Castelo Belinho’s village (Portimão Algarve) and the sea Landscape, resources and symbols

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1. The Neolithic village

The excavation of an Islamic structure named Castelo Belinho, conducted by the author and Rosa Varela Gomes, in 2004 and 2005, led to the identification of the most Far Southwest Neolithic village, in Western Algarve, dated back to the second half of the 5th millennium BC.

The settlement strategy shows localization on high, naturally defended ground, from where a vast area of territory could be controlled, surrounded by productive agricultural lands and pastures, with Mediterranean red soils, located 5 km away from the sea shore, a distance an individual could travel in a day, and not far from two important estuary areas (Arade and Alvor rivers).

Longhouses with wooden posts identified by holes in the ground, grain storage pits, cobbled hearths, ritual and funerary pits for inhumation, were the architectural elements found, all presenting a large variety of forms.

Twelve $^{14}$C determinations indicate a second half of the 5th millennium B.C. settlement. The material culture is composed of knapped flint and pecked/polished stone artefacts, pottery and shell adornments.

Castelo Belinho’s population was completely neolithized and sedentary, practicing a successful food production economy, based on agriculture and animal husbandry, primarily of ovicaprids but also bovids.

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Significant social differences and hierarchies are mainly detected through the house and mortuary pits dimensions or through the commodities placed with the deceased.

Fourteen graves, twelve of them single, some in pits and others in silos, display a clear polymorphism. Nine of the inhumed bodies were adults and three were children aged between five and eight. It was not possible to ascertain the ages of the others. Three of the adults were males.

Some graves contained evidence of material culture, artefacts of flaked or pecked/polished stone, ceramics and shell ornaments.

Artefacts and faunal remains reveal the aptitude for exploring aquatic resources, acquired from the surrounding environment. Nevertheless, isotopic analysis (δ¹³C and δ¹⁵N) obtained from the osteological remains of more than a dozen individuals reveal that the human preponderant diet was mainly from terrestrial origin (+80%).

Those information conducted the author to support that the connection to the sea, from this well settled and food-producer society, of more or less thirty people, was made essentially through symbolic traditions; possibly due to ancient cosmogonic believes, in the course of ritual meals (which remain conserved in small pits, together with artefacts such as grinding stones and sickle blades) and prestige goods, made from the shells of sea molluscs. These include small beads, a pin, pendants (two of them found inside a house and other in a pit grave) and the exceptional collection of twenty two bracelets, made from Glycymeris bimaculata (Poli, 1795) shells, worn by an individual buried in a pit grave, eleven on each arm, hitherto a unique case in Iberian archaeology.

2. The sea

The proximity of the Neolithic village to the Ocean and to two large estuary areas, due to its food resources, could not be indifferent to its habitants. However the geographic and archaeological testimonies found in Castelo Belinho permit to go further, beyond the traditional interpretations which only reveal the economic exploration.

One cannot doubt the importance of the food provisions for every living being and the adjustment and instinctive reactions that the need for food originates. Nevertheless human groups are defined by their aptitude to construct and manipulate symbols, to live and create social groups and societies to those commodities and survivance itself integrates the semiologic world.

According to this perspective there are three interaction aspects between the sea and the Neolith-
ic population of Belinho although such relations are not isolated and are linked to each other.

The first concerns the sensorial relation with the sea, the visual presence of a long blue line in the southern horizon to all who lived in that village. It’s the never ending sea, without a real dimension, moving constantly like every other living being. It disappears hidden by clouds and mist, during rainy days and storms and even throughout the night, but its continuous attacks to the cliffs or when the waves burst and spread against the sandy beaches, reveal its presence.

Many other times it’s confused with the firmament in unification with the sky the frontier with an unearthly world. It was a general knowledge that it was inhabited by strange and monstrous beings with fantastic shapes and sizes. It’s from the sea that enormous water streams are born, penetrating inland embracing it especially during the winter, worming like enormous snakes emerging from the chaos of primordial waters shaping cosmogony myths and supporting cultural origins. These conceptions are present in many ancient societies as well as in many still existing ethnographic groups.

The existence of the sea attends in many societies, even the ones which never seen it, not even through images, in the presence of myths, telling about an enormous extension of water or huge lakes like in the example of the Baruia, a people living in the inland mountains of New Guinea (Godelier, 2000, p. 215, foot note 28).

The second aspect is the undeniable economic importance, supported by many resources obtained in the sea and in estuaries and lakes located nearby. Mammals, fish, crustaceans, molluscs, seaweeds and many other vegetal species able to attract mammals, birds or reptiles used then and now as a food resources.

