RESEARCH ARTICLE

A Study of the Contents of Funerary Pottery from the Megalithic Tombs of Roknia and Bounouara (Eastern Algeria): A Symbolic and Analytical Approach

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Abstract

This study presents an in-depth analysis of selected ceramic vessels recovered from megalithic funerary contexts at the Roknia and Bounouara sites in eastern Algeria. Through a multi-dimensional approach combining morphological, technological, contextual, and symbolic criteria, the research seeks to elucidate the ritual and symbolic functions of funerary pottery. The classification of the ceramic assemblage is based on precise typological features, the analysis of material contents such as bone and food remains, and the spatial patterns of deposition within the graves. The findings reveal that, despite their formal resemblance to domestic pottery, these vessels were deliberately selected and employed within a structured ritual system that reflects Berber conceptions of death, transition to the afterlife, and the ceremonial honoring of the deceased. The study highlights a collective awareness of funerary symbolism and suggests parallels with broader Mediterranean and Saharan mortuary practices. This integrative approach affirms the role of pottery as a material medium bearing religious, social, and cultural significance, and contributes to reconstructing mortuary belief systems in North African prehistoric communities during the Late Prehistoric period.

Citation

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Introduction

The megalithic tombs in Eastern Algeria—specifically at the sites of Roknia and Bounouara—are among the most significant archaeological landmarks that bear cultural and ritual imprints dating back to prehistoric times. These sites served as burial grounds for ancient communities, where a substantial number of funerary ceramics have been uncovered. These ceramics represent a vital source for understanding the lifestyles, beliefs, and death-related rituals of that era. Far from being mere utilitarian objects, these vessels carry symbolic meanings that reflect the interaction between humans and their perceptions of death and rebirth. As such, they serve as key elements for deciphering funerary practices within their broader cultural and spiritual contexts. Despite their importance, many aspects related to funerary ceramics remain insufficiently explored, particularly regarding their contents, symbolic implications, and ritual functions. Most previous studies have been limited to descriptive or typological approaches, without deeply investigating the meanings embodied in these objects within the burial context and associated rituals. This raises the core research question: How can the contents of funerary ceramics recovered from the tombs of Roknia and Bounouara reflect the symbolic practices and funerary rituals of megalithic societies in Eastern Algeria? Moreover, can these contents reveal multifunctional roles that extend beyond mere practicality to encompass symbolic and spiritual dimensions?

This research problem holds significant importance due to the scarcity of studies addressing the symbolic and ritualistic aspects of pottery within the context of Algerian megalithic tombs. It calls for a comprehensive approach that connects the material analysis of ceramics with an understanding of funerary belief systems and symbolic frameworks. From this perspective, the present study aims to re-evaluate the classification of funerary ceramics and analyze their contents in order to better understand the ritualistic and symbolic roles they fulfilled, as well as to uncover the cultural influences that shaped these practices. The main objective of this research is to provide a symbolic and analytical interpretation of the contents of funerary ceramics from the sites of Roknia and Bounouara. This will be achieved through a precise statistical and typological study of the various forms of pottery and their contents, with a particular focus on their ritual and symbolic dimensions. The study also seeks to highlight the connection between archaeological material and funerary rites, interpreting the significance of physical elements found within the ceramics—such as bone fragments and food remains—which carry important cultural and spiritual implications.

Through this work, we hope to contribute to the enrichment of scientific understanding of the megalithic heritage in Eastern Algeria, and to reveal the complexity of the spiritual and ritual life of these ancient communities. Furthermore, the study aspires to offer an analytical framework that may serve as a reference for future research in the fields of funerary archaeology and cultural symbolism.

General Framework of Funerary Ceramics Recovered from Megalithic Tombs

Pottery represents one of the primary tools that provide essential information for establishing chronological sequences and understanding the development of ancient civilizations, whether in prehistoric or historical periods. Traditional Berber pottery reflects distinctive manufacturing and decorative techniques that have been employed and preserved across generations. This type of pottery is characterized by notable artisanal features, most notably hand-forming, natural air-drying processes, and its primary use for domestic purposes. Its decorations vary from simple motifs to linear engravings, which lend it a unique aesthetic appeal. The production of this kind of pottery did not involve advanced tools such as the potter's wheel or sophisticated kilns, nor was it produced in commercial quantities or transported over long distances. Nevertheless, it constitutes a vital cultural artifact that showcases the artisanal and traditional heritage of the region's populations. Algerian museums preserve important collections of pottery, displayed according to their regions of origin. However, these collections do not encompass all significant ceramic types from various areas, highlighting the need for a thorough review and accurate classification of these assemblages to achieve a comprehensive and precise understanding of pottery history (Ernest Leroux, 1911, pp. 13–14). Funerary ceramic remains are among the most critical archaeological indicators for understanding burial practices and ancient conceptions of death. The function of these vessels extends beyond mere transport or storage to embody symbolic and spiritual meanings that reflect individual and collective beliefs concerning life and the afterlife. The form, material, and decoration of pottery vary across time periods and cultures,

making it a precise tool for dating burials and identifying the social and cultural affiliations of the deceased. Discoveries of pottery in tombs have long attracted scholarly attention, as the quantity and variety of vessels within a single burial often differ, sometimes including charcoal remains, or appearing intact or perforated, and in diverse shapes. Within this framework, Arcisse de Caumont (1841) interpreted the presence of funerary vessels—including vases intended for incense or sacred fumes—as integral components of the mortuary rituals that accompanied the dead from various social strata. Although this practice was geographically widespread, the density of discoveries varies from one region to another. Moreover, the distribution and quantity of pottery within funerary pits reflect aspects of the burial rites and may indicate the social status of the deceased and their relationship with their kin. While the interpretation of these artifacts' meanings depends on the surrounding archaeological context, funerary ceramics remain a fundamental tool for reconstructing the history of mentalities and funerary rituals in ancient societies (Prigent Daniel, 1996, pp. 221–222).

In the same vein, hand-crafted pottery is considered one of the most prominent forms of ceramic production in antiquity, although it was relatively rare in megalithic tombs—especially during their earliest phases. The appearance of this type of vessel is closely associated with funerary contexts, where it was regarded as an object of high symbolic value, representing the extension of daily life into the funerary realm. This underscores the profound interaction between the concepts of life and death in ancient communities. A noticeable decline in the presence of hand-crafted pottery has been observed in major urban centers, where it was gradually replaced by wheel-made ceramic forms. In contrast, this type of pottery remained more prevalent in inland and rural areas, suggesting a preference for it in non-urbanized environments. The absence of such vessels in religious sites or temples further indicates their specialized use in funerary or artisanal contexts that were not associated with formal religious institutions (Pierre Cintas, 1950, pp. 447–448). Data from pottery recovered from megalithic tombs in Eastern Algeria reveal ritual and symbolic significances connected to the prevailing funerary practices of that period. The relative proportion between the number of vessels and the number of skulls discovered within the graves suggests the possibility that these ceramics were part of a tradition of burying provisions with the dead, in accordance with beliefs in an afterlife. However, this pattern was not consistent; some cases exhibited a complete absence of pottery or a disproportionately small number of vessels, which may be attributed to various factors, such as the decomposition of fragile ceramics or the presence of social distinctions expressed through funerary rituals.

Additionally, variations in the positioning of the vessels within the tomb—sometimes placed near the skull or in specific locations—suggest multiple symbolic or ritual functions. This diversity reflects the absence of a standardized burial pattern, which may stem from chronological differences or internal variations in the social structure of the buried communities. Archaeological evidence also reveals a significant diversity in the shapes and functions of pottery, reflecting varying levels of technical skill and both symbolic and practical uses during the megalithic period. Spherical vessels have been discovered—some with covers, others with a clearly funerary character. These vessels are distinguished by their high manufacturing quality, indicating advanced technical knowledge. It is likely that they were used to offer food or drink to the deceased, or to preserve body parts as part of funerary rituals. Additionally, some fragmented pieces scattered among the remains suggest an association with rituals involving death and sacrifice.

Moreover, the variation in size and function between small vessels designated for children and larger ones intended for adults points to social and functional distinctions within these communities. This underscores the complex nature of megalithic funerary ceramics (Faidherbe, 1867, pp. 19–52). Despite the attention given to the technical study of funerary ceramics since the early days of archaeological research in Algeria, the integration of such findings into the broader traditional archaeological framework remains limited. Existing studies often emphasize the evolution of forms and decorations over the utilization of technical and technological data. The technical features of pottery are frequently treated as a separate field, disconnected from comprehensive archaeological interpretation. As a result, technical reports are sometimes presented as appendices or in preliminary form, as if they are mere additions lacking clear scientific significance. Researcher Hélène Balfet argues that the disconnect between technical studies and other archaeological fields is partly due to the highly specialized nature of these approaches. To non-specialists, such methods may appear either as unnecessary luxuries or as ready-made solutions to rely upon. However, these tools only become truly effective within an integrated research framework that combines methodological and technical dimensions to produce accurate archaeological knowledge.

