



*Materialidade arqueológica:  
entre a Geografia e as  
Sociedades Humanas*

## MARITIME CULTURAL LANDSCAPE, SOCIAL ORGANIZATION, AND SHELL MIDDEN ARCHAEOLOGY IN SENEGAMBIA

## PAISAGEM CULTURAL MARÍTIMA, ORGANIZAÇÃO SOCIAL E ARQUEOLOGIA NOS CONCHEIROS NO SENEGÂMBIA

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### Abstract

West Africa has a long coast and numerous interior waterways where aquatic life and landscape associated with myths, legends, history, and complexity are present in some fishermen and shellfish collector groups. In these groups, the maritime cultural landscape plays a major role in their culture, identity, power relation, and in their interaction with the environment. Certain islands, spaces in the Atlantic Ocean, and aquatic animals such as manatee is sacred. They are shaped within a mystic world that uses rituals and has important social, cultural, and political ramifications. This form of complexity is not well documented in archaeological theories and landscape analysis in West Africa.

Besides widening the nature of complexity in West Africa, maritime cultural landscape analysis can be extended to shell middens archeology in Senegambia where archaeological research on hundreds of sites along the coast have focused on the funerary monuments. Hence, we know little about the daily activities and how people (who were fishermen and shellfish collectors) interacted culturally with the sea.

This paper uses the fishermen and shellfish collectors of Senegambia as an example to add to the body of knowledge around seascape, power, identity, complexity and water related culture and shell midden archaeology in Senegambia.

*Keywords:* Maritime cultural landscape, seascape, spiritscape, shell midden, complexity, peuple de l'eau, Senegambia.

### Resumo

África Ocidental tem uma longa linha costeira e canais interiores onde a vida aquática e a paisagem associada a mitos, lendas, história e complexidade estão presentes em alguns grupos de pescadores e marisqueiros. Nestes grupos, a paisagem cultural marítima desempenha um papel importante na sua cultura, identidade, relação de poder e na sua interação com o meio ambiente. Certas ilhas, espaços no Oceano Atlântico e animais aquáticos como lamento é sagrado. Eles são moldados num mundo místico que usa rituais e tem importantes ramificações sociais, culturais e políticas. Esta forma de complexidade não está bem documentada nas teorias arqueológicas e na análise da paisagem na África Ocidental.

Além de ampliar a natureza da complexidade na África Ocidental, a análise da paisagem cultural marítima pode se estender à arqueologia de concheiros na Senegâmbia, onde pesquisas arqueológicas em centenas de locais ao longo da costa se concentraram nos monumentos funerários. Consequentemente sabemos pouco sobre o cotidiano e como os povos (que eram pescadores e mariscadores) interagiam culturalmente com o mar. Este artigo pretende utilizar os pescadores e mariscadores da Senegâmbia como exemplo para adicionar ao corpo de conhecimento sobre paisagem marinha, poder, identidade, complexidade e cultura relacionada à água e à arqueologia de concheiros na Senegâmbia.

*Palavras-chave:* Paisagem Cultural Marítima, Paisagem Marinha, Paisagem Espiritual, Concheiro, Complexidade, Pessoas da Água, Senegâmbia.

## 1. Introduction

Archaeologists had increasingly come to feel that the standard theories on complexity have not been inclusive enough, because they did not take into account many data from certain areas of the world outside of Egypt or Mesopotamia. This had reduced those theories' applicability and shows their limits. As Yoffee and Sherratt (1993, p. 1) put it: "*theoretical schools have arisen to have a privileged status in determining what constitutes valid explanation in archaeological research. ...Such schools are clearly seen as grounded in partial bodies of empirical material*".

Africa was a good example of an area left out of the archaeological theorizing on complexity. The finding of new forms of complexity in Africa that were not included in the range of expressions predicted by the standard complexity theories should be another reason for the inclusion of African data in any archaeological theorizing on complexity. On the basis of ethnographic and historical data, S. McIntosh (1999) mentions the existence in Africa of societies with central authority balanced within a diffuse, segmented and heterarchical power structure. She mentions also the presence in Africa of societies with horizontal differentiation and consensus-based decision making. All these types of organization are characterized by the presence of several sources of power vested in corporate entities, such as lineages, age groups, cults and secret societies.

