreys & Thackeray 1983:173, 189).

Limerock I and II shelters on the farm Lime Rock north-west of Schmidtsdrift in the Northern Cape. A stone circle located not far from the two shelters is a third archaeological feature of interest to this study on Lime Rock. Limerock II was chosen because of its association with a stone circle, because of the nature of the water sources on the farm that remind of those on Bloubos, and because of its relatively large artefact sample. The shelters - Limerock II being the larger of the two - overlook a riverbed while the stone circle is situated close to one of several water pools on the farm. In contrast to the riverbed, these

pools hold water for some time after heavy rainfall (Humphreys & Thackeray 1983:197).

The type site **Swartkop I**, located in Bushmanland almost halfway between Brandvlei and Vanwyksvlei. The excavated stone circle yielded material belonging to one of the two contemporary Ceramic LSA industries defined by Beaumont (Beaumont & Vogel 1989; Beaumont, Smith & Vogel 1995). The Swartkop Industry is concurrent with the Doornfontein Industry. The latter has been found at **Biesje Poort II** - the only excavated site geographically close to Bloubos. It is a large site located north-west of Kakamas (Beaumont, Smith & Vogel 1995:239). Both these sites were chosen for comparison because, along with the other sites, they may shed light on the identity of the industry[s] found at BB5 and BB7. Both Swartkop and Biesje Poort II were excavated by Peter Beaumont between 1985 and 1990, who kindly gave me permission to examine the material for the purpose of comparison.

The methods of typological classification and metric analysis used by Humphreys and Thackeray to examine the assemblages from the first three sites, differ from those used in this study. Adjustments were made to provide for the differing methodologies when these results were compared. Another consideration is the subjective perception of the term 'utilised' artefacts. The definition of what is understood by the term 'utilised' has already been given in Chapter 4. However, it is obvious that the identification of the trait, 'utilisation damage visible to the naked eye', greatly depends on the person performing the analysis. The validity of the distinction between utilised and unutilised stone artefacts is therefore questionable.

A further possibly subjective perception relevant to the analysis of artefacts and subsequently to comparisons, is that of size. This perception specifically relates to what is understood by the terms 'microlithic' and 'macrolithic'. Whenever reference is made to the term microlithic in this study, it refers to stone artefacts with length x breadth smaller than 2cm², while macrolithic artefacts are larger than 2cm². Artefacts from other sites are described in terms of the same parameter. When comparing results obtained by means of direct



measurements, similarly obtained statistics for BB5 and not the results obtained with the Vogel scale are used. The three sites analysed by Humphreys and Thackeray will be discussed first in this chapter and then the two analysed by myself. The conclusions will follow thereafter.

The relevant results on which the following discussion is based, are given in Figures 5.1 to 5.9 and a list of relevant dates and additional information regarding them is given in Appendix C.

5.2. Wonderwerk cave

The stone artefact analysis conducted by A.I. Thackeray (1982) was based on material that she and J.F. Thackeray excavated at Wonderwerk cave. The formal tools recovered by Beaumont from adjacent squares were added in order to enlarge the available sample for the original analysis (Humphreys & Thackeray 1983:48). To enable a meaningful comparison, the results of layers 2B, 3A and 3B are used since these layers date to approximately the same time range as BB5 and BB7. The dates obtained for the three layers range from 1210 ± 50 years BP to 3990 ± 60 years BP. The stone tool classification used by Thackeray is adjusted to enable comparisons. The non-retouched and unutilised chunks, chips and flakes are all considered waste material. Thackeray and Humphreys include this material in the calculation of their relative frequencies while I exclude the waste. This makes a considerable difference to the composition of the classes within the three layers.

The following observations are based on the lithic artefact inventory of the Thackeray excavation, and where applicable, also on the formal tool inventory of the Beaumont excavation (Thackeray 1982:109-110). It is clear from Figure 5.1 that Wonderwerk cave has a higher frequency of formal tools than BB5. Cores also seem to be more abundant. Figure 5.2 indicates that broken flakes were not classed separately at Wonderwerk cave. Taking this into account, the proportion of blade flakes to irregular flakes become increasingly similar at the two sites through time with layer 2B from Wonderwerk Cave almost mirroring BB5. The general shape of flakes at Wonderwerk was shifting from being bladelike

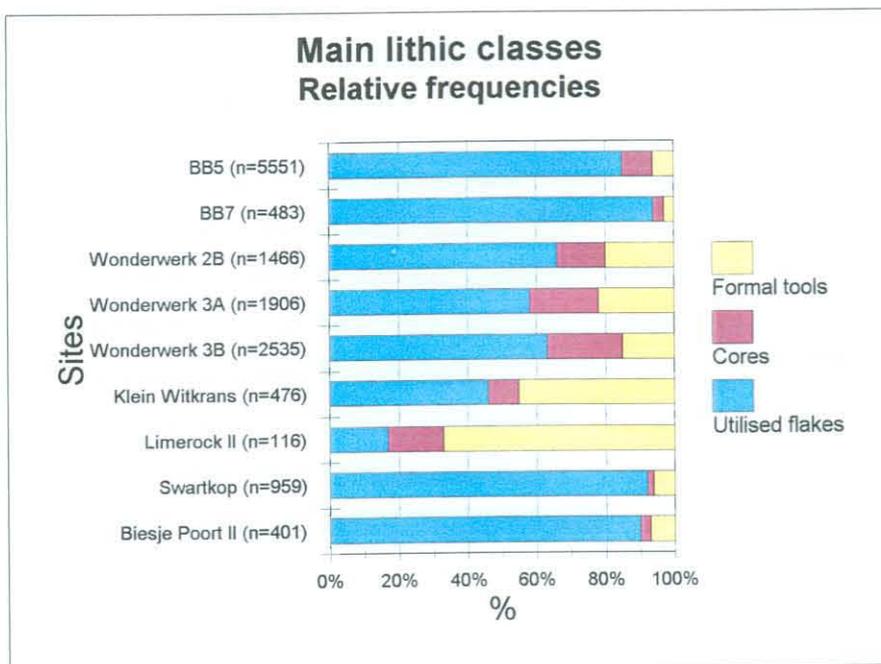


Figure 5.1: Relative frequencies of the main lithic classes of LSA sites in the Northern Cape.