The archaeological excavations made in Castelo Belinho revealed in fact some osteological remains from fishes, although the archaeological record, probably due to the taphonomy processes, reveal essentially the consumption of molluscs, from cold waters of rocky bottoms (limpets, mussels, barnacles), as well as from sandy bottoms with coolest and brackish waters a characteristic from estuary areas (clams, cockles, sea razors).

Those finds are usually interpreted as food remains although a large sum of it was recovered in small negative structures, excavated on the ground,
Fig. 2 – The Castelo Belinho village and the sea. Relations and interactions.

Fig. 3 – Castelo Belinho, near two important estuaries and the sea.
near pit graves and in relation to some artefacts, such as grinding stones, therefore depositional pits with a ritual connotation and not just the satisfaction of a need to survive.

It’s very important to mention that the isotopic values δ\(^{13}\)C, are inferior to -20/21 ‰, indicating a diet predominately supported by earth proteins (>95%). On the other hand the values of δ\(^{15}\)N, are located around 5‰ and 12 ‰, also indicating the consumption of earthen proteins. When crossing the entire available data one can sustain that the Castelo Belinho’s Neolithic habitants did not consume more than 20% of nourishment from maritime environments. The scarcity of osteological remains from mammals and birds, contrarily to the malacological remains, permits to conjecture that the people living there possessed and controlled a food production economy, based on husbandry and cereal agriculture for which a large part of the found structures and artefacts contribute (silos, grinding stones, sickles, *tribula*, large axes and adzes).

The third and last interaction is the symbolic one and one of the most significant, attending to the definition of Man in this paper’s introduction.

The reference to the sea presence in the landscape of Belinho’s habitants was already mentioned as well as some conceptual aspects of its responsibility, and also the ritual meals and deposits where molluscs had an important symbolic role that could even have been considered spiritual food. The presence of shells from sea molluscs is not a novelty in ritual and funerary contexts since the Neolithic up to the Bronze Age in the Iberian Southwest (Gomes, 1994, pp. 83, 84).

Still according to this perspective it makes perfect sense to think of its aquatic origin, anaerobic and hostile to the human presence, as well as its intoxicating capacity, able to unchain conscious states transformations and energized sensations responsible for conceptual developments and the believe
Fig. 4 – House 1. Plant, post holes' alignment section, finds distribution and reconstitution of the wooden structure (draw J. Gonçalves, after M. V. Gomes).
Fig. 5 – House 1. East and Western finds (draw J. Gonçalves).
that the supernatural world can be contacted, a sensation searched by many shamans in different regions in the planet.

And it was also the sea which gave to humans some raw materials such as shells able to be transformed in rare and prestige objects with a symbolism connected to its origins and shape, as well as the presence of nacre, a shiny calcium carbonate of light tones and iridescent.

In Castelo Belinho some woman wore shells of *Glycymeris glycymeris*, pierced at the umbo or top as adornments, hanging on their necks, arms and ankles. Others and even some men must have used cut, pierced and polished beads made from the shells of molluscs, although the species are difficult to determine but which had a clear maritime origin.

Two shells of *Glycymeris* used as pendants, probably with an apotropaic value, were found in the western area of a long rectangular house.

Nevertheless it was in the middle of a burial ritual that the most significant testimonies of this symbolic relation were found, with twenty two bracelets in the forearms of the deceased.

This find, matchless in all of the Iberian Peninsula unmistakably demonstrates the high status of the deceased represented or given through those adornments due to the prestige symbols they contained.

In this sense the symbolic presence of shell adornsments was present in Belinho’s life and death.

### 3. Long house and shell pendants.

Three parallel lines of post holes cut into the bed rock were identified. Some still preserving the stone wedges and earth packing, helping the fixation of the vertical posts corresponds to a latent structure of a long house.

The structure, directed according to its long axis west-east and its entrance facing south measured 16 metres long and 2 metres wide. In the northeast corner this structure was reinforced using a small wall made of stones and clay.

The three post holes’ alignments may indicate a possible two waters roof house. At the central part of this structure a hearth and a pit were identified, near the entrance.

On the western side of the house the excavation offered plain and decorated pottery sherds, flint...
Fig. 8 – Structures 4, 5 and 6.
complete and broken blades, bladelets and flakes and two adornments of *Glycymeris glycymeris* shells, pierced at the umbo.

On the opposite side a sherd of plain pottery and a polisher for large axes, two wasted flint cores, flint bladelets, flakes, a piercer and knapping debris was found.

The function differentiation of the finds may indicate that one of the house areas, in the east side could be predominantly or even exclusively used by women in their daily activities (pottery, adornments), while the other, in the west side corresponds to a space used mostly by male individuals (axe polisher, flint cores).