In this context, the technical study of pottery emerges as a central tool for understanding cultural and technological transformations in ancient societies. It allows for in-depth analysis of the evolution of production techniques and the external influences that shaped them over time. Through its material, formal, and functional properties, pottery reflects not only patterns of everyday or ritual use but also reveals the orientations of its makers and their level of knowledge regarding materials and processing techniques. The effectiveness of such analysis increases significantly when it

is guided from the outset by well-defined archaeological questions and based on a methodical selection of samples that accounts for the diversity of functional and technical contexts. Its analytical power is further enhanced through collaboration between archaeologists and technology specialists, enabling a multidimensional approach to the materials under study (Balfet Hélène, 1966, pp. 280–285). Within the scope of research on pottery recovered from megalithic tombs, integrated analytical approaches are of critical importance. Even the most precise analyses have limited impact if they are not directed toward clearly defined archaeological questions and incorporated into a comprehensive reading of field data. Presenting analytical results merely as footnotes or appendices without effectively employing them in the interpretive process signals a fundamental methodological flaw. From this standpoint, it becomes essential to formulate precise questions regarding the role that technological studies of pottery can play in addressing core archaeological issues—particularly at sites of megalithic character, where ceramic material serves as a key to understanding funerary rituals, cultural patterns, and artisanal techniques prevalent during prehistoric periods in the Maghreb region. This pottery constitutes a vital source for comprehending the economic and cultural interactions of ancient times, given its role in reconstructing a holistic image of past societies. The importance of its study lies in its capacity to reveal patterns of production and distribution, as well as to trace reciprocal influences between cultures. In this context, rigorous methodologies are applied to analyze the composition of clay pastes, manufacturing techniques, and decorative styles, thereby enabling distinctions between local and imported ceramics and contributing to uncovering the commercial and social dimensions of Mediterranean relationships. Despite the analytical potential these studies offer, they also face several challenges—chief among them being the identification of the geographical origin of pottery and the differentiation between local and foreign influences. Addressing these challenges necessitates broad scientific coordination among researchers across Maghreb countries, through joint excavations and meticulous comparative studies. Consequently, pottery is not merely viewed as a utilitarian object, but as a cultural artifact that carries identity and serves as a mirror of economic and social history. This underscores the need for adopting strict methodologies in both the documentation and analysis of ceramic material (Fevrier Paul-Albert, 1996, pp. 641–650).

In prehistoric contexts, pottery is regarded as one of the earliest human-made products and has held a central position among archaeological materials due to its high durability and resistance to biological, chemical, and physical degradation—allowing it to remain preserved in the soil for extended periods. Pottery is a material produced by transforming clay through mechanical means followed by a firing process. It has been widely used to frame archaeological sites both temporally and geographically through the analysis of its forms, decorations, and manufacturing techniques, making it a cultural and chronological indicator of the highest significance. In ancient times, the use of pottery extended beyond its utilitarian function to encompass symbolic and spiritual roles, especially in funerary contexts. It was not merely intended for storing food or liquids for the deceased, but rather served as an integral part of rituals that expressed beliefs related to the afterlife and the world beyond. Pottery vessels were often placed alongside the dead within the tomb, imbuing them with a profound cultural dimension connected to identity and social symbolism (Léa Drieu, 2019, pp. 25, 30). Extending this analysis of the role of pottery in funerary contexts, additional insights drawn from other Berber burial sites—such as Tiddis and the nearby Bazinas—enrich our understanding of the symbolic and technical diversity that characterized burial practices in the Maghreb region. Archaeological excavations have revealed complex ceramic arrangements, such as placing a smaller vessel inside a larger one, or incorporating a third vessel into the configuration. Additionally, small-sized vessels were found only in specific graves. This variability indicates the absence of a standardized funerary pattern, which may be attributed to chronological, social, or ideological differences among the buried individuals. One particularly noteworthy practice involved the placement of small human bone fragments inside the vessels, which may suggest rituals of defleshing prior to burial—either through natural exposure or temporary interment. There have also been documented cases of deliberate breakage of exceptional ceramic pieces, such as the three-legged pot, endowing these items with specific ritual significance. Such actions point to distinctive symbolic practices embedded within the funerary rites (Bussière Jean, 1998, pp. 40–43). In furthering our understanding of the symbolic dimensions and functional diversity of funerary pottery in megalithic and Berber contexts, Camps highlights findings from the tombs of Roknia, Gastel, Tiddis, and Bounouara. These sites revealed ceramic assemblages that reflect multiple symbolic meanings and can be classified into three main categories based on form and function:

A/ Microceramic Pottery: These are small-sized vessels, often placed inside larger ones, likely associated with offerings or symbolic representations of body parts.

B/ Simple Ritual Pottery: These vessels are undecorated and handleless, suggesting their use in symbolic libation or purification rites.

C/ Pottery Imitating Domestic Utensils: This group includes dishes, bowls, and jugs, some equipped with pouring filters, symbolizing the continuity of everyday life in the afterlife.

Several of these vessels exhibit external influences, particularly of Punic origin, visible in wheel-thrown forms or in models inspired by Mediterranean traditions, such as triangular-spouted jugs and decorated plates. These types are generally dated to the 3rd and 2nd centuries BCE. Such forms reveal the cultural interconnections that shaped the region and provide clues about the communities buried there, who appear to have led semi-sedentary agrarian lifestyles. This is especially evident at the Gastel site, where vessels similar to those traditionally hung in local rural homes were found (Camps, 1997, pp. 39–48). Although some pottery vessels exhibit formal characteristics reminiscent of Punic ceramics—as noted by Camps—such resemblance is not, in itself, sufficient evidence of a foreign origin. Relying solely on formal comparisons risks marginalizing the creative agency of local Berber communities in Algeria and reducing their technical and cultural capabilities to mere imitation. Therefore, these elements should be interpreted as expressions of potential cultural interactions rather than indicators of dependency or direct influence. Despite the significance of pottery as a key component of the funerary assemblage in ancient Berber tombs, the quantity of ceramics recovered from various sites remains relatively limited in comparison to the number of individuals buried. This scarcity may be partially explained by the lack of systematic and regular publication of excavation results, as well as the loss or deterioration of many items since the 19th century—whether during excavation or due to inadequate preservation conditions. Furthermore, the absence of precise documentation and detailed descriptions of ceramics in some early studies complicates their proper classification and scientific analysis.

Consequently, there is an urgent need to re-examine this material heritage using modern approaches that integrate topographic study, technical analysis, and cultural contextualization of funerary ceramics. Such a multidisciplinary methodology is essential to ensure a more accurate and comprehensive reading of the symbolic and social practices of ancient Maghrebi societies (Camps, 1961, p. 215). The funerary monuments of North Africa—particularly in Algeria—have yielded a considerable amount of pottery, most of which was handmade or produced using rudimentary techniques that still persist today in certain areas of the Tell and the Mediterranean zone. Despite the symbolic weight and quantitative richness that characterize this pottery, it has often not received sufficient scholarly attention. Frequently, the discovered pieces are mentioned only in passing or reported in brief summaries lacking detail and precision. It is certain that the number of published artifacts does not reflect the true volume of ceramics recovered, due to the large number of unpublished excavation campaigns or those only partially published. In parallel, unsystematic excavation activities—commonly referred to as "archaeological hunting"—have continued since antiquity. These actions have led to the destruction of many major burial Dolmen, which may have once contained richer and more complex funerary assemblages than the simpler graves that have mostly remained intact (Camps, 1964, p. 5). Taken as a whole, these observations underscore the growing importance of pottery in understanding the symbolic and social structures tied to funerary practices. This is further supported by the remarkable findings from megalithic tombs in Eastern Algeria—such as those at Gastel, Roknia, Bounouara, and other major burial sites—which have produced an exceptional quantity of simple, handmade pottery, estimated at around twenty thousand pieces. This constitutes one of the largest collections of non-wheel-thrown ceramics in North Africa. Such volume reflects the richness of a local material tradition that persisted in producing pottery for ritual purposes associated with death, even as more advanced techniques emerged in subsequent periods. These vessels are characterized by the simplicity of their manufacture, reliance on local raw materials, and an almost complete absence of decoration—all of which point to their symbolic nature and ritual use rather than everyday functionality. The value of these finds lies in their recovery from datable archaeological layers; the majority belong to the period extending from the late 4th to the early 3rd century BCE—a phase during which funerary ceramics remain poorly documented due to a lack of systematic excavations. The size and typological richness of these assemblages reflect the central role that pottery occupied within the symbolic structures of megalithic burials. They allow for the reconstruction of the cultural and social dynamics that accompanied the development of these tombs, ultimately leading to a deeper understanding of funerary practices and beliefs during the pre-Roman periods of North Africa (Joan Sanmartí, 2016, p. 85).

