CLIVE VELLA

Emerging aspects of interaction between prehistoric Sicily and Malta from the perspective of lithic tools

'... lithic studies have remained basically descriptive in nature or they have limited their own role in archaeological inference because they have approached lithic variability from a purely typological perspective.'
(Perles 1992: 223)

Introduction

The Maltese Islands are an archipelago situated in the centre of the Mediterranean approximately 90 km south of Sicily. Since the closest landmass is Sicily, it comes to no surprise that the Maltese Islands were colonised by prehistoric communities originating from Sicily circa 5,500 B.C. Apart from the physical colonisation of the islands, the islanders kept close to the cultural traditions of Sicily. Examples are shown in the importation of obsidian, flint and ochre to Malta and the production of pottery in close resemblance of Sicilian products up until the start of the so-called Copper Age.

Roughly one thousand years into the Copper Age megalithic structures started being built in the Mġarr phase, formalized into the Ġgantija phase and becoming almost 'flamboyant' in the last phase, the Tarxien phase. Almost thirty of these structures are distributed around the Maltese Islands, and their discovery has not been a recent one. Considering the density of these monuments, it is not surprising that investigations of these structures have been ongoing for at least the last two hundred years (Trump 2002: 7-9). The Maltese Islands underwent British sovereignty during the 20th century, which reflected in the high standard of well educated scholars who were interested in the local archaeological remains. This concentration on megalithic remains has led to the current large amount of literature regarding the temples with a minimal amount of artefact studies for Maltese prehistory. Furthermore, since most of the temples were cleared of their deposits without adequate documentation, we now have the monuments but not the deposits which filled them. Such situations make it difficult for us to understand the prehistoric communities which inhabited Malta.

Lithic tools, or stone tools, are amongst the artefacts which are expected to be

recovered during excavations of prehistoric sites. Lithic tools entail the involvement of a human agent (Darvill 2000: 231), and hence, their analysis can lead into the understanding of several facets regarding prehistoric human culture. Lithic tools became for humans an extension to their own bare hands, which meant that several previously difficult tasks could be overcome. Nowadays it is easy for us to relegate such artefacts to mere stones. However, if we did not have cutlery in our kitchens, tasks such as cutting tough meat would become suddenly energy consuming. In the same way different lithic tool types catered for tasks which required handling, an appropriate analysis of each artefacts leads into a better understanding of sites and culture in general.

Stone tools offer archaeologists the opportunity of understanding and comparing prehistoric systems of extraction, production, consumption and exchange (Kardulias & Yerkes 2003: 1). These four factors together imply that a raw material acquisition strategy was set up in every prehistoric community that required the procurement of raw materials. Ultimately, a community interacted with another community.

The aim of this paper is to highlight how a systematic analysis, which considers lithic variability, can 'open' our eyes to new possible understanding of material culture (Hodder 2001:166-167). Since the purpose of this seminar is the discussing of Siculo-Maltese relations, I shall concentrate on trying to explain emerging patterns regarding this interaction through the study of lithic tools.

The raw materials

Lithic tools are produced from specific rocks which can be found in several parts of the world in limited amounts. A determining variable in lithic production is the actual availability of adequate raw material in the space occupied by the people in question. However, there are other dominating variables in the choice of raw material utilization, which Kooyman summarizes as what can be feasibly traded through contacts with other people, the type of tools manufactured and how suitable the raw material(s) was or were for the desired tools (Kooyman 2001: 25). Thus the job of a lithic analyst in a lab is not necessarily just a functional examination of lithic tools, but rather he or she should attempt to understand the pragmatic and cultural choices made by prehistoric humans.

Raw materials adequate for lithic tool production require a significant amount of silicate to be present within the rock structure (Rapp and Hill 1998: 112). The structure of silicates is in turn made up of a silicone dioxide (SiO_2) tetrahedron structure (Kooyman 2001: 27). A tetrahedron is a negatively charged ion which

tends to combine with others to form minerals. There are five types of tetrahedron; however the most important for lithic production is the silica tetrahedron. Under the silica tetrahedron family are found rock types such as chalcedony, chert, flint, jasper, and opal, amongst others (Kooyman 2001: 27).

In the case of the Maltese Islands, three raw materials types were present in fluctuating quantities during prehistory. These raw materials are obsidian, flint and chert (fig. 6.1).