The continent "*provides a rich corpus of material relevant to an understanding of societies in which central authority, often a ritual nature, is paired with a powerful structure that is diffuse, segmentary, and heterarchical, as well as societies in which considerable complexity is achieved through horizontal differentiation and consensus based decision making. The distribution of power among several corporate entities (e.g., lineages, secret societies, cults, age grades) can be regarded as a strategy that has successfully resisted in a variety of ways the consolidation of power by individuals*" (S. McIntosh *apud.*, p. 4).

Coastal societies offer very interesting data. West Africa has a long coast occupied sometimes by fishermen and shellfish collectors. They often have complex social organizations where the maritime cultural landscape and water based rituals are essential in identity and power politics. One purpose of this chapter is to contribute to the expansion of comparative complexity in West Africa by doing a maritime cultural landscape analysis of the Senegambian coast and by proposing ways to widen our understanding of the shell middens along that coast.

## 2. Maritime Cultural Landscape

The sea can be considered as a “landscape” called seascape. As stated by Gusick et al.: “landscape has been conceived as a land-based concept; something that exists above the waterline. Yet, when considering the vast array of people, places, and cultures worldwide that rely on maritime environments and are considered maritime societies, this land-based orientation must be reconsidered. Both the landscape and the seascape are integral parts of these societies and collectively form a complex setting that encompasses a maritime space. This maritime space can provide cognitive, cultural, and social activities that shape culture” (2019, p. 140).

Gosden and Pavlides who worked in the Arawe Islands (Papua New Guinea), stated well: “If the way in which land is used is partly determined by the sea, we should think in terms of seascape, as well as landscape, extending the range of the latter term” (1994, p. 162). Seascape and maritime landscape are interwoven by the population to express their own meaning and suit their needs (cultural, social and economic). Cultural and social aspects such as cosmology, gendered kinship, subsistence activities, political power and status, rituals are visible and invisible elements that are part of the built and perceived environment. They affect the meaning of the landscape. In the process of subsistence activities, mobility, place making, and narratives, these elements bind people together in relationship. Space and culture affect each other. Through cultural construction people make meaning of themselves, their place, and activities.

For a holistic approach combining seascape and maritime landscape, the term maritime cultural landscape was coined by Westerdhal to comprise “the whole network of sailing routes with ports and harbors along the coast, and its related constructions and remains of human activity, underwater as well as terrestrial” (1992, p. 6). Ford: cites Sullivan and Breen who considered maritime cultural landscape analysis as an exploration on “how people perceived and understood the sea and used this knowledge and understanding to order and constitute the landscape and societies that they live in” (2011, p. 5).

The common trait remains an understanding of the world influenced by the conception of the sea. This shows that, from the shoreline, the sea is not a frontier. In the same way the land and the terrestrial world are manipulated, the sea and the aquatic world can also be manipulated. Far from being a distant space used for subsistence activities only, the sea becomes a cultural space integrated to the coast. In addition to being an economic space (fishing), the sea is also a cultural and symbolic space. The sea is riche

in geographical and cultural elements. It is the chosen area for powerful rituals practices engendered by its cosmological and religious significance (Cooney, 2003).

Maritime cultural landscape was aimed to combine underwater archaeology and terrestrial archaeology (Michael, 2014). But in areas such as the Senegambian coast, it finds a wider and important application in the analysis of the water related culture and ways of life. In what otherwise seems a limitless and undifferentiated space, the fishermen constructed landmarks that are cognitively important in their socio-cultural memory and play an important role in their construction of reality. There are areas in the sea that are integral part of the creation of cultural meaning. They are used during ritual activities. These ritual spaces in the seascape become spiritscapes (McNiven, 2010). This makes the sea an important component of the symbolic reservoir that shapes sense of place, belonging and social complexity.