General Statistical Data on Pottery Recovered from Megalithic Tombs

Archaeological data from ancient Berber tombs—whether Dolmen burials or Bazinas (and to a lesser extent, funerary mounds in the pre-Saharan region)—reveal the presence of a limited number of pottery vessels, which often correspond in quantity to the number of individuals buried in each grave. Despite their modest quantity, pottery remains the principal component among the funerary finds.Table 1 below—though incomplete—provides a quantitative snapshot of pottery recovered from megalithic tombs in North Africa, particularly in Algeria. Within this framework, Camps recorded

over one thousand ceramic vessels collected since the second half of the 19th century from various Berber funerary sites. While this figure might suggest the modest nature of these tombs or the communities that built them, such a judgment would be premature, considering that a significant portion of the archaeological material—including artifacts collected by official missions—was never documented or described.This lack of documentation is exemplified by the Dolmen of Beni Messous, where four excavation campaigns took place between 1868 and 1931. Of these, only two reports were published, and the earliest—prepared by researcher Bertrand—contains no mention of the number of vessels recovered. Similarly, the results of excavations conducted by Berbrugger remain unknown, while only partial records exist for the 1846 excavations led by military surgeon Guyon. This documentation gap also affects key sites such as Roknia, Ras El Ain Boumerzoug, Bounouara, and Gastel (Camps, 1961, pp. 214–216).Adding to this deficiency is the fact that Berber funerary pottery often failed to attract adequate attention from French excavators, whether due to its degraded condition or a tendency to underestimate its scientific value. In many cases, documentation was limited to partial descriptions of select samples or to illustrative drawings without precise inventory, which prevented the creation of a comprehensive scholarly catalog. Even when vessels were counted, only a limited number were subjected to systematic description or classification. This issue is not confined to early excavations; to this day, a significant portion of such ceramics remains locked in museum storage, neither displayed nor thoroughly studied in contemporary research.

In this regard, Camps points to cases from the site of Bounouara that demonstrate a direct correlation between the number of buried individuals and the number of accompanying ceramic vessels. Some Dolmen containing a single individual yielded only one vessel, whereas a bazina with the remains of five individuals contained five vessels—supporting the hypothesis of a direct relationship between the number of deceased and the number of associated ceramic items (Camps, 1961, p. 217). This observation is also confirmed at the Roknia site, as indicated in the excavation reports published by Faidherbe in 1867 in the Journal of the Hippone Academy. For instance, Dolmen No. 3 contained complete skeletal remains alongside one vessel; Dolmen No. 5 contained a single skull and one broken vessel; Dolmen No. 9 held seven skulls and seven vessels; and Dolmen No. 10 contained two skulls and two vessels. This consistent correlation between the number of buried individuals and accompanying ceramics highlights the symbolic or functional significance of these artifacts within funerary rituals (Faidherbe, 1868, pp. 38–53). Gsell underscores the close relationship between pottery and skeletal remains in the tombs of Bounouara, noting that vessels were often placed near the skull, which suggests a ritual function within what is commonly referred to as the "funerary assemblage." His analysis also reveals a differentiation in the types of pottery used, which may reflect social distinctions within the burying community. Simple, locally made vessels were typically associated with individuals of lower status, while imported or wheel-thrown ceramics were presumably reserved for individuals of higher rank. Thus, pottery should not be viewed merely as a material artifact, but rather as a symbolic element reflecting the social and economic status of the deceased, and more broadly, a system of values and representations connected to death and identity. Nonetheless, caution is warranted in adopting such interpretations, especially given the absence of in-depth technical analyses. Gsell at times relies on average cultural assumptions without sufficient material evidence. Even so, the diversity of the vessels does indicate a degree of cultural openness and exchange with the Mediterranean world during the pre-Roman period (Gsell, 1901, pp. 23–26). Gsell's readings of the funerary pottery from Bounouara highlight a methodological issue concerning the projection of external interpretations onto local finds—particularly in the case of wheel-thrown pottery, which he assumes to be of Mediterranean origin without supporting technical or laboratory analysis. This approach reflects a traditional bias that undermines the potential of local production and overstates foreign influence. Moreover, Gsell's interpretation of the relationship between this pottery and Mediterranean trade dynamics lacks precise quantitative data and comparative social analysis, rendering his argument more impressionistic than scientifically grounded. Despite the variation in the number of ceramic vessels found across burial sites, the relationship between these vessels and funerary rituals remains clear. Typically, each deceased individual is accompanied by a single ritual vessel, as evidenced in examples from Gastel, Tiddis, and Sila. Though rare, the remnants of some of these artifacts still bear witness to this tradition—many of which ended up forgotten in museum storage, such as the pottery fragments collected by Ballarée in 1909 from the cemeteries of Bounouara, Boumerzoug, and others. Museum records indicate that his excavations covered twelve Dolmen in Bounouara, yet the fate of most of the associated finds remains unknown.

On the other hand, some excavations have recovered nearly intact ceramic vessels characterized by limited morphological variety and primitive manufacturing techniques. These vessels are typically handleless, made of coarse clay, and air-dried—reflecting local traditions of producing funerary items intended for symbolic, rather than utilitarian, use (Camps, 1961, pp. 215–217). Understanding the funerary practices of megalithic tombs is further complicated by the losses caused by unsystematic excavations and site looting—practices that Camps noted during his inspections of locations such as Bounouara. He observed the extent of damage inflicted upon major Dolmen, which were likely reserved for members of the local elite, given their presumed richness in funerary furnishings. In contrast, the smaller, less

conspicuous graves remained in better condition, though they contained only simple vessels made from coarse clay—evidence of the persistence of modest rural traditions.

Megalithic sites	Number of pottery vessels	Ranking
Gastel – Tébessa Province	350 (+)	1
Sila – Constantine Province	187	2
Roknia – Guelma Province	148 (+)	3
Ras El Ain Bou Merzoug – Constantine Province	92	4
Tiddis – Constantine Province	61	5
Beni Messous – Algiers Province	57 (+)	6
Aïn El Bey – Constantine Province	40	7
Bounouara – Constantine Province	24 (+)	8
Ape Peak – Béjaïa Province	19	9
Sigus – Oum El Bouaghi Province	14	10
Aïn El Hammam – Tizi Ouzou Province	13	11
Mount Mestiri – Tébessa Province	6	12
Djelfa – Djelfa Province	4 (+)	13
Djidiouia – Relizane Province	3	14
Maadid – M'Sila Province	3 (+)	15
Aït Rahouna – Tizi Ouzou Province	2	16
Morsott – Tébessa Province	2	17
Boghar – Médéa Province	1	18
Kef el-Djelam – TlemcenProvince	1	19

Table.1 Statistics of Pottery Discovered in Major Megalithic Burial Sites in Algeria.

However, this disparity among burial sites does not provide a complete picture of funerary practices—particularly in light of the loss of a significant portion of ritual or symbolic ceramic artifacts, whether due to poor documentation or systematic looting (Camps, 1961, pp. 217–218). As a result, the archaeological record available today offers only a partial and distorted reflection of ancient funerary practices in North Africa, and especially in Algeria. This situation necessitates a cautious and critically methodological rereading of the material record, one that takes into account missing contexts and imbalanced representations. In his study, Camps focused primarily on pottery recovered from burial contexts due to its rarity and the uncertainty surrounding its provenance in residential sites, which renders its archaeological analysis unreliable. He pointed out the near-total absence of pottery in the funerary mounds of southern Aurès, the High Plateaus, the Ouarsenis Mountains, and the hill ranges of Oran. Similarly, the material from cemeteries extending from eastern Morocco to Taza remains insufficient for comparative analysis. Data from three major Algerian sites—Gastel, Sila, and Roknia—reveal that these alone contain over half of the total ceramic assemblage recovered from all the cemeteries studied. Despite the limited scope of these data, they offer partial insights into the cultural practices of a narrow segment of the population. This can be attributed to the positioning of the funerary monuments on barren mountain slopes lacking soil cover, which often leads to the disappearance of archaeological materials. Researchers frequently encounter, just beneath the skeletal level, a rocky layer devoid of further finds. By contrast, funerary monuments in France—thanks to the thickness of their Stratigraphy and the scale of their construction—allow for renewed excavation and the discovery of