Obsidian is a naturally occurring glass that forms from fast cooling lava. Obsidian is frequently black in colour with different shades when held against a white light (Rapp and Hill 1998: 123). Because obsidian is formed by fast cooling lava, as explained above, it is almost structure less to the naked eye. This lack of sizeable crystals (Henderson 2000: 305) means that once hit, the force will propagate through the rock quickly without crystals hindering or reducing the force's speed of propagation. Within the Central Mediterranean lie four obsidian sources, the Sicilian sources at Lipari and Pantelleria, the Sardinian Monte Arci source, and the Palmarolan source. Obsidian recovered from archaeological sites in Malta originates either from Lipari or Pantelleria (Tykot 1996: 46). To date, no evidence has linked Sardinian or Palmarola obsidian sources to the Maltese Islands.

From a purely linguistic point of view the terms chert and flint are not the same thing. Kooyman points out that the term flint 'is not a term [used by] North American geologists' (Kooyman 2001: 28-29). Luedtke also points out that the earliest reference to flint appeared about 700 AD, whereas chert did not appear in any literature till 1679 AD (Luedtke 1992: 5). The major division in term usage appears to be geographic. In American literature, flint does not tend to be mentioned. On the other hand, British literature uses the term flint as referring to dark coloured siliceous deposit found in chalk beds (Kooyman 2001: 28). The term chert is referred to as a lighter coloured, impure, lesser quality material found in limestone beds or as nodules among shale (Luedtke 1992: 6). Geologically speaking, the chert found in the Maltese Islands is found within the Middle Globigerina limestone beds (Bowen-Jones, Dewdney & Fisher 1961: 27), whereas Sicilian flint is found within chalk deposits in the Monti Iblei region.

I find it important to note that two out of three raw materials required importation into the Maltese Islands by sea. This transportation issue is a major debate that has seen archaeologists separated on the matter of constant contact with the Sicilian mainland or whether contact was sporadic and limited. I hope that I can shed some interesting emerging patterns of interaction from my analysis of the Skorba lithic tools.

Skorba: the site

Skorba is a place-name related to a number of fields in the north-west of Malta (fig. 6.2) which overlook the village of Iz-Zebbiegħ (Wettinger 2000: 535). The site is placed on the Bidnija Ridge, which is mainly composed of Upper Globigerina Limestone, overlooking a wide valley (Trump 1966: 1).

Within a culturally constructed and exploited landscape, no site is placed randomly (Horden and Purcell 2000:125). The case of Skorba is strongly in agreement to this observation. From a physical perspective, this site is placed on a high vantage point of an area that has a very good agricultural potential, replenished by the hydrological supplies of this area (Bowen-Jones *et al.* 1961). Any need for soft stone building material would have either had to depend on the recovery of tough Upper Globigerina Limestone or else procurement of Globigerina limestone from the foot of the Ras Il-Pellegrin hill about 3 km away. Clay might have been extracted from Wied Qanotta, about a mile north, and on the Binġemma Ridge, a mile to the south (Trump 1966: 13). The closest chert source for the production of stone tools is once again in the foot of the Ras Il-Pellegrin hill. Ġnejna bay, which Ras Il-Pellegrin overlooks, might have very easily acted as the anchorage bay for any vessels related to Skorba. All in all, the location of this site appears to have been considerably planned out. The site's predominant position in the surrounding landscape must have stimulated the building of megalithic temple at Skorba. The building of this temple was no easy feat, as Trump observed 'owing to the natural slope a considerable quantity of soil had to be dug out at the back and built at the front [to form] a terrace ...' (Trump 1966: 3). To no surprise the most intrinsically significant building was placed at the highest point possible in visual connectivity of the Ta' Ħaġrat temple. This conscious placement of such a multi-phased site is vital to our understanding of the archaeological record discovered.

This site was first documented in the early 20th century as a menhir (Trump 1966: 2) until further studies in 1937 by Capt C.G Zammit. From surface surveying, large blocks were noted in surrounding field walls and prehistoric pottery sherds were observed scattered (MAR 1937-38: 2). An exploratory trench was opened and the pitted globigerina limestone step was uncovered. Due to financial constraints, the excavation was abandoned and the site classified as a possible megalithic temple (Trump 1966: 2).

In 1961, works resumed under the direction of Dr D.H Trump who was at that time Curator of the Museum of Archaeology. Over three years, several campaign periods were led with the following aims:

- to excavate an undisturbed temple site;
- to better understand the earlier prehistoric periods of the Maltese Islands;
- to uncover charcoal fragments for the application of C^{14} dating.

The uncovered prehistoric remains were beyond the excavators' expectations (fig. 6.3). From the excavations emerged two new megalithic temples and for the first time a village from these excavations (Trump 1966: 50). The uncovering of a multi-phased site helped in the formation of a clear cultural sequence for the Maltese prehistoric period, spanning as far back as 5,500 BC (Trump 1966: 48-49).