The comparison between the frequencies indicates remarkable similarities between the assemblages from BB5, BB7, Swartkop Excavation I and Biesje Poort II.

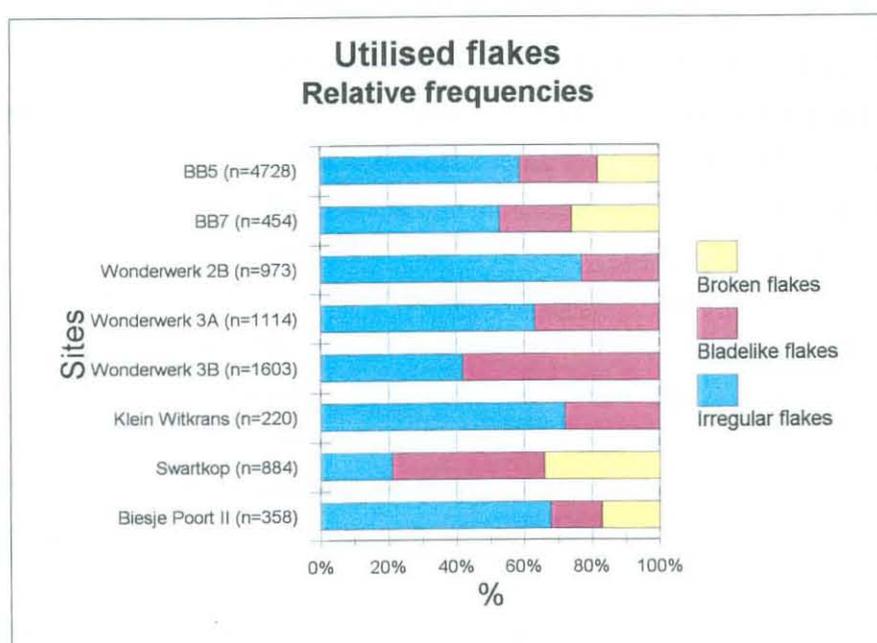


Figure 5.2: Relative frequencies of the utilised flake classes of LSA sites in the Northern Cape.

The comparison between the frequencies indicates remarkable similarities between the assemblages from BB5, BB7, Swartkop Excavation I and Biesje Poort II.



to being irregular between the fourth and second millennium BP. The relation of blade cores to irregular cores as shown in Figure 5.3 is approximately similar at Wonderwerk and BB5 with practically no radial cores represented. Figure 5.4 surprisingly shows that the formal tool frequency of layer 3A and not 2B is most similar to BB5. Both samples contain some segments while scrapers largely predominate over backed blades at both sites. Generally speaking, the composition of the formal tool assemblages from the two sites is similar.

Figure 5.5 compares the mean size and shape of the different stone artefacts from BB5 and Wonderwerk cave analysed by A.I. Thackeray. The utilised flakes from Wonderwerk cave are predominantly macrolithic. This is attributed to the intensive use of larger raw material nodules like banded ironstone and dolomite (Thackeray 1982:343, 373). Similar large flakes made from sandstone are also present at BB5. No definite changes are discernable with regard to the size of the utilised blade flakes on all raw materials through time at Wonderwerk cave (Thackeray 1982:377). This implies that one envisaged size for blade flakes remained the norm through time. It is however interesting that the backed blades from all three layers are microlithic while the unretouched blade flakes have a macrolithic character (Thackeray 1982:333, 391-396). A similar trend is identifiable at BB5.

The unbroken chert scrapers from the Wonderwerk layers are macrolithic and slightly oblong in shape (Thackeray 1982:383). Banded ironstone and dolomite scrapers from the same layers (not depicted in Figure 5.5) are as expected much larger than the chert tools and vary between being square and oblong in shape. The quartz scrapers are, like the chert scrapers, macrolithic, but also smaller than the banded ironstone and dolomite scrapers (Thackeray 1982:379, 387, 389). It is possible that the scraper shape based on mean length and breadth, may have been distorted by the method used for measuring scrapers (Thackeray 1982:69-71). This is especially seen in tools where the breadth exceeds the length. The BB5 scrapers are similar in size to the chert and quartz scrapers from Wonderwerk cave.

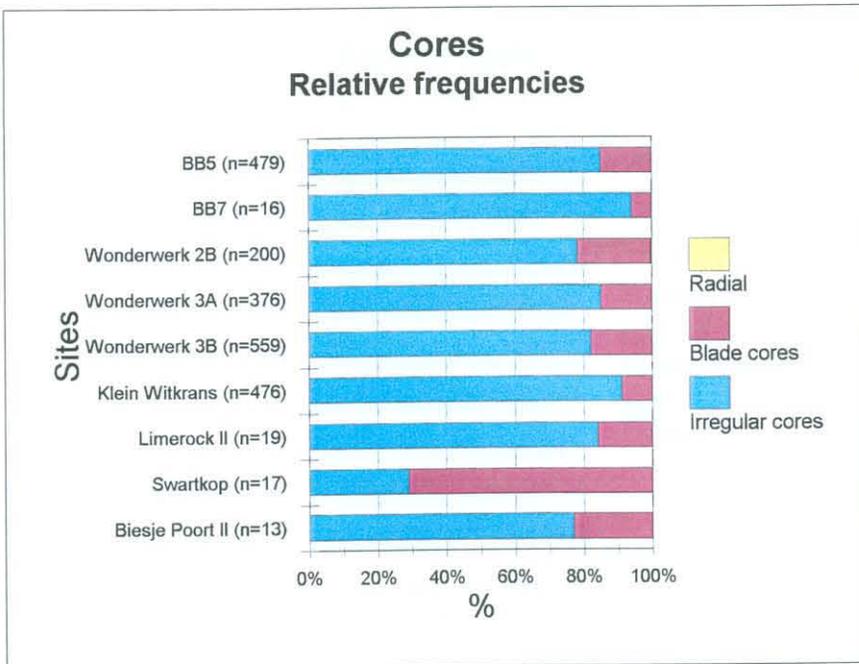


Figure 5.3: Relative frequencies of the core classes of LSA sites in the Northern Cape.