additional materials, as was the case at "Causse de Foissac." In Algeria at the time, the situation was markedly different: the discovered Dolmen rarely offered similar opportunities for repeated discovery. Nonetheless, some funerary mounds, particularly those excavated in the Oujda region in 1909, yielded a considerable number of ceramic vessels (Camps, 1961, p. 218). Statistics indicate that a total of 1,125 ceramic vessels have been recorded, 1,057 of which were found within a geographical triangle connecting Algiers, Bir el-Ater, and Kef el- Djelam —particularly at the sites of Gastel (350 vessels), Sila (175 vessels), and Roknia (148 vessels). This accounts for more than half of the total number of vessels (Table 1). Despite the relative rarity of ceramics, their importance is considerable for the study of chronological sequences and cultural interactions, as illustrated by some finds from Tiddis bearing decorations reminiscent of modern Berber pottery, suggesting a long-lasting artistic and technical continuity. The geographic distribution confirms a concentration of vessels within the aforementioned triangle, underscoring the significance of this region in understanding the characteristics of funerary ceramics in North Africa. In terms of manufacturing techniques, the proportion of wheel-made pottery varies across sites: 8% at Gastel, 3.3% at Sila, 10% in the gallery graves associated with Gastel, 2.75% at Roknia, 1.66% at Tiddis, and 4% at Bounouara. These figures highlight considerable variation even within the same site, as illustrated by the contrast between the Kouster Dolmen at Beni Messous, where no wheel-made vessels were found (44 items), and the Lower Marchand group, where 6 of the 11 vessels recovered were produced on a potter's wheel. This variation is likely attributable to differences in the topographical setting of the tombs and potential chronological disparities between them. (Camps, 1961, pp. 218–219)

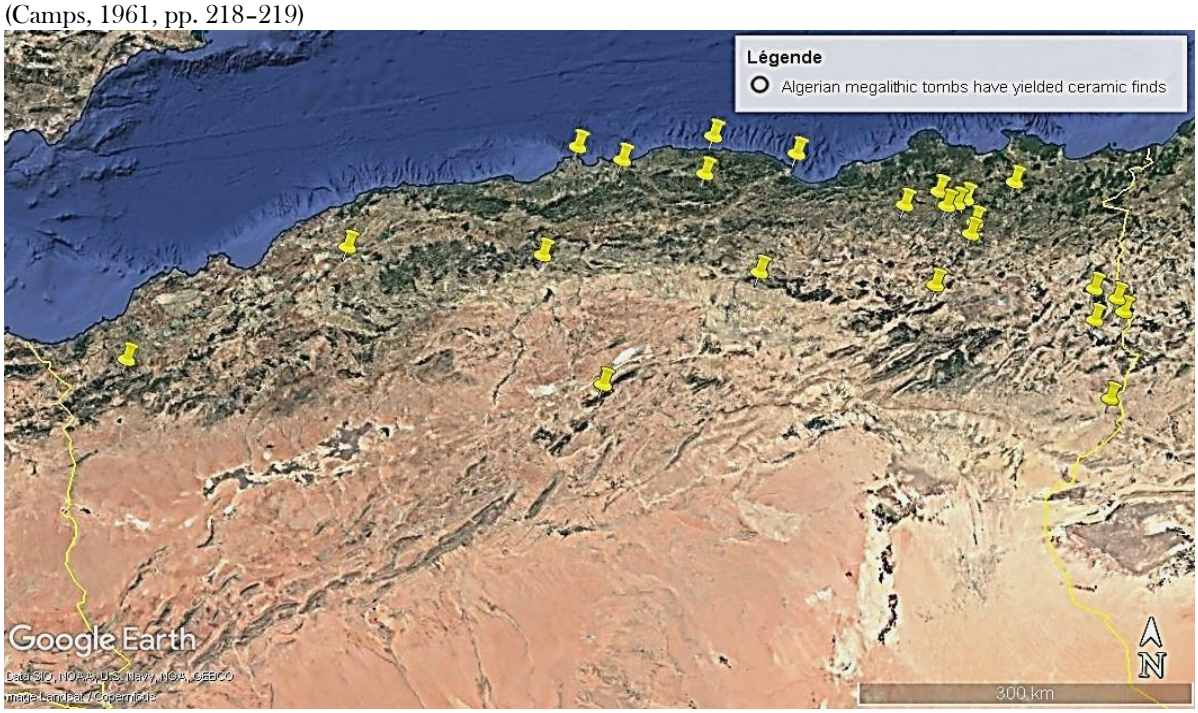

Fig.1 Distribution of Major Megalithic Burial Sites in Algeria with Discovered Pottery.

Funerary Pottery Recovered from the Roknia and Bounouara Tombs

A/ Pottery from the Roknia Cemetery

Excavations carried out in the tombs of Roknia—whether in Dolmen or Bazinas—revealed a limited quantity of ceramics, generally corresponding to the number of individuals interred, despite these vessels being among the primary funerary accompaniments. Since the second half of the 19th century, a significant number of pieces have been recovered. However, this number does not necessarily reflect the richness of the discoveries, due to the lack of published results from several excavation campaigns in the megalithic tombs, which has led to limited available information on the pottery. In some cases, the descriptions of the artifacts lacked precision. According to Camps' statistics, only 2.75% of the pottery recovered from the Roknia tombs was produced using a potter's wheel, while the remainder was handmade using traditional techniques. This is reflected in the collection of the National Public Museum of the Bardo, where hand-formed vessels represent 11.94% of the assemblage, compared to only two wheel-made pots among the total (Camps, 1961, p. 215). General Faidherbe, for his part, documented the results of his excavations in fourteen tombs within the Roknia

Dolmen and noted variation in the manufacturing and contents of the pottery. Some vessels contained simple organic residues, while others were carefully crafted from high-quality clay paste, which may reflect a degree of social differentiation within the buried population. A quasi-regular pattern emerged in the placement of the vessels, often located near the skull or one of the hands, although exceptions were recorded—likely attributable either to variations in funerary practices or to the disintegration of more fragile ceramics over time. These findings illustrate the diverse symbolic meanings of funerary pottery, ranging from ritual function to indicators of social status within the Roknia burial context (Faidherbe, 1867, pp. 30–38). Bourguignat's excavations at the Roknia cemetery led to the opening of 28 tombs distributed across various parts of the site. The researcher focused on burial structures with distinctive architectural features, which enabled him to examine multiple types of funerary constructions. These excavations yielded approximately 45 ceramic vessels of varying forms and types—a significant number within the overall ceramic assemblage from the site—highlighting the diversity of local production and its relevance to understanding funerary rituals during prehistoric periods (Bourguignat, 1868, p. 23). Most of these artifacts were transferred to the Saint-Germain Museum in France, while Camps noted the presence of a limited number of samples in the Bardo Museum in Algeria (Camps, 1964, pp. 5–89).

In this context, Bertrand indicated that Bourguignat's excavations in the Roknia Dolmen led to important archaeological discoveries, including well-preserved skulls, ceramic vessels, and metal ornaments, which enable a better understanding of the communities that inhabited the region during prehistoric times. The ceramic vessels constitute an essential component of these discoveries due to their cultural and artisanal significance. Bertrand also noted that Bourguignat donated a considerable portion of these archaeological materials, including pottery, to the Saint-Germain Museum, marking a significant scientific contribution to the documentation of North Africa's past (Bertrand, 1868, pp. 628–629).

The results of the first systematic excavations at the Roknia cemetery in 1867, as documented by Gsell, indicate the opening of approximately sixty graves and the discovery of a significant number of funerary ceramic vessels. These findings provided valuable insights into the burial rites and beliefs of those who constructed the Dolmen. Excavations by Bourguignat and Faidherbe confirmed the relative scarcity of pottery in comparison to the large number of graves, where typically only a single vessel was placed near the head of each individual, suggesting a consistent ritual practice and standardized symbolic behavior. Overall, this pottery is characterized by the simplicity of its forms and the primitiveness of its manufacturing techniques—features that correspond to those documented at the Beni Messous cemetery, reflecting the continuity of local handcraft traditions. However, the discovery of a wheel-thrown vessel resembling the so-called "nursing bottle" type of Punic origin (3rd–2nd century BCE) indicates a temporal extension of the site's use and the possibility of interactions between local production and Mediterranean influences. This diversity in ceramic finds reveals clear social and symbolic dimensions: the simpler vessels reflect the affiliation of their owners with lower social strata, whereas the presence of manufactured or imported items points to individuals of higher social status. As such, funerary pottery serves as an effective indicator of identity and social belonging within local megalithic ritual practices.(Gsell, 1901, pp. 18–23)

However, Stéphane Gsell's attempt to link the wheel-thrown vessel found at the Roknia site to Carthaginian influence—based on its morphological resemblance to the so-called "nursing bottle"—constitutes a hasty conclusion. Formal similarity alone is insufficient to establish origin, especially in the absence of clear contextual data or in-depth technical analysis. Moreover, the site's geographical proximity to the Carthaginian sphere does not automatically justify the assumption of cultural influence, as such reasoning tends to overlook the possibility of an independent local development and the creative agency of the communities that constructed the Dolmen.