The Neolithic phases of Għar Dalam, Grey Skorba and Red Skorba are especially important in this site due to their first finding in stratigraphic superposition (Trump 2002: 58-59). A cultural break was observed in Skorba between the Red Skorba and Żebbuġ phases. The site of Skorba was inhabited once again as from the Żebbuġ phase, albeit the cultural break. Structurally the phase of Żebbuġ was hardly represented at Skorba. However, a clear stratigraphic relation was uncovered, such as in grid ZA where Żebbuġ material cut into a Red Skorba deposit and faint traces of a hut wall were made out (Trump 1966: 14). More hut remains were uncovered for the transitional Mgarr phase and the Ġgantija temple period phase. A major alteration to the village fabric was experienced in the Ġgantija phase when a megalithic trefoil temple was built on the higher area of Skorba (Trump 1966: 3). Other major alterations to the West temple occurred in the Tarxien phase, which in the Maltese Islands appears to have led to the widespread 'embellishment' of the megalithic temples. During the Tarxien phase the eastern wall of the Ġgantija temple was demolished so that a four apse megalithic temple would fit at Skorba (Trump 2002: 158-159). However, no further domestic deposits were discovered for the Tarxien phase. A scant Bronze Age reoccupation of the temples was observed at Skorba, a pattern which is also reminiscent of the finds at Tas-Silġ, Borġ In-Nadur and Tarxien. There is also an evident change in the functionality purpose of these megalithic purposes which appear to have been used for domestic dwellings (Trump 1966: 7).

Considering the extensive remains that were uncovered by the 1960s excavations, it is evident that this site is, until now, is a unique discovery. An archaeologist can rarely say that an excavation is ended once the field report is published. Almost to the contrary, the appropriate publishing of a site excavation tends to open further the way for specialist studies. Therefore, the analysis of lithic remains from this site was seen as optimal because:

- The site was excavated stratigraphically;
- Architectural spaces were uncovered from various periods of Maltese

prehistory. This means that we can try and understanding the village fabric at least on a structure to structure basis since we lack the whole village;

- Choice dynamics can be understood, that is, the interaction that was occurring between Maltese and Sicilian prehistoric communities.

Due to the preliminary nature of this ongoing research, the main areas to be discussed are related to the Neolithic period within the site of Skorba which are:

- the Għar Dalam phase wall (fig. 6.6);
- the Grey Skorba dump deposits (fig. 6.3);
- the Red Skorba 'shrine' room (fig. 6.7);
- the Red Skorba courtyard space (fig. 6.7);
- and the Red Skorba south room (fig. 6.7).

There appears to be an over bias of lithic research in favour of quantitative analysis, which leaves us with little insights into the 'subjective meanings [of] the minds of people long dead ...' (Hodder 1986: 7). As shall be examined later in this article, this 'squeezing' of data has been attacked by many archaeologists. Chippendale goes as far as observing that 'the task of the archaeologist [should be the recording] of ruins, hazarding only a cautious and occasional guess as to what they are the ruins of' (Chippindale 1993: 28). Taking both stances into consideration, a middle line can be taken and utilised advantageously. Consequently, the approach taken in this paper is based on the structural context and spatial extent of lithic tool finds.

Understanding the lithic finds in their context of deposition

A study of lithic tools can reveal many aspects of human behaviour. For the purpose of this conference I will limit myself to showing patterns of interaction which can be evidenced from lithic tools.

Skorba, in the Neolithic period, appears to have been a permanent village, possibly even fortified in the Għar Dalam phase overlooking a favourable area of the Maltese Islands. Due to the discovery of a megalithic temple in the core of the excavation area, Neolithic structures were only uncovered where deeper digging was permissible. Therefore, the excavated area of Skorba is limited to a small area from a wider site. This means that any interpretation needs to be cautious and flexible.

Being at a preliminary stage in my research, I would like to tackle the site of Skorba by considering two axes of the data against each other:

- Raw material amounts versus location within Skorba

Unfortunately in the Skorba excavations, artefacts and prominent scatters were not recorded in 3-D as is custom in modern day excavations. Still, by referring the quantities related to their grid, we can still grasp an idea of space and location within these architectural spaces (fig. 6.2).

Għar Dalam Wall: The function of this structure was not confirmed in the 1960s excavations. To complicate matters, this wall runs beneath the West Temple making any further excavations impossible.