The comparison between the frequencies indicates remarkable similarities between the assemblages from BB5, BB7 and Biesje Poort II.

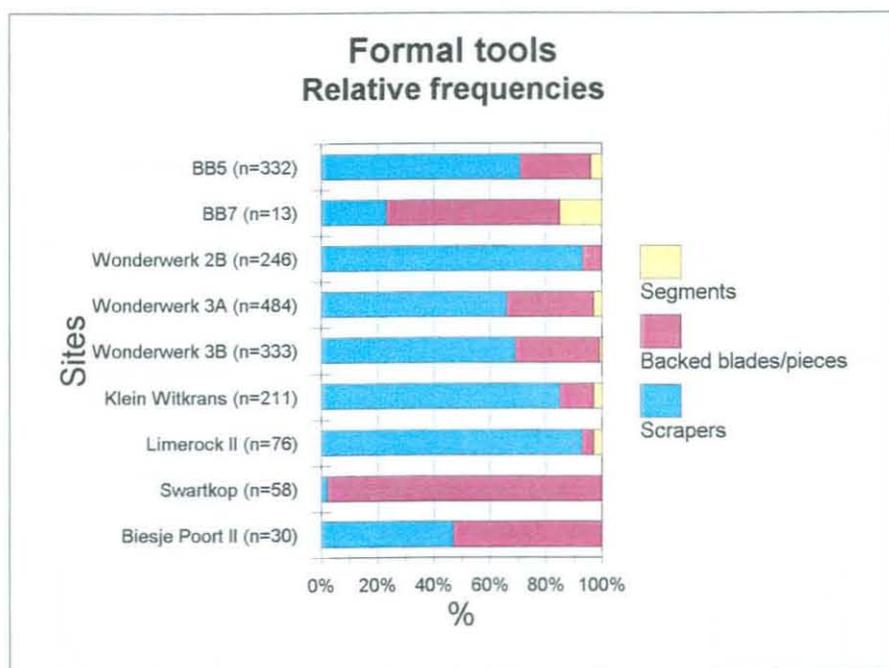
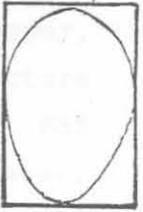
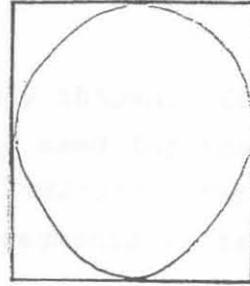
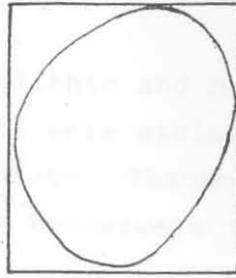
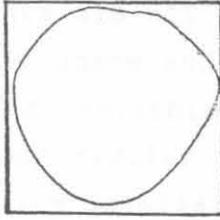


Figure 5.4: Relative frequencies of the formal tool classes of LSA sites in the Northern Cape.

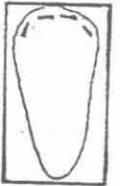
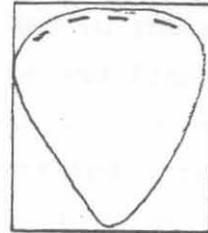
The comparison between the frequencies indicates a remarkable difference between the assemblages from BB5, BB7 and Swartkop Excavation I. Both the Biesje Poort II and the Swartkop Excavation I assemblages lack segments.



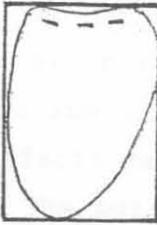
Regular flakes



Blade flakes



Chert scrapers



Quartz scrapers

Backed blades



Segments





Figure 5.5: Comparison between the mean size and shape of stone tools from BB5 and Wonderwerk cave. (Scale 1:1).

These diagrams indicate a general correspondence in artefact shape although artefact size differs in several instances.

The segments are all microlithic and narrowly shaped. Chert, jasper, chalcedony, agate and quartz were exclusively used for the manufacture of these microlithic elements (Thackeray 1982:347, 398-400). BB5 segments are similar to the Wonderwerk cave segments in terms of size, shape and raw material.

Upper and lower grinding stones as well as hammer stones were found throughout the three Wonderwerk layers, supporting the notion that this was also a manufacturing site. All of these tools are present at BB5.

The following observations with regard to the non-lithic artefacts found in layers 2B, 3A and 3B, are based on the inventory of the Thackeray excavation (Humphreys & Thackeray 1983:130). Several bone points and some miscellaneous fragments of bone are included in the assemblages of the selected layers. A large number of complete and fragmented ostrich eggshell beads was found along with some plain OES fragments. Metal objects were retrieved from the two upper layers and a few undecorated grit-tempered potsherds from all three layers (Humphreys & Thackeray 1983:92-93).

In contrast, no European artefacts, iron objects or bone points were found at the Bloubos sites. The lack of bone points is attributed to poor preservation conditions while the absence of iron objects and European artefacts may be attributed to the relatively isolated location of Bloubos. The potsherds excavated from the selected Wonderwerk cave layers seem to be similar to those from BB5 and the BB7 spits.

5.3. Klein Witkrans shelter

The dates obtained from the top seven spits of Klein Witkrans shelter range from 1490 ± 40 to 3910 ± 60 BP (see Appendix C). Klein Witkrans shelter is characterised by a single industry which falls well within the BB5/BB7 time range (Thackeray 1982:186). I lumped the results from these spits together to obtain a larger sample. The following observations are based on the inventory of the Beaumont excavation of Klein Witkrans shelter (Thackeray 1982:187). For the purpose of comparison, the waste

material as defined in this study is again subtracted from the artefact total.