### 3. Sea and complexity in Senegambia

Maritime culture “is based on the subsistence gained from the seas and the water, and consists of all the thought patterns, cosmologies, customs, objects, phenomena and patterns of action connected with a life by the sea” (Westerdhal, 2008, p. 210). It is an important factor in creating identity in the coast.

Along the coast of Senegambia, there are people for whom fishing and shell collection are important part of their activities. Their maritime landscape, culture, identity, and construction of reality are totally integrated to the sea. The sea is part of their *terroir aquatique* (Cormier Salem, 1995). Water in general and the sea in particular, are imbedded in their culture. Water is used for libation, in the rituals, and in other cultural activities because it purifies, protects, heals, and regenerates the body and the spirit. Cosmology and ritual practices are means by which they construct the sea, give it meaning, and mediate their relationship with it. This is why they are called “people de l’ eau. (people of water). Through these cultural processes they transform the water (H<sub>2</sub>O), into H<sub>2</sub>O (C) (C meaning culture). They construct water from a natural element into something very cultural.

In fact, Senegambian coastal people share the belief in sea deities or water spirits (who are mostly women). In the water (sea) live tutelary spirits depicted as a mermaid who are ancestor and protector of specific fishermen groups and localities: Maam Kumba Bang (Saint Louis), Maam Njare (Yoff), Kumba Kastel (Gorée Island), Maam Kumba

Lambay (Rufisque), Leuk Daour Mbaye (Dakar) Mama Ngeec (Joal-Fadiouth), Mariama Sangomaar (Niodior – Dionewar). All the mermaids have female name excepted Leuk Daour Mbaye. Mermaids are guardians or protectors of the community. Prayers are invoked during communal and individual ceremonies that involve libations, animal sacrifices, and recital of the deities' genealogy (Sarr, 1983, Dupire, 1991, Sylla, 1992, Dumez & Ka 2000, Ngom, 2018).

Diversely, aquatic animals such as hippopotamus, lament, crocodile and turtle are considered as sacred. People consider that all animals are endowed with a certain humanity. Sakho who uses the Niominka of the Salum Delta as an example, stated: “humans and other beings in nature, especially animals, share the same human essence. Consequently, the logics of their interactions are not intelligible through a prism that follows the distinction of nature between them. In truth, through our life experiences we are accustomed to the fact that, in some localities, non-human beings are considered and treated as human beings because they are known to share with them connectedness systems and similarity based on physical or metaphysical relationship. Certain populations who thus objectify this way their vision of the world or their being-in-the-world are categorized as referring to either animal or totemic ontologies” (2017, p. 110).

Certain sea spaces are considered as home of the titular spirits and other spirits. They are used as altar for the ritual performance. Those altar are located in islands (Gorée, Teungeen, Sangomar, Fadiouth, Ile Madeleine, Ngor) and certain areas on the Atlantic Ocean. With the transformation of these spaces into sacred places, they become spiritscapes (Figure 1).

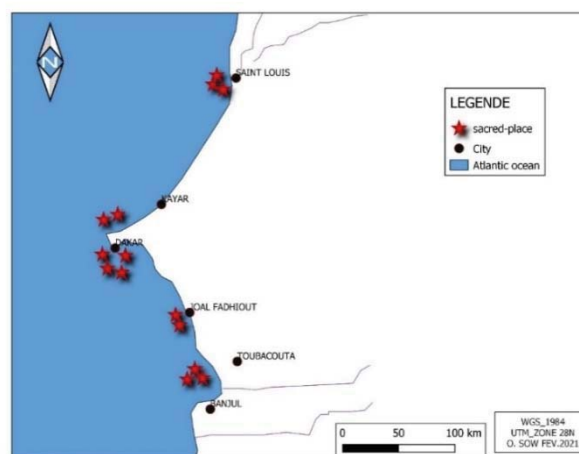


Figure 1- Localization of a few spiritscapes in the Atlantic Ocean. Source: The Authors.