The cobbled floor discovered inside the house with sub circular plant and 0,090 m diameter filling a small ground depression and showing signs of fire reveal another fireplace intended to prepare food. Around it other economic activities clearly took place. This hearth provided illumination, heat or to keep wild animals away, working as a social aggregation centre for the household occupants.

The artefact polisher finds parallels in a similar objects with two layers found in the same site (structure 27) and in another archaeological site, an Early Neolithic settlement in Carrascal (Oeiras) or even in an example from the dolmen II from Fernão Vaz (Ourique) found together with edger maybe indicating the presence of a craftsman specialized in the production of such artefacts (Cardoso, 2005, pp. 26, 42, fig. 10-8; Beirão & Tavares da Silva, 1978, pp. 34-37, plates V and VI).

4. The bracelets grave

Fourteen graves were identified in Castelo Belinho with an assorted polymorphism. They were located in the central area of the village together with other underground structures, despite being more frequent in the south-eastern quadrant and especially in the eastern part of this quarter.

A grave, shaped as a silo (structure 4), still conserving a small tumulus composed by stones and earth, contained scarce osteological remains of an individual over 35 years old, who’s sex was impossible to determinate, surrounded by reddish earth sediments also had faunal remains, three flint bladelets and one blade, two hammer-stones and two grinding stones, as well as some ceramic sherds belonging to bowls and spherical vases. Nevertheless the most remarkable find were the twenty two *Glycymeris bimaculata* (Poli, 1795) bracelets, eleven on each forearm of the deceased. This individual offered the most ancient radiocarbon determination for this site.

These adornments, carefully cut and polished, not showing any ware marks, were made from the shell of a sea molluse, not very rare or difficult to obtain, although originally found in the lower sea coast (up to 24 meters depth) where it lives buried in the sand or in the sandy silt of the southern Portugal shore, as well as in all the Mediterranean.

In all Portuguese territory from Early Neolithic to Late Chalcolithic there are only two dozen similar bracelets although smaller and narrower. The *Glycymeris* bracelets found in other sites in Algarve were discovered in Ibn Amar cave (Lagoa) and in the Cerro das Cabeças Late Neolithic grave, excavated by the author.

5. Other finds

Hemispheric pit grave, cut into the bedrock (structure 52) kept the remains of a male adult together with some grave goods. Lithic artefacts (a backed bladelet and a double side retouched bladelet) and a shell pendant made from the valve of *Glycymeris consubrica*, found in sandy sea beds and quite smaller than the *Glycymeris glycymeris* pendants as the ones found inside the long house.

Another pendant made from *Glycymeris glycymeris* (Linnaeus, 1758) was recovered near a cobble floor (structure 65).

A fragment of another similar pendant, corresponding to the umbo of the shell, was found inside the southern area of a medieval ditch, thus absent from its original context.

The use of *Glycymeris* shells as an adornment, pierced at the umbo or top, is also documented in the Early Neolithic archaeological site of
Fig. 9 – Structure 4 (grave). Finds (draw. J. Gonçalves and A. Machado).
Rocha das Gaivotas, in the northern area of the São Vicente Cape (Vila do Bispo, Algarve) (Carvalho, 2008, pp. 119, 414).

From the underground structure (structure 35) in the shape of an 8 part of a shell pin was found, therefore it was most likely an adornment, used in clothes, hair or even a piercing.

Two disc beads, of different dimensions, used parts of shells of sea molluscs from indeterminate species.

6. Conclusions

Writing the symbolic history of shell artefacts implies knowing its origin, manufacture process and use, issues that the Castelo Belinho’s site allows to infer.

It’s important to refer that the use of mollusc shells as adornments or symbolic elements goes back in the Iberian Peninsula to the presence of the Neanderthal Man, confirmed by the occurrence of pierced bivalve from the Cueva de los Aviones and Cueva Antón, both in the Murcia region (Zilhão et alii, 2010; Vanhaeren & Julien, 2011, p. 57). This use would be amelio-rated together with the development of their cognitive capacities.

The shell artefacts in general but the twenty two bracelets in particular considering them as the most difficult to make objects and their rarity in Neolithic contexts are the result of a production chain (chaine opératoire) that started in the recovery of the Glycymeris bimaculata or the Glycymeris glycymeris shells, in beaches in some low tides belonging to dead sea animals. The polished surfaces motivated by sea erosion and the biological characteristics confirm this form of recovery.

After the recovery the biggest and the best ones would be selected following a very careful cut and polishing. This anthropogenic action did not need a lot of craft specialization and would be made with a stone polisher, namely sandstone as the one found inside house 1. The original convex shape of the shell would help this task. This could be made in the village or near the sea where the water and sand would help the process.