As shown in Figure 5.1 the most arresting feature of the Klein Witkrans sample is the high frequency of formal tools that equals the frequency of utilised flakes. This distribution of formal tools may be attributed to the rather small sample retrieved or to a different definition of 'utilised' flakes. The frequency of cores is more similar to that of BB5.

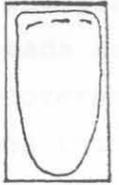
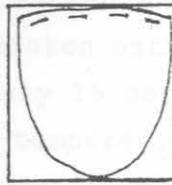
As shown in Figure 5.2 broken flakes are again not distinguished at this site. Nonetheless, the relationship of blade flakes to irregular flakes is roughly similar to that of BB5. The frequency of blade cores is slightly less at Klein Witkrans than at BB5 but not significantly so (see Figure 5.3). Figure 5.4 indicates that the breakdown of formal tool types at Klein Witkrans is very similar to that at BB5 except for a somewhat higher frequency of scrapers and a lower frequency of backed blades.

No measurements of utilised irregular and blade flakes are documented as they represent such a small sample. It is however accepted that no obvious changes in the length or breadth of flakes are discernable through time at Klein Witkrans shelter and that differences that do occur are directly related to the chosen raw material (Thackeray 1982:200). Lidianite and quartzite artefacts are necessarily larger than chert, quartz or chalcedony artefacts (Thackeray 1982:207).

Figure 5.6 shows that, similar to Wonderwerk cave, the chert and chalcedony scrapers in the first seven spits at Klein Witkrans are macrolithic in size (Thackeray 1982:428). They are however somewhat smaller than the Wonderwerk Cave scrapers (Thackeray 1982:257-258). The backed blades and segments from Klein Witkrans are also microlithic, as at Wonderwerk and Bloubos (Thackeray 1982:434-435). These differences imply that larger scrapers were purposefully manufactured at Wonderwerk cave, Klein Witkrans and BB5.



Scrapers*



Scrapers**



Backed blades***



Segments****



Segments*****





Figure 5.6: Comparison between the mean size and shape of stone tools from BB5, Klein Witkrans shelter and Limerock II. (Scale 1:1).

* All material, ** chert & chalcedony, *** chert & hornfels, **** all material, ***** chert, chalcedony & quartz

A single upper grinding stone indicates food preparation at Klein Witkrans. The non-lithic artefacts excavated from the spits include eight bone points, several complete and broken ostrich eggshell beads as well as some decorated OES fragments. Only 15 potsherds were recovered from these spits and these are all grit-tempered, undecorated and thin walled (between 4 and 8mm thick) (Humphreys & Thackeray 1983:187, 250, 252). The non-lithic artefacts from the selected spits from Klein Witkrans shelter seem, with the exception of bone points, to be very similar to those from the selected Wonderwerk cave layers and the BB5 and BB7 assemblages.

5.4. Limerock II

Limerock II is a 12m x 5m shelter, excavated to bedrock in four units. The dates obtained for this deposit range from 1760± 50 to 1430± 50 years BP (see Appendix C for the whole range of dates for the site). Although slight changes in artefact size are observable, the deposit was only 60cm deep and the results of spits I to V are therefore lumped together to enable a meaningful comparison (Humphreys & Thackeray 1983:201, 205).

The following is a summary of results based on Humphreys' excavation (Humphreys & Thackeray 1983:254). Subtracting the waste material from the total, again left a very small sample of only 116 stone artefacts. A very high incidence of formally retouched tools which totally contrasts with BB5, is seen in Figure 5.1, utilised irregular and blade flakes are abnormally scarce and no broken flakes were documented. This discrepancy may again be due to the excavator's definition of 'utilised'. Cores, on the other hand, are comparatively well represented. It is notable that almost all the flakes produced at this site were retouched. Since no distinction was originally made between irregular and blade flakes, the utilised class of the site is not represented in Figure 5.2. Despite the low frequency of cores, the proportion of irregular to blade cores shown in Figure 5.3 is almost exactly similar to that of BB5. Figure 5.4 shows that the formal tool class consists of scrapers, backed blades and

segments as at BB5. However, scrapers are much more prominent than at BB5 while backed blades are less well represented.

Due to the small sample, no dimensions are given for utilised flakes. Scrapers are macrolithic in size, as is the case for BB5 (see Figure 5.6). They are however squarely shaped. The segments are microlithic as are those from the other considered sites. Only three backed blades were excavated from the site making mean length and breadth dimensions meaningless (Humphreys & Thackeray 1983:205-206). The majority of retouched and utilised tools were made from chert at Limerock II (Humphreys & Thackeray 1983:256). It is noteworthy that the Limerock II scrapers are macrolithic despite the smaller sized raw material used. This trend is similar to the one identified at Wonderwerk cave, Klein Witkrans and BB5.

The presence of three grinding stones points to Limerock II being a living site. The large number and variation of non-lithic artefacts from the site is noteworthy. The deposit contained several fragmented bone points, broken and complete ostrich eggshell beads throughout, decorated OES fragments and some OES flask mouth fragments (Humphreys & Thackeray 1983:263). Iron, glass and porcelain of European origins were found in the top spits with potsherds throughout the deposit. The majority of these potsherds are thin walled while the few thicker ones from the surface probably belonged to the base of a single vessel (Humphreys & Thackeray 1983:121). The two sherds were respectively decorated with cross-hatching on the vessel's rim and wide, shallow impressions on the body (Humphreys & Thackeray 1983:212). Similar thicker sherds, probably belonging to a single vessel, were found on the surface at BB7.

It is a pity that the Limerock stone circle could not be excavated. Especially since its dimensions are very similar to those of the BB7 circle and it might have been informative with reference to the nature of these structures.