The majority of lithics recovered from this area are chert pieces. Small shattered pieces of obsidian were also recovered during excavations (Table 6.1). The major difference between the chert and obsidian lithics is the state of curation at which they were discarded. Tool curation is a term used mostly in New World literature, especially by Binford in the 1970s (Binford 1979: 260). Careful curation of lithic tools means that artefacts are found reduced to bits after a prolonged use life. The chert pieces recovered next to the Għar Dalam wall are waste pieces with no signs of recycling. No major spatial concentration can be seen in Table 6.1 and therefore the scatter cannot be interpreted in any way.

Grey Skorba Deposits: Several scant Grey Skorba deposits were uncovered in the north eastern area of Skorba, especially grids QE, PE, OE (Table 6.2). In the site report Trump recounts that 'although much more material, particularly refuse from the village, could be recovered from further trenches to the north, the reward in terms of information would be unlikely to repay the effort at this juncture' (Trump 1966: 2). Even though no architectural elements emerged from the area, the lithic finds are astonishing. Counting almost 470 lithic tools in three grids, less than 25-30% showed signs of utilisation. This hints further towards the interpretation that this area of the village must have been an extensive dump over a short period of time. The predominant debitage type identified was of a significant size and it must be assumed that the villagers were dumping all their reductive waste from the early stages of knapping.

Red Skorba 'Shrine' Room: Within this space several fragments of anthropomorphic figurines, carved cow tarsals and three 'ritually' mutilated goat crania, were recovered during excavations. Considering these finds and comparing them to the finds within other spaces, interpretation tends to point towards a ritualistic nature, unparalleled within Skorba (Trump 1966: 14).

Around 188 lithic tools were recovered from PD which is situated in the

easternmost corner of this space. In the opinion of the excavator, the structure might have served as a shrine for votive offerings (Trump 1966: 14). Most of the lithic tools from this area are debitage, which seems to contradict elements of a shrine. In such a ritualistic context, it would be expected to recover elements of raw material hoarding or at least tools in workable condition. In comparison to the Red Skorba South Room, three times as many lithic tools were recovered in a ritualistic context. The same ratio of finds can be noted between the 'shrine' room and the paved spaces which separate the two rooms. This might indicate, in my opinion, that knapping could have taken place within the 'shrine' room and products distributed in the village or else this 'shrine' was the property of one family unit. Due to the lack of other structures for the Red Skorba period, this theory is an interesting supposition.

Red Skorba South Room: To the excavators this room offered no strange artefacts and the functionality of this space is thought to be habitual. As already explained above, the lithic tools found in this room amount to about one third of the finds recovered from the 'shrine' room. Some blades were found amongst the majority of debitage. A concentration of lithic scatter can be seen within HE, once again the easternmost corner of this room.

Red Skorba Courtyard Space: No patterns in terms of scatter concentration or tool types were observed for this area. A basic explanation can be that any lithics found with this area were typical in the sense of a village open area, i.e. rubbish accumulates in no organized manner (unlike what is shown in the Gsk deposits).

Understanding human behaviour through lithics

The interest of this conference lies in the interaction of communities in Sicily and Malta which was sustained for several millennia. The description shown above shall now be seen from the point of view of human behaviour processes which led to the archaeological record.

The model known as châine opératoire (fig. 6.8) treats lithic assemblages as a number of analytical steps which can lead the archaeologist into understanding better human decisions (Phillips 2003: 8). There is a logical relationship between actions that humans undertake and the remains excavated by archaeologists (Schlanger 1994: 143). The châine opératoire is usually applied to lithic technology on two different levels: lithic experimentation in comparison to site formation processes and envisioning human behaviour through the material record (Schlanger 1994: 143). The approach I shall take is the latter.

Considering the large percentage of chert pieces observed with limestone cortical skin, it appears that chert was being transported as extracted from the outcrops at least 3-4 km away from Skorba (fig. 6.7). On the other hand, transportation for obsidian and flint presents a multitude of variables. It is very improbable that prehistoric communities from Malta were going to Sicily for lithic raw materials only (Binford 1979: 258). This means that space within the sea vessels utilised would have been limited. Considering the low amount of cortex present on both flint or obsidian pieces found at Skorba, it can be safely deduced that these raw materials were being reduced from excess material and exchanged to the Maltese prior to transportation.

Another aspect which requires further research is the form under which obsidian and flint were being exchanged to the Maltese. Even though we are not dealing with a monetary based society, artefacts are still ascribed value in different scales, and the larger distance they originate from the higher the value the object has (Binford 1979: 260). In this light the archaeological record at Skorba does not tell us whether flint and obsidian were being imported as readily made flakes or cores. I hope that through the study of other sites some sort of pattern will emerge in the different periods of Maltese prehistory.