Fig.2 Closed vessel with a spout from the Roknia site.

Researcher Elké is considered one of the prominent figures in the study of megalithic burials in Algeria. Her work significantly enriched the understanding of funerary ceramics, particularly at the Roknia site, where her excavations uncovered a diverse array of ceramic vessels reflecting the site's cultural heterogeneity. However, the absence of formal excavation reports on her findings raises methodological concerns, hindering the ability to conduct precise contextual analyses. Nevertheless, Camps implicitly relied on the results of her work in his inventory of funerary ceramics at Roknia (Camps, 1964, pp. 5–90). Although the exact date of Elké's excavations remains unclear, available data suggests that the first investigations at the site began in 1867 with Faidherbe, followed by Bourguignat a year later. This timeline makes it likely that Elké conducted her research either concurrently with or prior to Camps, leaving the chronology of her involvement uncertain. The ceramics documented by Elké are important for highlighting characteristics of local cultural expressions at the site. The absence of certain ceramic types when compared to Bounouara may reflect functional or ritual differences, and points to a degree of local specificity. This divergence supports hypotheses that regard funerary pottery as a crucial element in analyzing the cultural structure of prehistoric North African communities. As for the ceramics attributed to Laburthe and currently held at the Musée de l'Homme in Paris, their provenance and discovery context remain questionable. In the absence of evidence confirming that Laburthe conducted field excavations at Roknia, it is likely that these items originate from older collections, possibly those gathered by Bourguignat. Should it be confirmed that Laburthe obtained them from the Musée de Saint-Germain before transferring them to the Musée de l'Homme, this would further support that assumption. This situation complicates the scholarly use of these artifacts in archaeological analyses, due to the lack of stratigraphic and locational documentation. While Camps included Laburthe-attributed pieces in his Roknia inventory, he did not explicitly cite original sources, weakening the certainty regarding their attribution (Camps, 1964, pp. 5–90). Consequently, a cautious methodological approach is required when incorporating these materials into scientific research that demands precise context and provenance. As for the references to ceramic pieces attributed to Roknia found in the writings of Berbrugger and Letourneux, they predate the systematic excavations carried out by Faidherbe and Bourguignat in 1867. This chronology undermines their reliability, particularly given that these earlier scholars did not conduct direct excavations at the site (Berbrugger, 1864, pp. 390–392). Therefore, the first methodical field interventions at Roknia can be properly attributed to Faidherbe and Bourguignat.

Camps also noted the existence of ceramic vessels attributed to Roknia in the Morel Collection held at the Nice Museum. However, the lack of precise documentation regarding their discovery context casts doubt on their attribution to the site (Camps, 1964, pp. 34–65). The absence of supporting archaeological studies further diminishes their value as contextual evidence. Given that some of these items were transferred to European museums under undocumented conditions, it becomes increasingly difficult to trace their Stratigraphy context, which severely limits their usability in archaeological analysis of Roknia. Thus, such data must be treated with caution and considered indirect evidence that should not be heavily relied upon in formulating field-based hypotheses unless corroborated, particularly in light of the lack of formal archaeological documentation linking them definitively to the site.

B/ Funerary Pottery at the Bounouara Cemetery

Ceramic vessels constitute the principal category of funerary artifacts associated with the megalithic structures at the Bounouara site. One of the most notable features of the megalithic tombs at Mount Mazla is the striking contrast between the density of funerary monuments—making this necropolis one of the richest in North Africa in terms of number—and the relative scarcity of associated grave goods. This discrepancy raises important methodological questions about the burial rites and symbolic practices of the communities that constructed these monuments. In 1869, General Faidherbe conducted excavations at Bounouara, which included the opening of five graves within the cemetery. However, he did not uncover any ceramic vessels. Commenting on this observation, he stated: "Since I did not find any pottery, I presume either that poorly fired ceramics may have completely disintegrated, as happened with some vessels at the Roknia site, or that the practice of placing pottery inside the graves was not common in Mazala" (Faidherbe, 1868, pp. 63–65). Gsell notes that the Bounouara burials remain among the sites that had not undergone systematic archaeological investigation at that time, with proper excavations being carried out later by Camps and others. Faidherbe's intervention was limited to the excavation of just five graves, in which only scattered skeletal remains were found, with little to no architectural or funerary data provided. These graves are characterized by their construction based on Dolmen with visible chambers, which have yielded ceramic finds that allow for an analysis of the burial rituals practiced in the region. The pottery discovered at the site demonstrates a notable variety, encompassing both locally produced items and others that are likely imported.

On one hand, hand-made ceramic vessels were uncovered, displaying forms and techniques comparable to those found at the Roknia site. These were crafted following local traditions, employing rudimentary tools and showing little or no decoration—features that underscore their local and archaic character. On the other hand, wheel-made vessels were also discovered, covered with a shiny red slip. These are attributed to Mediterranean workshops, probably of Italian origin, and serve as a clear indication of cultural and commercial interactions between local communities and the broader Mediterranean world. (Gsell, 1901, pp. 23–26). Gsell consistently attributes all finely crafted, well-formed, and elaborately decorated ceramic vessels to foreign civilizations, interpreting them as imported goods. However, this explanatory approach—rooted in equating artistic quality with external origin—remains an insufficient assumption, especially in the absence of in-depth analyses of technical and contextual data. Such a view also overlooks the possibility of independent local development, driven by internal cultural dynamics that may be more complex than these reductionist hypotheses suggest.

On another front, there is a lack of precise information regarding the number of vessels or other funerary objects recovered by Pallary from the Dolmen at Mount Mazla. The holdings of the National Museum of Prehistory and Ethnography in Algiers (Bardo Museum) include only a single well-preserved cup containing human remains, along with the base of another vessel. Both pieces bear an inscription on the underside reading: "BounouaraPallary – current site." These vessels are believed—if not definitively known—to belong to a category of small votive offerings used in "shrines" and were likely collected by Pallary for ritual or cultural comparison. It is almost certain that both ceramic items currently housed at the Bardo Museum were under his supervision (Camps, 1964, pp. 5–90). Excavations conducted by Débrogues and Goulot at the Bounouara megalithic cemetery also revealed a marked scarcity of funerary furnishings. Their investigation, which covered twenty-five funerary Dolmen, yielded only two ceramic vessels and approximately twenty pottery sherds. Notably, only one Dolmen remained in its original state. While the researchers suggested that this paucity of artifacts may be due to ancient looting, the lack of clear material evidence—particularly in tombs that were sealed and undisturbed—casts doubt on this explanation. The first vessel is characterized by a primitive appearance and simple craftsmanship, made from impure clay with uneven traces of burning visible on its surface. In contrast, the second vessel reflects a more advanced level of craftsmanship: it was wheel-thrown, adorned with wavy horizontal decorations, and coated with a smooth red slip, suggesting that it was imported from a Mediterranean region, possibly of Italian origin. Although the precise dating of these two vessels remains uncertain, their technical features allow for a chronological placement ranging from the late 3rd century BCE to the early 3rd century CE. It is likely that the use of these tombs continued throughout the 2nd century BCE and the 2nd century CE, based on broader funerary context. (Debruge &Joleaud, 1961, pp. 174–186)