5.5. Swartkop Excavation I

The OES date obtained for Swartkop is 670 ± 50 years BP, as shown in Appendix C. Comparing the Bloubos and Swartkop samples was a comparatively easy task as the same classification was used to analyse the two. It was originally hoped that similarities would exist between the BB5 and Swartkop results but it soon became apparent that the samples differed in several ways. At Swartkop, the whole surface within a stone circle was excavated in three blocks, in 5cm spits down to 10cm. The artefacts were lumped together because no obvious size differences were identified during the classification process. A total of 959 stone artefacts was excavated.

As can be seen in Figure 5.1 the basic class composition of the Swartkop sample is not that different from the Bloubos sample. However, Figure 5.2 sheds a different light on the Swartkop sample. This is the only site analysed with a constant lower frequency of irregular flakes than blade flakes. In addition, a much higher frequency of broken flakes is present. It is however noteworthy that the Wonderwerk cave layers 3A and 3B also contain rather high frequencies of blade flakes. The core frequencies shown in Figure 5.3 correspond to the frequencies of irregular and blade flakes. In contrast with BB5, the majority of cores at Swartkop are blade cores, not irregular cores. The subsequent breakdown of formal tools (Figure 5.4) is not surprising as almost 90% of these are backed blades with the remaining formal tools being scrapers. No segments were retrieved. Taken together, the assemblage from Swartkop differs markedly from those at Bloubos and must represent a totally different activity.

The Vogel scale was used to determine shape and size tendencies within the Swartkop sample (see Figure 5.7). As shown in Figure 5.8, the majority of irregular and blade flakes vary between 4cm^2 and 8cm^2 in size. Similarly to the Bloubos artefacts, the Swartkop unretouched flakes thus possess an overall macrolithic character. This is however to be expected since the majority of Swartkop artefacts are made of indurated shale. Backed blades on the other hand are completely microlithic with their sizes varying between 0.5cm^2 and 2cm^2 . Thus it

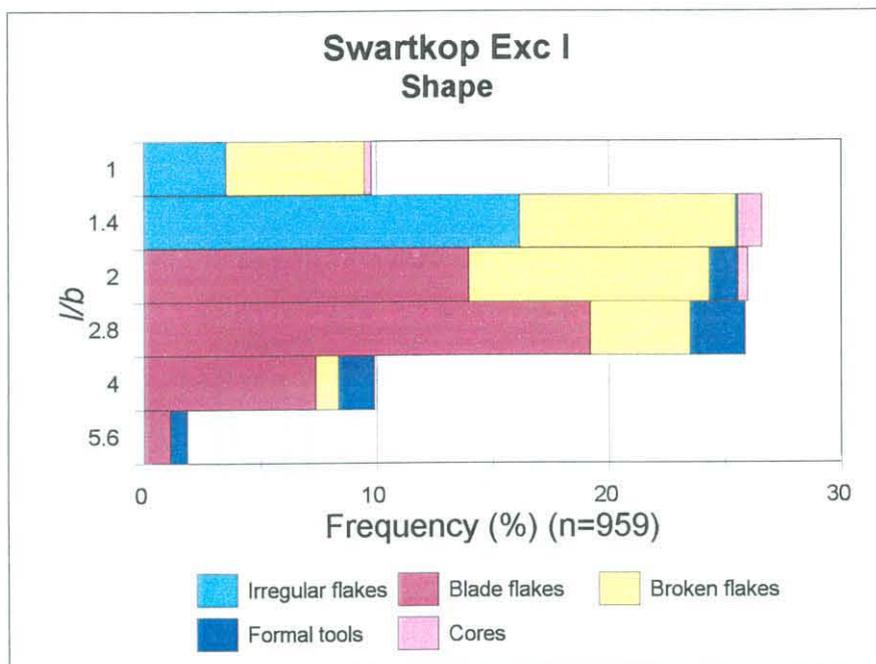
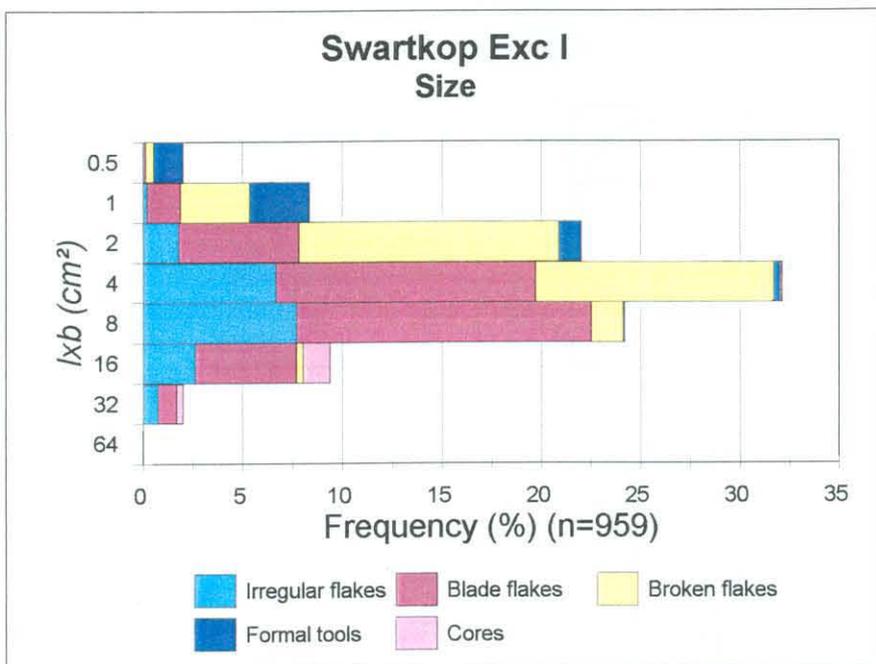
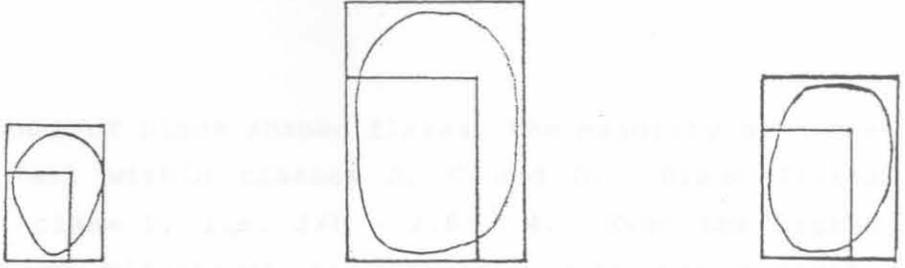


Figure 5.7: Distribution histograms of the size and shape of stone tools from Swartkop Excavation I.