Up to this date no flint cores have been found from the excavations at Skorba. However, in most instances flint flakes analysed contain evidence of a formal manufacture on their surface. This aspect of production can be interpreted in two ways: cores were being knapped in a systematic manner so as to extract as many flakes as possible or lithics made from flint were being imported pre-made from Sicily. Either way, the main consideration that appears evident is that access to flint must have been limited and very much dependent on the social relations between prehistoric communities from two distant lands. At this point, I have to remark that obsidian follows very much the same pattern as flint does. Indeed, a face value consideration of Trump's obsidian quantity summary leaves us with the impression that a large amount of obsidian lithic tools were recovered from Skorba (Trump 1966: 50). To date, I have only seen obsidian flake shatter from the four areas under consideration in this article. However, these flake shatter pieces should not be considered mere debitage, but rather they show signs of previous tool reutilisation. The only exceptions that can be noted are the two obsidian cores recovered from the Grey Skorba dump deposits. From preliminary observations, both cores are in their early stages of knapping and significantly large in size. This observation can lead us into over assuming, especially since the whole site of Skorba has not been excavated. These two cores throw an interesting light on the possibility that cores might have, albeit in limited quantities, made it to the Maltese Islands.

At the consumption stage, chert is relatively straightforward and repeated in the different periods of Skorba. Tools manufactured appear to have used for immediate tasks. This pattern coincides with the fact that chert was readily available at close vicinity, and therefore, only a small amount of energy was expended into its extraction and manufacture (Andrefsky 1994: 21). If any retouching is present, it tends to be primary and utilization marks are relatively non-existent. The most common chert tool type observed during analysis is the basic unretouched flake, which implies an edge that is compatible for multiple tasks. The inhabitants of Skorba had nothing to oblige them into economization of the raw material. This is contrasted by the opposite trend in obsidian and flint. Not only are these raw materials valuable, but they also appear to have retained a technological superiority. Flint and obsidian appear to have been used for the production of specific tool types, such as blades, backed blades, sickles etc. Their use life seems to be more extended than chert lithic tools. Therefore, reverting to the châine opēratoire model, obsidian and flint tools kept going to and fro between the production and consumption stages through recycling. These tools were eventually discarded once they became too small or broke through use. At this stage I would to refer to a case study recorded by Binford regarding the Nunamiut's discarding of curated tools, 'the discard of personal gear … was generally done inside a residential camp, not in the field where the activity in which the item was used occurred' (Binford 1979: 263). I think this analogy helps us understand why we find these tiny bits of lithic tools within the structures of Skorba.

Interaction between Maltese and Sicilian prehistoric societies through lithic analysis

Lithic tools are insights on human behaviour. In turn, human behaviour implicates that more than one human played a role with this process, and therefore, interaction is quintessential. Lithic tools are a distinct product of humans that required travel over landscape, interaction between societies, importation, and finally consumption. Whilst the archaeologists cannot identify all of these stages, this research is presenting three inter-related axis of human behaviour in Neolithic Skorba.

- There is a significant difference between the production and consumption of the local chert in comparison to the imported flint and obsidian.
- There appears to be a general consensus that Neolithic societies were structure less and vaguely egalitarian. How far is this correct? Could the interaction between Malta and Sicily tell us something else?
- Is this social inequality reflected in the different architectural spaces of

Neolithic Skorba?

Referring back once again to the application of the châine opératoire to the raw materials recovered in Skorba, I believe that the strongest emerging aspect is at the consumption-discarding transition. Whereas chert was used for immediate requirements, flint and obsidian where curated. This is to me especially evident in the constant recording of snapped flint lithic tools at Skorba. I have already referred to the possibility that flint and obsidian were utilised for formal tools which consequently means that they had a specific value that appears to have been higher than the local chert. An unanswered question remains however, were flint and obsidian considered superior to their origin or their ease for knapping purposes? In my opinion the key is considering these two factors as dependent on the interaction process in itself.

Interaction between Maltese and Sicilian prehistoric communities leads to the second axis. When the strict cultural parallels between Malta and Sicily during the Neolithic are considered, the impression is that contacts, and hence the transfer of cultural information, were widespread. We tend to forget, however, that the group of people who made these voyages must have been attributed special status since the knowledge required for this journey could not have been accessible to everyone (Helms 1988: 4). Mediterranean studies are still influenced by Fernand Braudel who once claimed that in any society '*the principal stimulus of trade comes of course from supply and demand …*' (Braudel 1992: 172). We need to detach ourselves from the mentality of a capitalist economy and try to visualise why we do not find a larger amount of imported raw materials. Considering that 80% of the imported lithic tools show signs of curation leads into thinking that importation was not only limited but possibly also restricted.