They are important centers of a spiritual belief, religious practices, and rituals.



Because the open sea is seen as an intimidating, constructive / destructive force and a dangerous, uncertain, and mystical world populated with mermaids, spirits, and aquatic animals (some of which are endowed with powerful knowledge and mystical powers), the population develop what Malinowski (1925) and Radcliffe-Brown (1933) called the anxiety ritual approach: practice of ritual performance and avoidance of taboos. Gris-gris, amulets and mystical water are put on the fishing boats for protection and for good fishing results. Through ritual practices, spiritscapes are used for protection and for healing individuals, communities and society. Rituals include dance (during which some people fall into a trance), incantation, and sacrifice for the spirits and the mermaid. This transforms the spiritscapes into a liminal space between the living and the spiritual worlds as evidenced by Fall et al., (2011) in the relationship between the titular spirits living in the sacred island of Sangomar, the sea and the Niominka.

Another example comes from the Ile Madeleine (vicinity of Dakar) where the Lebu sacrifice animals such as cow, goat, rooster or hen. They also use cola nuts, milk, knives, millet porridge, biscuits, calabash, ceramic pots, pestle, mortar, and coins (Figure 2). Some area of the house, in the bush or in the vicinity of the village are used as altar<sup>1</sup>.



Figure 2 - milk, coin, cola nuts and biscuits found on the altar for Leuk Daour Mbaye in the Ile Madeleine. Source: In Ngom, 2018, p. 62)

The rituals are led by specialists who detain the occult knowledge and have special relationship with the mermaid, spirits or the aquatic world. They have also the technical

<sup>1</sup> Because of Islam, colonization and urbanization, these practices have undergone mutations accompanied by religious prohibition (Islamic, Catholic) of their practices, pushing their abandonment or clandestine practice. However, they have survived in the Lebu who seem to have successfully made a syncretism between Islam and African religious practices

and mystical mastery of the sea. That ritual exclusivity and access in these sacred places give them preeminence and authority.

Knowledge and mastery of the sea play an important role in the social organization. The cult chief or priest is from the ruling lineage. In the Salum Delta, he is the head of the lineage and descendant of the lineage founder: Jaxanoora (Maama Ngeec), Simala (Sangomar) (Becker, 1979a; Fall et al., 2011). In a similar situation, the leading Lebu lineages (Seck, Samb, Mbengue, Guey, Diagne, Ndoy, Dyop) claim each, special relationship with the sea and the aquatic world (Balandier & Mercier 1952). This highlights the ways and means by which the sea and the aquatic world influence the social, cultural, and intellectual constructs. It shows clearly that vis à vis the coast, the sea is not a frontier. In fact, the coast is socio-culturally entangled with the sea.

#### **4. Maritime cultural landscape and shell middens archaeology in Senegambia**

There are thousands of shell midden sites along the 700 km long Senegambian coast. The historical relationship (chronology) between today's population (for whom fishing and shellfish collection is still important in their subsistence activities) and the builders of the shell mounds is still unknown (Becker, 1979b).

The shell middens were first formed during an eustatic event known as the Nouakchottien marine transgression (6800 - 4000 BP). During that marine transgression, the sea invaded the shoreline and hundreds km in the hinterland (Michel & Asseman 1969; Michel, 1973; Monteillet, 1988). This engendered the flourishing of malacological fauna and several fish species. Later on, in a Late Stone Age context, people started to exploit the aquatic fauna; engendering the formation of anthropic shell middens. These shell middens sites were formed from the Late Stone Age to the 2nd millennium AD with some regional and intraregional chronological differences.

There are two types of sites: the shell middens sites (site d'amas) and the tumulus (tumulus coquilliers used for inhumation). Most of the shell middens sites are located in 4 areas: Senegal delta, Dakar and its vicinity (known as Cap-Vert), Petite Cote Salum delta, and the Casamance region (Figure 3). Only a few sites have been excavated (Linares de Sapir, 1971; Descamps et al., 1974 & 1977; Deschamps & Thilmans, 1979; Dieng, 1980; Mbow, 1997; Kantoussan, 2006; Diouf, 2011 & 2020; Camara et al., 2017).