French scholarly literature recurrently exhibits an interpretative tendency to attribute finely crafted ceramic vessels—whether decorated or wheel-thrown—to supposedly more "advanced" Mediterranean civilizations, such as Carthage or Italic workshops. This attribution is often grounded in superficial morphological resemblance, without thorough technical analysis or engagement with ceramic specialization. Implicit in this approach is an assumption that local Berber societies were incapable of producing such forms, even when the vessels themselves are relatively simple in

shape. This reductionist assumption overlooks the possibility of indigenous innovation and the emergence of sophisticated craft traditions within autonomous or interactive local contexts. Some of the pottery retrieved from megalithic burials exhibits rudimentary manufacturing traits, such as coarse clay mixed with gravel and quartz, and poor firing conditions that led to over burning on many sherds—though traces of slip remain on a few. These vessels are also covered in a hard earthy crust indicative of considerable antiquity. According to Camps' observations, the site had been repeatedly disturbed by treasure hunters, which further complicates accurate stratigraphic documentation. Nonetheless, a more focused analysis of intact funerary Dolmen could contribute to a deeper understanding of the communities responsible for constructing these burial monuments. Despite the absence of human remains in some tombs, the discovery of a lid and a nearly intact vessel supports the hypothesis of the reuse of certain burial structures. These two vessels, which belong to different chronological phases, were subjected to detailed technical analysis by Mercié, a colleague of Camps. In a broader context, ceramics are among the most frequently encountered finds in Algerian megalithic tombs, such as those at Beni Messous, Ichoukan, Roknia, Aïn el-Bey, Ras el-Aïn Boumerzoug, and Sigus. These vessels were often placed near the heads of the deceased and are generally characterized by rudimentary handmade techniques. Nevertheless, wheel-thrown pottery has also been discovered at certain sites, such as Roknia and Gastel. (Debruge &Joleaud, 1961, pp. 181–186) During the excavations led by Camps, twenty-two funerary Dolmen and two Bazinas were uncovered, yielding twenty-one complete or nearly complete ceramic vessels whose shapes could be clearly identified. As a result, the outcomes of Camps' excavations proved to be richer than those of previous investigations.

However, this disparity in findings cannot be attributed solely to excavation conditions or methodological differences. Rather, it appears that the fundamental factor lies in the selection of excavation sites. While earlier excavations focused primarily on large and prominent structures—frequently subject to repeated human disturbance over time—Camps opted to excavate more modest tombs, scarcely visible within the landscape. These less conspicuous structures were thus less likely to have been looted or damaged, whether by tomb robbers or by early antiquarians. In the context of Camps' excavations at the Bounouara necropolis, it is notable that the ceramic vessels placed within the funerary Dolmen were often already broken, and in some cases, may have been unusable even at the time of the burial ceremony. For instance, in Dolmen 2 and 4, the funerary furnishings consisted solely of fragmented pottery, which may indicate a link to primitive magical beliefs, wherein the part symbolically represented the whole. Depending on the circumstances or the families' means, the funerary assemblage could range from a complete vessel or more, to a broken one, or even just a few small shards insufficient to reconstruct the vessel. In some Dolmen, such as numbers 10, 14, and 20, small fragments were found alongside larger pieces, underscoring the diversity of ritual practices. Most of the funerary assemblage was made of clay pottery; however, decorative items were also found in certain tombs. Dolmen 15 and 16 present particularly interesting cases: metallic ornaments were discovered within them, although neither contained ceramic vessels or even pottery fragments. The same applies to Bazina 23. Nevertheless, this pattern is not universal. In contrast, Dolmen 21 yielded a ceramic dish, animal offerings, and a bronze wire bracelet, demonstrating a degree of variability in the content of funerary assemblages from one tomb to another. While the data extracted from Camps' tables might slightly adjust the prevailing notions regarding the "exceptional poverty of funerary furnishings" or the "absence of pottery" at Bounouara, the general impression remains: the funerary assemblages are characterized by their scarcity and modest nature—an archaeological reality that nonetheless carries deeper symbolic and cultural significance. (Camps, 1964, pp. 57–60)

Criteria for Classifying Pottery within Funerary Contexts

Funerary ceramics recovered from megalithic tombs with local Berber characteristics—such as those at Roknia and Bounouara—constitute essential material for understanding burial systems and their symbolic and social implications. Recent studies have aimed to establish standardized classification criteria for this type of pottery, emphasizing that these items are not merely physical artifacts but embody complex cultural systems reflected in their methods of manufacture, use, and symbolic meaning. These criteria—detailed further below—serve as analytical tools that enable researchers to approach funerary pottery as a product situated at the intersection of form and symbolism, as well as technology and social structure. They facilitate the reconstruction of aspects such as artisanal organization, social stratification, and funerary beliefs among the Berber communities that constructed these burial monuments. This classificatory framework is part of a broader integrative approach aimed at understanding pottery within its local funerary context. It relies on a careful reading of the material attributes of the ceramics, their ritual functions, and their cultural meanings.

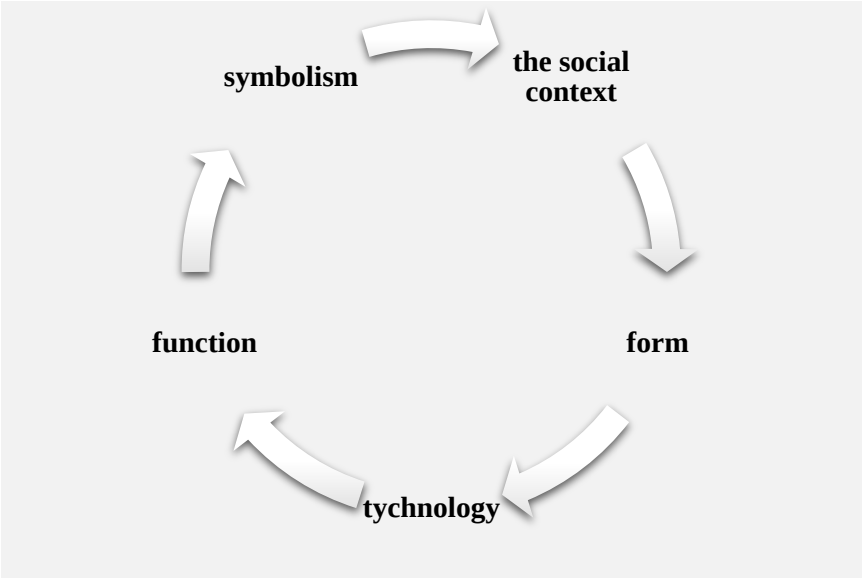

Fig.3 Fundamental criteria for interpreting pottery in funerary contexts.

The classification of pottery within funerary contexts relies on a set of interrelated criteria that reflect the technical, functional, symbolic, and social dimensions of ceramic production and its use in burial rituals. The most prominent of these criteria include:

A/ Morphological Criterion:

The shape of the ceramic vessel and its components (rim, body, base) serves as a primary entry point for determining its typology and function within the funerary rite. For instance, closed forms are often associated with the symbolic containment of offerings or ashes, while open vessels may indicate the presentation of liquids or foodstuffs (Orton et al., 1993, p. 114).

B/ Technical Criterion:

This refers to the mode of production, including the type of clay, forming techniques (hand-built or wheel-thrown), and firing characteristics. These attributes reveal the technical expertise of the producing communities and the degree of standardization within specialized workshops (Roux &Courty, 1998/2017, p. 108). Exterior decoration—such as motifs, burnishing, or coloring—also serves as a precise cultural marker, often reflecting beliefs associated with death and the afterlife. Funerary motifs frequently encode ritual symbols related to the transitional status of the deceased (Gosselain, 2002, p. 25).

All of these elements fall within the framework of the "operational sequence", a core analytical model in pottery studies. This framework allows for the reconstruction of the various stages a ceramic object undergoes—from raw material acquisition to eventual disposal. It emphasizes the dynamic nature of production, highlighting the series of technical and social decisions made by potters within a given cultural system (Leroi-Gourhan, 1964, p. 164). The sequence generally comprises several major stages: extraction and preparation of clay, vessel forming, finishing and decoration, firing, and ultimately, use or discard (Cresswell, 1983, p. 13).

This approach demonstrates that each stage of the chaîneopératoire is not merely a technical procedure, but also a culturally and socially loaded act, reflecting local traditions and the intergenerational transmission of artisanal knowledge (Roux, 2017, p. 108). It also reveals how technical skills were passed down within potter communities and how these groups preserved distinctive production styles—not only in terms of vessel form, but also through specific techniques and surface treatments unique to each community (Carloni et al., 2021, p. 4). Thus, the operational sequence becomes a

powerful analytical tool for understanding pottery within funerary contexts from a comprehensive historical and social perspective.

C/ Functional Criterion:

The funerary function of a vessel is inferred from its immediate context (e.g., placement inside the tomb, near the feet, beside the head), as well as from any organic remains or ash contained within. This context reveals that pottery served multiple roles—not only as utilitarian objects but also as ritual containers (Farbstein et al., 2017, p. 6).

D/ Symbolic Criterion:

This pertains to the ritual and spiritual meanings attributed to pottery in burial practices. A vessel may symbolize the continuity of life or serve as a medium for the deceased's transition to the afterlife, especially when it contains cremated remains or symbolic offerings (Joyce, 2008, p. 58). Additionally, specific decorative motifs or the positioning of vessels within the grave reflect the community's beliefs about death and the boundaries between the material and spiritual realms (Barrett, 2012, p. 164).