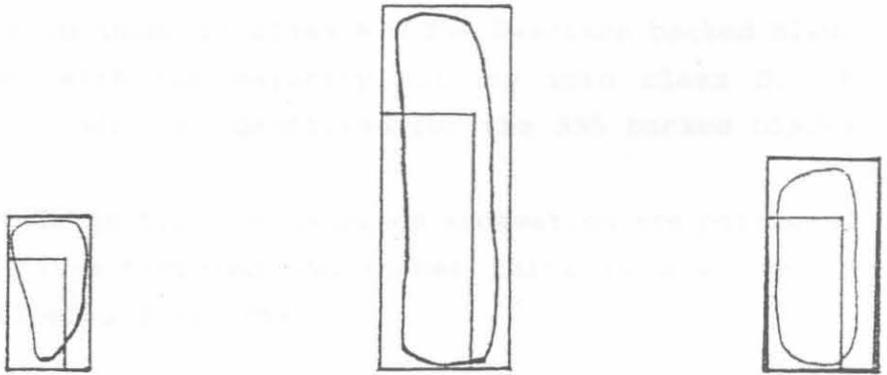
The distribution between size and shape classes for this assemblage clearly differs from that of BB5.



Irregular flakes



Blade flakes



Scrapers



Backed blades





Figure 5.8: Comparison between the Vogel scale size and shape of stone tools from BB5, Swartkop Excavation I and Biesje Poort II (scale 1:1).

Although slightly smaller, the Biesje Poort II artefacts correspond very well to those from BB5.

seems that as soon as stone tools were being retouched, the desired size tended to be smaller, regardless of the type of raw material used. This might also be the case at BB5 as well as at the other sites considered in this chapter.

Due to the high incidence of blade shaped flakes, the majority of stone tools from Swartkop fall within classes B, C and D. Blade flakes predominantly fall in class D, i.e. $l/b = 2.8 - 4$. Even the broken flakes seem to be 'more bladelike' in character with the majority belonging to class C, i.e. $l/b = 2 - 2.8$. This is quite different from BB5 where the most desired shape is class B. The Swartkop backed blades are all rather narrow, with the majority falling into class D. No definite shape patterns could be identified for the BB5 backed blades.

The only non-lithic artefacts from the Swartkop excavation are potsherds. All these sherds are fibre-tempered and rather thick in diameter and therefore unlike the Bloubos fragments.

5.6. Biesje Poort II

According to Beaumont, Biesje Poort II represents an early Doornfontein site with two surface dates (pers. comm.). The first date, obtained from OES organics, is 1390 ± 70 years BP, while the second, obtained from sherd organics, is 1870 ± 50 years BP (see Appendix C) (Beaumont, Smith & Vogel 1995:247). Three of four blocks were excavated to 50cm and the remaining one to 55cm in 5cm spits. The sample contained 401 stone artefacts in total which were all lumped together because little variation between them was identified during classification.

At first glance the samples from Biesje Poort II and Swartkop seem very similar. Figure 5.1 shows a lower frequency of cores at Biesje Poort than at BB5. However, Figure 5.2 indicates that the relative frequency of utilised flakes is similar to that at BB5. Figure 5.3 shows that a slightly higher frequency of blade cores is present at Biesje Poort than at BB5. The largest difference between BB5 and Biesje Poort can however be seen in Figure 5.4. The latter clearly has a higher frequency of backed blades and less scrapers than BB5 while no segments

are present at Biesje Poort. The small size of the formal tool category may, however, be the reason for this difference.

As can be seen in Figures 5.8 and 5.9, the Biesje Poort II assemblage is predominantly microlithic with utilised irregular, bladelike and broken flakes, and scrapers measuring from 1cm² to 2cm² on the Vogel scale. The majority of backed blades measure from 0,5cm² to 1cm². With regard to size, the BB5 irregular and blade flakes and scrapers are on average slightly larger than their Biesje Poort II counterparts.

Obvious characteristics with regard to stone tool shape, include that Biesje Poort II scrapers mainly fall within class B, thus being slightly oblong. The same trend can be seen with the utilised irregular and broken flakes. The majority of backed blades fall within class C. These results correspond to the BB5 results.

The non-lithic sample retrieved from Biesje Poort II consists of the following artefacts. Complete and broken or uncompleted ostrich eggshell beads were found throughout much of the deposit. Towards the middle of the deposit, one decorated OES fragment was found as well as one bone point. Several potsherds were also present throughout the deposit. They are all thin, grit-tempered and of a light reddish brown colour. Four sherds are decorated with parallel incisions on the rim, and two sherds with diagonal incisions on the rim. One ceramic fragment found may belong to a lug and one seems to have a slight shoulder. The bone point and the relatively many decorated potsherds are absent from BB5.