### Carte d'emplacement des amas coquilliers au Sénégal

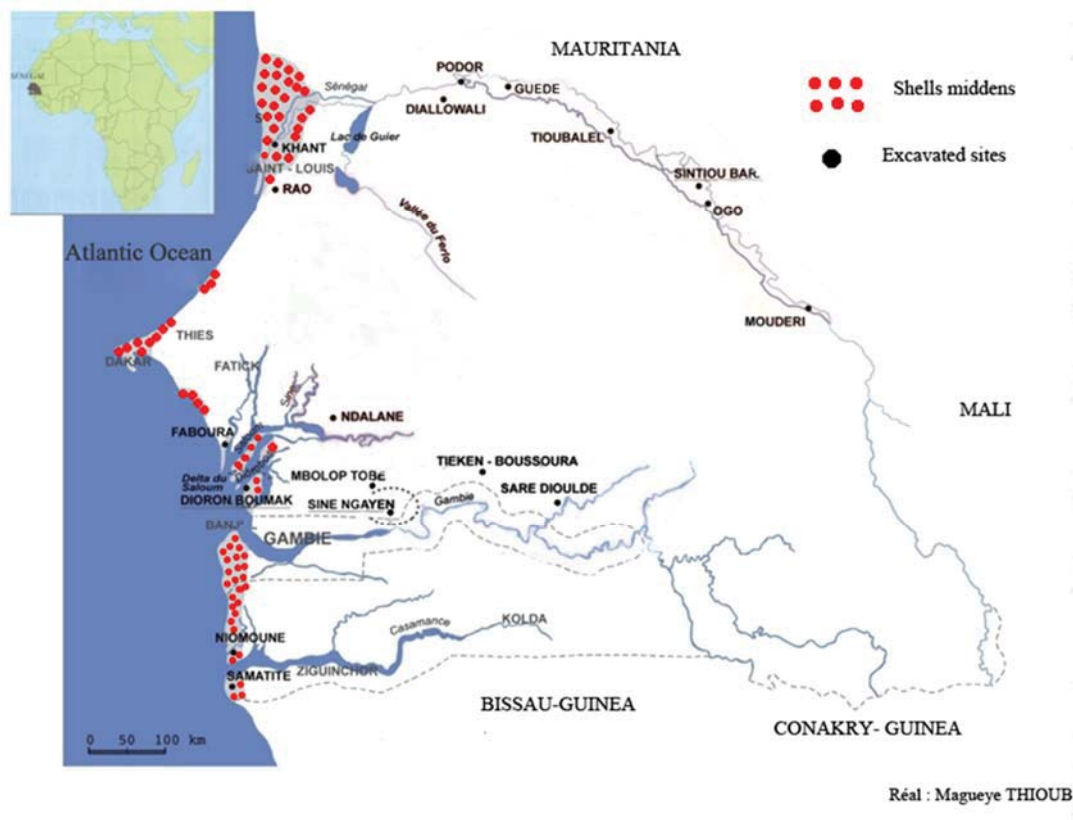


Figure 3 - Location of the shell middens sites along the Senegalese coast. Source: drawn by Maguèye Thioub.

Data show that the dominant type of shellfish collected were *Anadara senilis* (arches), *Crassostrea gasar* (oyster), *Patella safiena* (limpet), *Thais haemastoma* (redmouthed rockshell), *Murex hoplites* (purple), and *Cymbium* (cymbium) (Ravisé, 1975).

Of all the three areas, the Petite Côte – Salum Delta contains the most spectacular shell midden sites in terms of number (more than 200 sites), size (the size of tumulus ranging from a few m to 12 m), height (as high as 11 m), material culture (ceramic diversity, presence of gold, copper, and iron artifacts), and high number of inhumations (Faboura, Fadiouth, Falia, Dioron boumak)<sup>2</sup>. The maritime environment and the combined factors of temperature, insolation, and mineral create favorable condition for shell middens and other marine life (Hardy et al., 2016b).