E/ Social Criterion:

This highlights the social status of the deceased through the quality, craftsmanship, and ornamentation of the pottery. Finely made and elaborately decorated ceramics are typically associated with individuals of higher social standing, while simpler vessels are often linked to lower-status individuals (Shepard, 1956, p. 107). This contrast underscores that the production and use of pottery were not neutral activities but were governed by the social hierarchy and the deceased's position within their community.

Ritual Significance of the Contents Found Inside Funerary Pottery

Some ceramic vessels recovered from megalithic tombs in eastern Algeria offer tangible evidence of their direct ritual function. Several of these vessels were found containing symbolically charged materials—such as human or animal bones, or remnants of offerings—indicating that they were not merely grave goods placed alongside the deceased, but were actively used in ritual contexts. This dimension invites a reevaluation of pottery's funerary function: beyond form, attention must also be paid to content, highlighting the complex interplay between material culture and symbolic practices in mortuary settings.

A/ Skeletal Remains

It is rare for ritual funerary vessels to be buried in isolation; they are often accompanied by one or more household-type ceramic vessels, as observed by Camps in his analysis of ceramics from megalithic tombs. Many such vessels have been discovered across various tombs, with a common pattern being the presence of a single vessel per individual. The function of these vessels can be readily inferred, as their forms are still found in traditional rural ceramics of North Africa. Cups, bowls, and drinking vessels, for example, continue to serve in the transport and presentation of food, similar to the mashrab, typically used to offer fruits or carefully prepared dishes. Some of these vessels were discovered filled with human bones—as seen in the tombs of Bounouara (Figure 4). This may reflect the same symbolic rationale behind the placement of raw or cooked animal parts as offerings to the deceased. It is plausible that vessels found upright and deliberately positioned contained water, even though physiological life no longer necessitates such sustenance for the dead. This raises questions as to why such vessels were not covered—especially considering that the individuals responsible for these offerings appear, based on the archaeological evidence, to have been meticulous in their ritual presentations.

Elsewhere, the archaeologist Gsell argues that the burial of domestic vessels should be interpreted purely in symbolic terms, particularly as they were often interred empty. The generally small size of these vessels might be explained by the notion that those actually containing food offerings were deliberately shaped and sized to resemble regular domestic ceramics. (Camps, 1961, pp. 293–295)

Fig.4 Funerary bowl containing animal bone remains from the Bounouara burials.

During our field analysis of a group of ceramic materials unearthed at the site of Roknia, we encountered a particularly telling funerary artifact: a small bowl (Gasàa) that contained bone fragments, most likely of animal origin. The presence of such content within a simply shaped vessel suggests a potential ritual function associated with burial practices. The Gasàa, being an open and shallow vessel, may have been used either to present food offerings in the context of funerary rites or to preserve animal remains bearing symbolic associations with death or the transition to the afterlife. This observation aligns with similar finds at other funerary sites across the Mediterranean, where ceramic vessels are frequently found accompanying human skeletons and containing organic or faunal remains. These practices are interpreted as part of an integrated symbolic system aimed at ensuring the continuation of the soul or facilitating its passage into the afterlife. From this perspective, the Gasàa should not be considered an ordinary burial item but rather an active ritual component reflecting a specific conception of death and metaphysical beliefs held by the tomb builders.

In mortuary contexts, the presence of bone remains inside ceramic vessels is a recurrent phenomenon that reveals diverse ritual and symbolic practices across cultures. Archaeological evidence demonstrates that these vessels were not mere containers but functioned as mediums for holding human or animal remains, indicating clearly defined funerary roles. The discovery of bone remains inside funerary ceramics constitutes some of the most significant evidence for ritual behavior among prehistoric societies in North Africa. Excavations have revealed vessels containing burnt or partially fractured human bones in stone tombs, suggesting cremation practices or the symbolic offering of human remains. In certain tombs from the Hoggar region and southern Tunisia, vessels containing bone fragments identified as belonging to children have been found placed next to primary burials. This pattern raises the recurring hypothesis of seasonal or cyclical rituals—such as those associated with birth and death—linked to agricultural or celestial cycles. (Camps, 1961, p. 221)

Fig.5 Small bowl containing bone remains

B/ Food Remains

Funerary pottery containing food remains represents one of the most significant material indicators of the complex symbolic and ritual dimensions embedded in ancient burial practices. In many cultures—including those of ancient North Africa—ceramic vessels buried with the deceased were not merely quotidian utensils interred by coincidence. Instead, they fulfilled a symbolic function linked to the reconstitution of scenes from daily life within the funerary space. The presence of food residues, whether animal or vegetal, within certain vessels indicates the performance of sacrificial rites that expressed the continuity between the worlds of the living and the dead, and reflected beliefs in the role of such offerings in accompanying, nourishing, or appeasing the spirit.

These vessels were often part of carefully choreographed funerary scenarios, where the selection and placement of objects were imbued with ritual intention, making them valuable material for interpreting the underlying ceremonial logic. A number of such ceramic pieces have been found in a limited number of megalithic tombs, including the necropolis of Roknia, where vessels were discovered containing unidentified organic remains. These remains likely hold symbolic significance similar to that attached to raw or cooked animal parts presented as offerings to the dead. It is also probable that upright vessels—deliberately placed—contained water, even though physiological hydration was no longer necessary for the deceased. This raises important questions about the rationale behind leaving these vessels uncovered, especially given the clear evidence of careful ritual presentation by the living participants. According to Camps, the burial of uncovered ceramic vessels likely held a deeper symbolic meaning that transcended practical utility. Placing them upright may have been intended to create ritual balance or to symbolize the soul's transition, possibly even representing an open channel of communication with the otherworld. The lack of a cover may have also conveyed the idea that the deceased could continue interacting with their surroundings, or that death itself was viewed as a temporary condition. For his part, Gsell contended that the burial of ceramics resembling domestic utensils must be interpreted as a purely symbolic act. These vessels were often interred empty, reinforcing their metaphorical rather than functional role. Their small size, he argued, may indicate that even those used for actual food offerings had to conform to the recognizable shapes and proportions of everyday domestic wares, thus blurring the line between life and ritual (Camps, 1961, pp. 293–294).

This resemblance introduces a symbolic dimension associated with the ritual simulation of scenes from life within the realm of death, expressing a belief in the continuity of existence beyond physical life. Although these ceramic vessels appear limited in capacity or practical use, their presence within the funerary context clearly points to a symbolic function that transcends the material nature of offerings, reflecting more abstract levels of meaning related to ancient conceptions of death and the soul. One example includes a ceramic bowl (Jafnah) that contained compacted remains, likely representing organic-soil accumulations within the vessel. These may have resulted from the decomposition of food materials mixed with surrounding soil over a prolonged funerary timespan (Figure 6). However, this interpretation remains hypothetical and lacks precision, as a comprehensive laboratory analysis of the vessel or the assemblage as a whole has not been conducted—largely due to limited resources.

Furthermore, had microscopic analysis been employed—one of the key techniques for studying food residues or organic materials on ceramic surfaces—it could have greatly enhanced the accuracy of the findings. This type of analysis enables close inspection of pottery to identify organic or inorganic matter that may have been deposited or interacted with the ceramic surface over time. For instance, remnants of plant fibers, ground grains, or even traces of food could potentially be detected through microscopic examination. Such analysis would have provided a more accurate understanding of the substances used in funerary rituals and contributed to a better grasp of how these vessels functioned in daily life or within ceremonial contexts. On the other hand, this ceramic bowl distinguished itself from the rest of the assemblage by the presence of a light white coating on its outer surface, while the fabric of the clay tended toward a light ochre-red hue. The white coloration may indicate the application of additional materials such as lime or white clay—an interpretation we find plausible—or it could result from specific polishing techniques. Symbolically, the color white may also connote purity or sanctity, suggesting a ritual purpose related to spiritual transition or the honoring of the deceased. It is possible that this color was deliberately selected to reinforce the sacred character of the funerary rites, thereby imbuing this type of pottery with a spiritual dimension.

Based on these observations, it can be hypothesized that, despite its morphological resemblance to domestic ware, this vessel was specifically produced for funerary purposes and not intended for daily use. This interpretation is further supported by its small size and limited capacity, which would not suffice for the practical needs of the living—thus reinforcing the likelihood of its symbolic significance and ritual function within the burial ceremony.

Fig.6 Funerary bowl containing organic accumulations mixed with soil.