5.7. Conclusions

5.7.1. Preliminary remarks

Some comments with regard to the importance attached to raw material analysis in LSA studies should be made. The importance attached to the

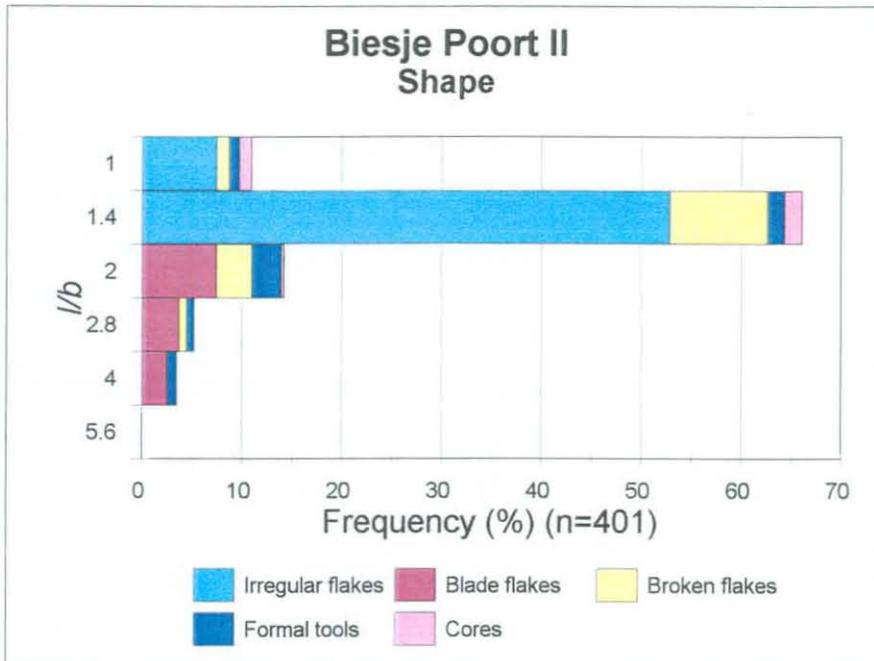
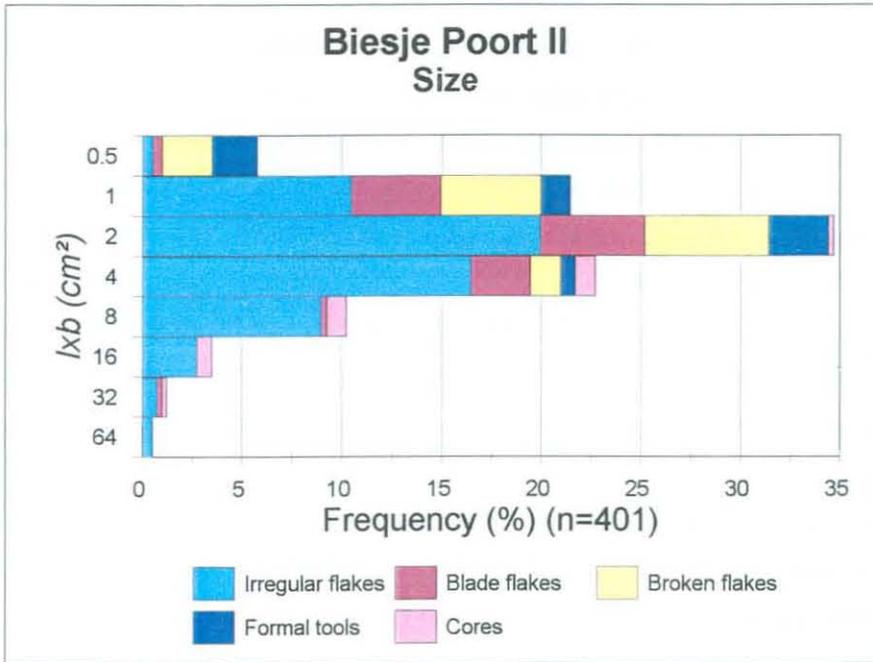


Figure 5.9: Distribution histograms of the size and shape of stone tools from Biesje Poort II.

The distribution curve between the size and shape classes for this assemblage is similar to that of BB5 although the position of the size peak differs slightly.

role played by raw material was indicated in the archaeological review of this study and throughout this chapter. Raw material size obviously played a role, as did its availability and its suitability when specific tool types were being manufactured during the LSA. The fact that instances do occur where different sized stone tools were produced on similar raw materials within one spatial and temporal framework, even at one site, goes to show that raw materials alone cannot account for every change in stone tool size and shape through time. It is clear from these instances, that mental templates existed in the LSA, and that they were probably just as much a deciding factor during the manufacturing process of stone tools, as were the available raw materials, personal skill and stylistic preferences. Therefore, raw material based divisions of stone tools sometimes seem excessive, if not always irrelevant. A case in point are the similarities identified in scraper size at Wonderwerk Cave, Klein Witkrans, Limerock II and BB5. The contemporaneous scrapers from these sites are all macrolithic, while the rest of the formal assemblages, made from the same types of raw material, are microlithic. Thus despite the use of raw materials characterised by smaller nodules, the resulting formal implements were not necessarily all microlithic.

A drawback experienced while trying to compare the abovementioned sites was the different definitions of length and breadth. Obviously these affect mean length and breadth measurements and may lead to the mistaken impression that flakes are generally square when in fact they are oblong in shape. This is especially true for sidestruck flakes, if the length is taken as the maximum distance between the striking platform and the opposing end of the flake. Often in such cases the breadth then exceeds the length, thus influencing the mean figures. Obviously this is not a problem when one is predominantly dealing with endstruck flakes as is the case at BB5, or when length/breadth ratios are used for analysis. Deacon's definition of the length of a scraper as being the distance perpendicular to the retouched surface can also lead to distorted mean values (1984b:404). For instance, a collection of elongated end- and sidescrapers together will result in equal average lengths and breadths, suggesting that the mean shape is more or less square.

The stone circles present at three of the considered sites are of special interest in this study. BB7 is one of several stone circles on Bloubos located within close proximity of a dry watercourse which might have held water in previous times. It is a pity that only a very small sample was excavated at the site, especially since the combination of artefacts recovered which included bone fragments, was rather unique considering the environmental conditions on Bloubos. It is possible that BB7, like the stone circle on Lime Rock and Swartkop, represents the base of a LSA dwelling. Additionally, the Lime Rock and Swartkop circles are both located close to water sources. Swartkop is situated close to a pan, although it was observed that it seldom carries water (pers. comm. P.B. Beaumont). All three examples are indirectly related to potential sources of protein in the shape of wildlife drawn to the water. A thorough investigation might provide detailed information on hunting exploitation strategies.