<sup>2</sup>Thank to its geography and archeological importance, the Salum Delta was included in the UNESCO World Heritage list in 2011.

Today the shellfish are collected by fishermen and shell collectors (who are also part time agriculturalists) for consumption and mostly trade (Hardy et al., 2016 b).

The regional analysis of the material culture (specifically ceramic) shows the existence of two groups: one from Faboura to Cap-Vert and the other from Dioron boumak to Casamance. To understand this regional similarity, it is important to take into consideration maritime mobility in the occupation process along the coast. Seafaring is a way of life. Considering the coast and the connected sea and rivers as a large place to sail, settle and mingle with other seafarers, people might have settled along the coast letting cultural influence play. In the context of mobility and cultural transport, new settlers make over time strategic choices of continuities, changes, and erasures. Their maritime cultural landscape, shaped by the belief system became an element of cultural transmission. That cultural linkage might have engendered a network of sites that share similarities in the material culture and a genealogical memory. This process occurs today as evidenced widespread adoption or mention of certain mermaids beyond their place of origin. For example, in their ritual songs, the Lebu mention often Sangomar; a spiritscape located in the Salum delta. Today, there are Lebu who live in Joal Fadiouth through a process of maritime mobility. It should be stressed that in a regional comparative framework, a processual approach with a diachrony / synchrony focus is necessary to shed light on the occupation process, change, and continuity in the material culture, trade, and social organization.

Moreover, shell midden archaeology has been focusing on the funerary monuments. There has been more focus on the tumulus than on the amas sites. For instance, at Dioron boumak it is estimated an average of 50 inhumations per tumulus with a total estimation of 7 000 tumuli. In the overall Salum delta, Descamps and Thilmans (1979) recorded a total of 903 tumuli with 15 000 inhumations. Because of this imbalance, we know more about the deceased than about the people who layed them to rest, more about their conception of afterlife than about life itself (daily activities). It is important to go beyond the funerary monuments to search and study the occupation and the daily activities as manifested in the material culture broadly defined. More information on non-funerary activities is badly needed. Some ongoing research are bringing encouraging results. The discovery of furnaces at Soukouta is bringing new data on technology (metallurgy) (Sall & Dème et al., 2018; Deme & Sall forthcoming). These findings have called into question the division of Senegambian prehistory into four zones:

metallurgy in the north, tumulus in the center and center west, megalith in the center and shell lidden along the coast.

The maritime element should also be included during the artifact analysis. Because ritual practices have material expressions, it is possible to detect them archaeologically. This will shed light on the relationship between people who lived in the coast and the sea. In a holistic approach, we have to take into consideration the material and the immaterial worlds and detect the immaterial elements present in certain artifacts and in the settlement and landscape organization. Since culture affects diet and material production, shell midden archaeology should include the search for maritime cultural influence. We should look for evidence of maritimity (Tuddenham, 2010). Through maritimity, the sea becomes part of the knowable past.

### **Conclusion**

The ethnography of the “people de l’eau” shows a form of culture and complexity based on a special relationship with the sea. Research on fishermen and shellfish collectors show that their sense of identity is in part rooted in the sea. This paper stresses the need for what Ford call “a bridge between maritime archaeology and terrestrial archaeology” (2011b, p. 63). That methodological and theoretical bridge is of utmost importance because of the cultural bridge between the sea and the land. In fact, to understand the immateriality in certain material culture, one must turn to the sea. Hence, in Senegambian shell midden archaeology, maritime cultural landscape should be integrated into coastal archeology and in cultural heritage research, management, and policy as well. Finally, because of the tightly tangled relationship between the coast and the “culturalized” sea, it is necessary to question, in the coast the dichotomy between tangible heritage and intangible heritage.

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