This means that I do not interpret this 'utilisation until the end' as a sign of a deprived or impoverished community. How can we attempt to justify this when Neolithic culture in the Maltese Islands was so parallel to the Sicilian Neolithic? The lithic tools are giving the impression that the act of interaction was restricted to a group of knowledgeable people who then distributed raw materials once they got to their homeland. So not only was space limited within the sea vessels for raw material importation, but the act in itself of travel could have been a key factor.

Such a consideration leads me to the third axis. The architectural spaces in Skorba, albeit fragmented, appear to have had different functions, which in turn might have been related to who inhabited or owned this space. Hence, the Għar Dalam wall lithic tools need to be considered within the general context. Trump himself asserted that this space might have been communal or defensive due to its large size (Trump 1966: 10). Indeed, the quantities and type of lithics found were

mostly waste and non functional. The Grey Skorba deposits, on the other hand, are purely waste and mostly local chert debitage. The type of this debitage is associated to a significant knapping activity which was being dumped in this area without any relation to a structure. A consideration of the Red Skorba spaces looks rather promising. The so called 'shrine' contains a significant amount of worn out imported lithic tools alongside the several ritualistic objects, whereas the south room contained a very small amount of flint or obsidian lithic tools.

Although the excavations at Skorba have uncovered limited parts of this prehistoric village, there are signs emerging that indicate that importation of these lithic tools was not a public affair. In Malta we have a saying that can be roughly translated into 'there is a hundred dogs for a single bone', and the case for Neolithic Malta could not have been any different. After all, limited amounts only increase the value of an object. The interaction between Sicilian and Maltese parties must have profited some individuals over others. Even simple based societies tend to contain stronger or shall we say more cunning individuals and the Skorba lithic tools appear to indicate towards this scenario.

Interaction through lithic analysis in Maltese prehistory is appearing to be a highly informative venture into understanding human behaviour. By addressing the tangible remnants of imported raw materials through our modern mentality of importation and exportation would be an argumentative fallacy. I quote Hodder here who observed that 'the thing exchanged is not arbitrary, and its associations and symbolism play an active part in the construction of social strategies' (Hodder 1982: 199). At this stage of my research it appears as if consideration of community interaction and subsequent trade may only be one of several conjectures between power, knowledge and distance, but I hope we are heading towards a wider discourse on Maltese-Sicilian prehistoric relations.

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References

ANDREFSKY, W.J. 1994. Raw Material Availability and the Organization of Technology. *American Antiquity* 59: 21-35.

BINFORD, L.R. 1979. Organization and Formation Processes: Looking at Curated Technologies. *Journal of Anthropological Research* 35: 172-197.

BONANNO, A. 2001. *Il-prestorja.* Malta: PIN.

BOWEN-JONES, H., J.C. DEWDNEY & W.B. FISHER. 1961. *Malta: Background for Development*. Durham: University of Durham.

BRAUDEL, F. 1992. *The wheels of commerce.* Berkeley: University of California Press.

BROODBANK, C. 2005. Ulysses without sails: trade, distance, knowledge and power in the Early Cyclades. *World Archaeology* 24 (3): 315-331.

CHIPPINDALE, C. 1993. Ambition, deference, discrepancy, consumption: the intellectual background to a post-processual archaeology, in A. Sherratt & N. Yoffee (eds), *Archaeological theory: who sets the agenda?*: 27-37. Cambridge: Cambridge University Press.

DARVILL, T. 2002. *The concise Oxford dictionary of archaeology.* Oxford: Oxford University Press.

HELMS, M. 1988. *Ulysses' Sail: An Ethnographic Odyssey of Power, Knowledge and Geographical Distance*. Princeton: Princeton University Press.

HODDER, I. 1982. *Symbols in action. Ethnoarchaeological studies of material culture*. Cambridge: Cambridge University Press.

HODDER, I. & S. HUTSON. 2001. *Reading the past: Current approaches to interpretation in archaeology.* Cambridge: Cambridge University Press.

KARDULLAS, P.N. & R.W. YERKES (eds). 2003. *Written in stone: the multiple dimensions of lithic analysis*. Lanham: Lexington Books.

LUEDTKE, B.E. 1992. *An archaeologist's guide to chert and flint*. Los Angeles: University of California Press.

Museum Annual Reports. 1937. Annual Reports of the Museum Department 1936-7. Malta: Valletta.

ODELL, G.H. 2004, *Lithic analysis*. New York: Kluwer Academic.