The bracelet would become a personal item of its producer and it was integrated in a low-in-
tensity production. The bracelets could be traded or offered or even made sacred concerning the quality, dimensions and the polished look, reflecting light in glaring colours as well as the origin of the raw material.

The bracelet shape would have a cosmic symbolism according to its circular and closed outline becoming an apotropaic symbol that could protect the hands and arms and for many human groups the symbol of total union, of body and spirit (Chevalier & Gheerbrant, 1997, p. 204).

Moreover, the symbolic value of each bracelet would be related to the rarity of the raw-material and the way it was obtained (a gift from the Gods?), to the work a person would invest in its production as well as its appearance and ancientness. In some ethnographical societies the most precious objects are the rarest and oldest. This last aspect is related to the few people who produced and possessed such objects, which could become sacred items. So they needed “to be needless or unusable in subsistence and existence quotidien activities” (Godelier, 2000, pp. 202, 204).
As precious objects which are symbols of the existence of the power of imagined beings (gods, spirits and ancestors) that some ethnographic societies believed to be manufacture by them, the shell bracelets can correspond to some aspects of those beings (Godelier, 1998, p. 18; 2000, p. 201). These objects also create a distinction between the people who have them and the ones who don’t, creating inequality in the social status and the reinforcement of hierarchies bearing in mind and never forgetting that the relation with the sacred world and the access to its symbols are the activities which legitimate many political aspects. To detain a sacred object, especially one that could be used in some rituals, would be essential to hold and justify political supremacy or domination (Godelier, 1998, pp. 17, 20; 2000, p. 47).

The Castelo Belinho bracelets are hence a rare assembly of sophisticated prestige goods somehow similar to some sets of analogous objects, tied in layers, manufactured in some Pacific Ocean and New Guinea isles. Here they have a high emblematic

Fig. 15 – Shell bracelets from Eastern New Guinea (Ø = 0,09m) (after. Van Cutsem, 2002, pp. 300, 357).

Fig. 16 – “The birth of Venus”, from Sandro Boticelli (1483).
and economic value, much appreciated although not very practical to ware. They circulate especially as gift and re-gift commodities of a symbolic interchange system such as the Trobiandes isles kula but also in many other areas and continents (Malinowski, 1975, p. 99; Harrison, 1992, p. 237; Godelier, 2000, p. 69; Trubitt, 2003).

In the American Southwest (Arizona, New Mexico, Mexico) there are some 2nd millennium BC societies which produced large quantities of shell ornaments, namely in Glycymeris, recovered in the Gulf of California shores that would integrate intense commercial relations and travelling on occasion more than 200 kilometres (Woodward, 1936; Bayman, 1996).

The beads made from sea molluscs due to symbolic reasons are the most ancient adornments known to Man. They go back to 100,000 years ago and to the Middle Palaeolithic with the pierced Glycymeris shells found in Qafzeh Cave, in Israel, and in the Grotte des Pigeons in Eastern Morocco dated from 82,000 years ago even older than the ones identified in Blombos Cave in South Africa, red painted and dated from 75,000 years ago and already related to the Modern Men (Holden, 2004; Heushilwood et alii, 2004; D’Errico et alii, 2005; Bouzouggar et alii, 2007; Assefa, Lam & Mienis, 2008).

To many Australian communities the shell iridescent nacre by reflecting the rainbow colours is symbolically related to a large serpent which dominates the rains and lives in water springs and rivers (Lanternari, 1952, p. 121).

Shell pendants and beads are protection symbols due to their shape but mostly in relation to their sea origin, the big symbol of life and power where the large myths of the universal cosmogony creation are immersed.

In many societies shells are associated with the female sexual organs whereat such as the sea are connected to the erotic and fertility and providing some old European legends such as the birth of Aphrodite/Venus. In many African, American, Asian and Oceanian ethnographic societies sea shells are use as adornments for deceased, ensuring its resurrection. Some shells, such as the cowries (Cyprea moneta) are believed to have protection proprieties against lightnings and other harms offered by Nature (Dias, 1992, pp. 150, 151).

The presence of shells in ritual meals or offerings as the ones identified in Castelo Belinho or in graves from other archaeological sites can in fact be related to that symbolic aspect related to regeneration and to the cycle of birth, death and resurrection that these object would represent, intrinsically believed to belong to a underground or ctonian environment of primordial waters although still able to interfere in the uranian sphere through the rainbow that its nacre reveals.

The shell artefacts were socially valued and revealed the strait connection between the Castelo Belinho’s population and the sea, not in the survival questions but related to mythological constructions and cultural memory, trigged by the continuous presence of that enormous imagination stimulus, a base to diverse conceptualizations and the crib to universal cosmogonies.

Bibliography