5.7.2. Concluding remarks

When examining the results of the comparisons made, it is undeniable that the four samples classified by me, have significantly more utilised flakes, less formal tools, and a wider range of utilised flakes, than the Humphreys and Thackeray material. This is attributed to the subjective nature of the classification process of stone tools, the fact that different systems were used and possibly to the geographic location of the sites.

After comparing BB5 to the chosen sites, it is clear that the site has several elements in common with others in the Northern Cape. An important aspect of the classification scheme used in this study, is that utilised broken flakes are classified as a separate category, the reason being that they often do not classify as either irregular or blade flakes. Broken flakes are not noted as a separate class by either Humphreys or Thackeray and this influences the relative proportions of utilised flake subclasses identified by them. The samples analysed by me all contained broken, bladelike and irregular flakes, even if the relative proportions differed somewhat.

The majority of cores on all the mentioned sites except Swartkop, are irregular. The presence of blade cores at Swartkop is related to the high frequency of blade flakes and backed blades. Evidently, the Swartkop type site has little relation to the Bloubos sites, even though the dates of Swartkop sites - until now mainly found in Bushmanland - cover at least the last 2000 years (Beaumont, Smith & Vogel 1995:242). Swartkop itself, however, has a relatively late date.

It is clear that scrapers, backed blades and segments were the most popular formal tools produced at the mentioned sites. Even the Wonderwerk cave layers held some segments despite the fact that all three formal types are not present in all three layers. It is therefore significant that the youngest layer (2B), Swartkop, and Biesje Poort II lack any segments as these assemblages belong to the final phase of the LSA in the region. It has been observed that the frequency of backed microliths and particularly segments, decreases after the appearance of LSA pottery in some parts of South Africa (Deacon 1984b:345). It might thus be suggested that BB5 - a site where both backed microliths and segments are well represented - characterises a LSA site associated with some ceramics but falling on the borderline between pre-pottery and pottery late Holocene assemblages, while layer 2B of Wonderwerk cave, Swartkop and Biesje Poort II are more representative of the Ceramic LSA.

The extremely high frequency of scrapers at Limerock II that accounts for the majority of the stone tools, is striking. The fact that more scrapers than utilised flakes or blades were excavated, suggests that the manufacturing of stone tool was a very specialized task at the site. Simultaneously, the site contained strong evidence of having been a living area. A similar, though maybe not as pronounced, high frequency of scrapers is observable at Klein Witkrans, Wonderwerk cave Layer 2B and BB5. It is interesting to note however, that the younger Swartkop site as well as the Doornfontein site, Biesje Poort II, are not characterised by such a decrease in backed tools at this time. These two sites are both far removed from Wonderwerk cave, Klein Witkrans and Limerock II, lying closer to Bloubos.

It is accepted that the Bloubos LSA material shares several characteristics with that of Biesje Poort II as well as with the other sites considered in this chapter with the exception of Swartkop. Contact did probably take place between different LSA groupings during the last 2000 or more years in the Northern Cape. This would account for similarities between the Bloubos, Kuruman hills and Ghaap sites considered in this chapter, all of whom were more or less contemporaneously occupied. Differences that do occur, may be attributed to radically different environmental conditions.

The assemblage from BB5 contains several traditional Wilton characteristics. The most obvious is the inclusion of scrapers, backed blades and segments in the formal lithic sample. These types continue to indicate the Wilton Complex, as understood in LSA studies in southern Africa (Deacon 1972:38; Wadley 1986:54). It is at approximately 2000 years BP, that ceramic ware first appears on the LSA scene in southern Africa. The Bloubos sites contained some pottery as do the other sites considered. It does however become clear that while Biesje Poort II and Swartkop are both relatively rich in ceramic fragments, BB5 and BB7, like some of the Kuruman hills and Ghaap sites, lack large numbers of ceramics. This is especially surprising for BB5, considering the large lithic sample collected there. The ceramic fragments found at BB5 and BB7 are similar to the Biesje Poort II and sites classed as Wilton while they differ completely from the Swartkop pottery. The Swartkop assemblage also clearly challenges the notion that LSA assemblages associated with ceramics after 2000 years are dominated by scrapers. This trend may not be applicable to Bushmanland and some other parts of the Northern Cape.

Considering these elements, I suggest that the BB5 artefacts belong to a transitional period between the non-ceramic Wilton in the Northern Cape, and LSA assemblages associated with pottery after 2000 years BP, be they named Doornfontein, Ceramic Wilton, or Ceramic LSA assemblages (Beaumont & Vogel 1989:79; Beaumont & Vogel 1984:82; Beaumont, Smith & Vogel 1995:242-247). It is clear that the BB5 tool frequencies are on more than one level very similar to that of the Biesje Poort II, while it is simultaneously also similar to the other investigated assemblages.



Differences that occur may be attributed to variations in geographical setting, age and limited contact between the makers of these artefacts. Differences may also be attributed to differing site types. The sites analysed by Humphreys and Thackeray, as well as BB5 and BB7, contain evidence of having been living sites while the Beaumont samples do not. Whatever the case may be, sufficient evidence that includes similar stone artefact types, sizes, raw materials and ceramic ware, exists to conclude that the BB5 artefacts are in fact, very similar to other analysed LSA assemblages in the Northern Cape and that it may be incorporated into the accepted archaeological framework for the region.

As discussed in Chapter 1, Beaumont identifies the presence of two distinct but contemporaneous industries belonging to the Ceramic LSA Complex of the Northern Cape. Without hesitation he associates hunter groups with the Swartkop Industry, while pastoralists are associated with the Doornfontein (Biesje Poort II) Industry. In view of the evidence examined in this chapter, it is believed that the Bloubos material would belong to the pastoralist Doornfontein Industry.