PHILLIPS, J.L. 2003. Use of the châine opēratoire approach in the Upper Paleolithic period of Sinai, in P.N. Kardulias & R.W. Yerkes (eds), *Written in stone: the multiple dimensions of lithic analysis*: (INSERT PAGES) Lanham: Lexington Books.

RAPP, G. Jr. & C.L. HILL. 1998. *Geoarchaeology: The earth-science approach to archaeological interpretation*. New Haven: Yale University Press.

SCHLANGER, N. 1994. Mindful technology: unleashing the châine opēratoire for an archaeology of mind, in C. Renfrew & E.B.W. Zubrow (eds), *The ancient mind*. Cambridge: Cambridge University Press.

TRUMP, D. 1966, *Skorba*. London: Oxford University Press.

2002. *Malta: Prehistory and Temples*. Malta: Midsea Books Ltd.

TYKOT, R. 1996, Obsidian procurement and distribution in the Central and Western Mediterranean. *Journal of Mediterranean Archaeology* 9(1): 39-82.

Structure	Chert	Flint	Obsidian
Ghar Dalam Wall:			
GB	13	0	5
AB	7	2	2
SB	19	4	21
FB			
NB	26	5	10
FB			
CC	6	1	19
Total	**71**	**12**	**57**
Grey Skorba Deposits:			
QE			
PE	154	6	5
OE	296	2	0
Total	**450**	**8**	**5**

Fig. 6.1. Raw material quantities within grids excavated

Structure	Chert	Flint	Obsidian
Red Skorba South Room:			
IE	2	0	2
HE	22	0	1
LD			
ID			
Total	**24**	**0**	**3**
Red Skorba Paved Space:			
NE	1	0	0
RD	0	1	0
WD	0	2	3
CF	3	2	8
DE			
EE	2	0	0
DF	15	1	0
FE			
Total	**21**	**6**	**11**
Red Skorba 'Shrine' Room:			
UE	1	0	0
WE			
RE	5	0	0
BF			
ND			
NC	3	0	0
PD	182	2	4
ME	0	0	1
TD	1	0	0
YD			
VD	0	0	3
Total	**192**	**2**	**8**

Fig. 6.2. Raw material quantities within grids excavated

Fig. 6.3. Distribution map showing the raw materials utilised in Maltese prehistory. The sources are respectively: Lipari obsidian (circle), Pantelleria obsidian (star), Sicilian flint (square) and Maltese chert (triangle)

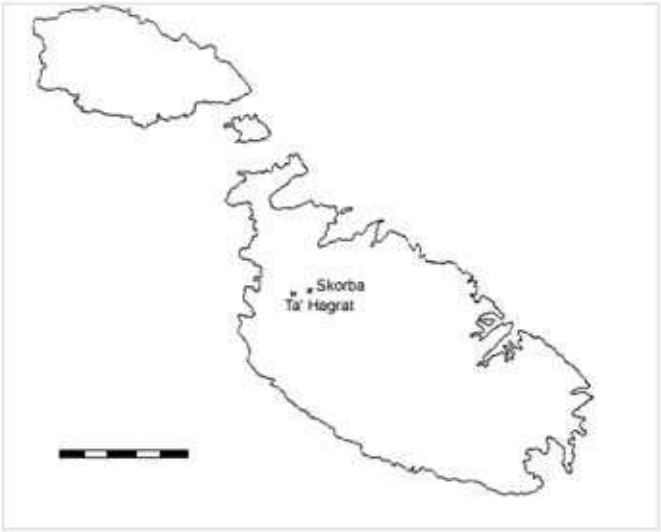

Fig. 6.4. Map of Malta indicating the site of Skorba and nearby Ta' Hagrat

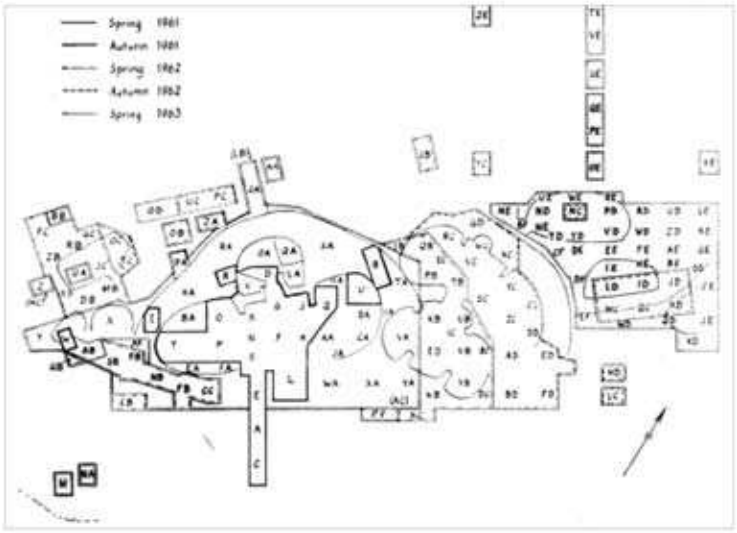

Fig. 6.5. Site plan of Skorba showing the trenches excavated. Areas marked in red are referred to in the text (after TRUMP 1966)

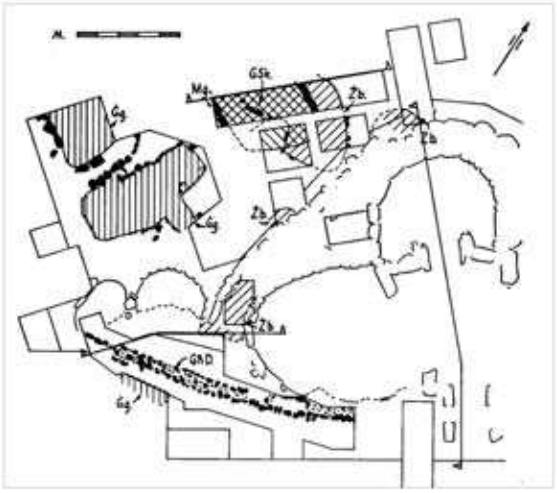

Fig. 6.6. Plan showing the location of the Ghar Dalam wall at Skorba (after TRUMP 1966)

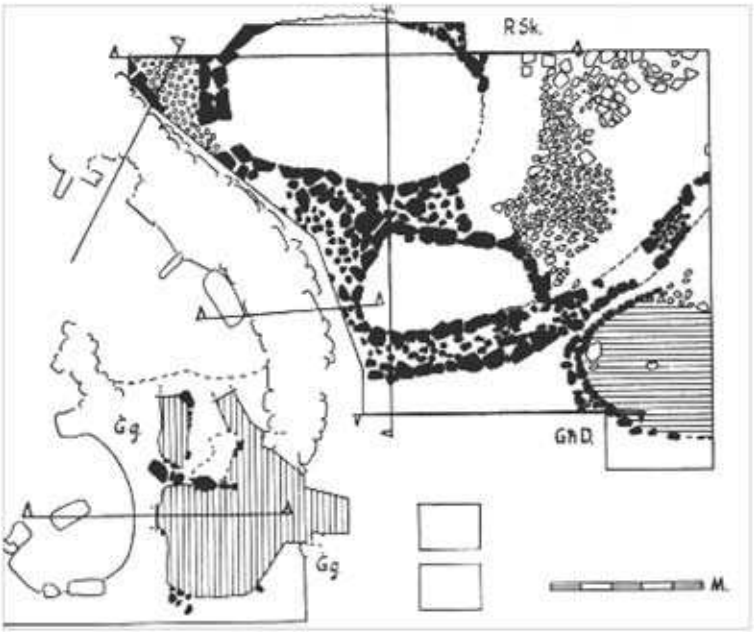

Fig. 6.7. Plan showing the location of Red Skorba 'shrine', courtyard and south room (after TRUMP 1966)

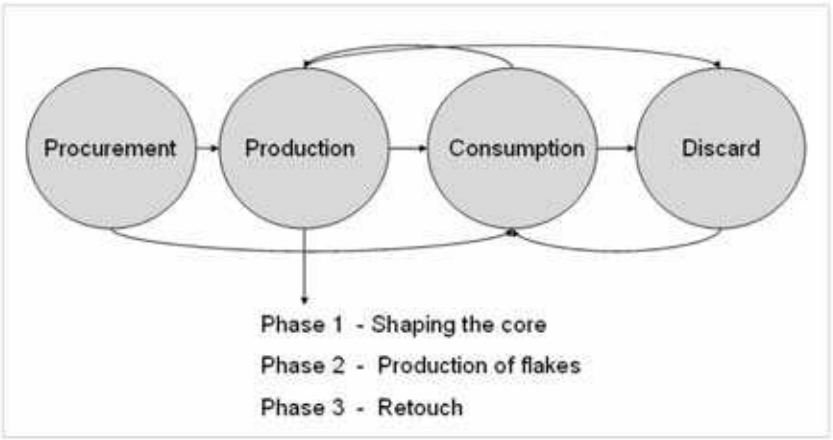

Fig. 6.8. A schematic representation of the châine opēratoire model

Fig. 6.9. An example of refitted chert pieces from grid ND in the Red Skorba 'shrine' room. On all three sides can still be observed the cortical skin