This pattern of funerary behavior is not unique to ancient North African sites; rather, the offering of food in ceramic vessels is attested across various funerary traditions in both the Mediterranean and Saharan regions. In Phoenician cemeteries, such as at Tyre in Lebanon, ceramic vessels were used to present food offerings, with remains of meals found inside funerary jars or placed on plates outside them—indicating that meals were served to the deceased as part of ritual practice (Núñez, 2017, pp. 187–190). Similarly, in the funerary customs of the Garamantes in the Libyan Sahara, coffins have yielded charred date remains and ashes, pointing to the practice of food offerings and possibly the performance of burning rituals at the gravesite. These practices reflect a belief in the need to nourish the dead in the afterlife and to maintain a symbolic relationship between the living and the deceased (Alhaique, 2013, pp. 1–20). Recent analyses of ceramic vessels from Roman graves in Britain reveal a high degree of symbolic dietary specificity. Remains of cooked meats, bread, fruits, and oils were identified. In one notable case, an entire chicken—minus its head and feet—was found placed on a dish alongside a cow rib and a small pig bone, clearly indicating the preparation of a "complete meal" for the deceased within an explicitly ritualized framework (Lepetz, 2017, pp. 1–20).

Taken together, these lines of evidence support the hypothesis that such vessels, despite their morphological resemblance to domestic pottery, were purposefully produced for funerary use. Their small size and limited capacity, which would not suffice for practical daily needs, further underscore their symbolic meaning and ritual function within the burial context. This particular funerary bowl discovered at the Roknia cemetery stands out distinctly due to the presence of a light white coating on its exterior surface—an unusual feature not observed on other vessels from the same funerary assemblage. This unique white slip has attracted the attention of researchers, as it is believed to represent more than a

mere decorative element. Rather, it may hold symbolic and functional significance within the specific ritual framework of the cemetery. The distinctiveness of this bowl, marked by its white coating, could suggest a special status or a particular role in burial rites, making it a valuable artifact for understanding the cultural and symbolic dimensions of the community that produced it. The white coating on the surface of this funerary vessel is considered a symbolically charged element in ancient funerary practices. In many ancient cultures, the color white was associated with concepts of purity and sanctity. This association indicates that such vessels were not intended for ordinary utilitarian purposes, but instead fulfilled spiritual functions—perhaps signifying the sanctification of their contents or marking the vessel's role in facilitating the ritual transition between life and death (Bradley, 2000, pp. 45–47). Beyond its symbolic meaning, the white slip may also have derived from natural materials such as lime or white clay, which could serve to protect the ceramic surface from deterioration and improve its preservation in burial conditions. This suggests a particular care taken by the artisans and the broader community in the production of these vessels (Rice, 1987, pp. 23–25).

Moreover, the white coating acts as a visual marker that distinguishes funerary ceramics from those used in daily life, underscoring the existence of a symbolic and social division in the materials employed in mortuary contexts. This visual differentiation likely played a role in enhancing the ritual dimension of burial practices and reflects a broader cultural expression surrounding the notions of death and transition to the afterlife (Tite, 2008, pp. 312–315).

Symbolic Meanings and Ritual Functions

In Berber burial contexts—particularly in the Aurès, Constantine, and the High Plateaus—funerary pottery has been discovered containing charred or deliberately selected bone remains, such as jaws, teeth, or cervical vertebrae. These finds suggest a symbolic dimension attributed to specific parts of the body. According to Camps, "this practice was not arbitrary but reflected a belief that certain body parts possessed spiritual power or were intrinsically linked to the deceased's personal identity" (Camps, 1980, p. 204). Within this framework, the pottery appears to function as a "vessel for the soul" or a medium ensuring its transition or continuity within the collective memory of the tribe. Delving further into the symbolic meaning, the presence of bone remains inside ceramic vessels has often been interpreted as a ritual act representing the body or soul in a container viewed metaphorically as a "second womb"—a notion supported by comparative anthropological studies. Souville notes that some prehistoric sites in Algeria and Tunisia exhibit recurring patterns of small, narrow-mouthed vessels containing charred bones, reinforcing the hypothesis that they served as receptacles for cremated remains or even symbolic fetal relics (Souville, 1977, p. 185). This interpretation intersects with Arambourg's observations in sites along the Saharan fringe, where pottery was not merely used to store ashes, but rather to express a symbolic continuity between life and death (Arambourg, 1934, p. 49). Excavation results from sites such as Tawzi, Hoggar, and Qasr al-Ghoul further support this interpretation, having revealed ceramic vessels containing burnt bones in sealed tombs dating to the third and second millennia BCE. These findings suggest the practice of cremation and purification rituals in early North African societies. Camps notes that such phenomena were often associated with nomadic pastoralist groups who had adopted hybrid cultural traits from both desert and oasis traditions, thus emphasizing the ritual role of pottery as a mediator between body and soul (Camps, 1974, p. 93). Additionally, the selective burial of specific skeletal parts—such as vertebrae or teeth—within some vessels may reflect symbolic practices grounded in the cultural concept of "the part representing the whole" within funerary ideology.

Furthermore, in the Punic funerary context, ceramic vessels containing charred bone remains are considered an essential component of burial rites, especially in Carthaginian cemeteries and their associated sites along the Maghrebian coast. In a number of burials at Carthage and Sousse, ceramic vessels were found containing ash and human bones—often those of children—within what are known as Tophet cemeteries. These are distinctive funerary spaces believed to be associated with rituals of human sacrifice to the goddess Tanit and the god Baal Hammon. G. Picard interprets this pattern as a religious practice with both sacrificial and symbolic dimensions, noting that "the ceramic vessel was not merely a container, but an integral part of the ritual, functioning as a symbolic vessel for the soul's passage" (Picard, 1969, p. 178). Ritual comparisons between Punic and Berber burials reveal a symbolic convergence in the "ritual transformation of bones into sacred ash deposited within pottery" in a sanctified space, as reflected in the spatial arrangement of deposits within the burial. In certain Berber communal graves, such as those at Tipasa, ceramic vessels were deliberately placed around the body or over the skull, sometimes containing ash mixed with aromatic plant residue. This suggests purification rituals or symbolic transitions of the deceased. As researcher Lhote observes, "these vessels were not part of the quotidian objects buried with the dead, but rather elements of a spiritual act carefully performed to ensure reincarnation or protection" (Lhote, 1955, p. 87). Punic funerary rites, particularly in North African settlements such as Carthage, Kerkennah, and Hippo Regius, were also characterized by the use of small to medium-sized ceramic vessels containing

burnt bone remains. These remains often belonged to infants or small children, deposited within cinerary urns that were sealed with clay stoppers or stone slabs. Scholar L. Poinssot interprets this practice as a representation of "purification by fire" and a symbolic return to the primordial four elements—particularly in the context of child burials, which held sacrificial or expiatory connotations (Poinssot, 1951, p. 27). These rituals were closely linked to ancient Phoenician beliefs regarding the soul's transition through ritual burning, endowing pottery with a spiritual function that far exceeded its material purpose.

Conversely, the use of funerary pottery as a ritual vessel continued in later Berber burials,particularly during the period spanning the 3rd century BCE to the 1st century CE, though with increasing symbolic complexity. At the "Sidi Rached" cemetery in Constantine, ceramic vessels were discovered containing human remains accompanied by small stones or aromatic plant ash. This suggests a fully developed ritual that transcended the narrow funerary framework, incorporating purificatory meanings and a sanctified dimension. Camps interprets this practice as evidence of a synthesis between Punic and Berber beliefs, wherein the pottery represents a symbol of transition, and the bones serve as corporeal remnants imbued with symbolic potency—necessitating ritual care and reverence (Camps, 1980, p. 219).

Conclusion

The study of funerary ceramics recovered from the megalithic tombs of Roknia and Bounouara demonstrates that these objects were not secondary elements within the burial assemblage, but rather material media imbued with complex symbolic and ritual functions. Archaeological data reveals that pottery—whether through its form, its location within the grave, or its content of bones or food—was not chosen arbitrarily. Instead, it was the result of a deliberate funerary logic, expressing localized conceptions of death, transition, commemoration, and the symbolic continuity of the soul. Multiple field observations have shown that some vessels were carefully positioned, often containing animal remains or selected human bones, indicating ritual practices marked by precision and recurrence. The contents are no less significant than the vessels themselves; rather, they bestow upon the pottery a ritual dimension, transforming them into containers of meaning rather than simple utilitarian objects. Specific features, such as shape, size, or distinctive surface treatments—like the white-coated bowl found at Roknia—highlight a symbolic awareness that links physical characteristics with spiritual function in the funerary context. Through the analysis of technical and morphological criteria, it is clear that most of these ceramics stem from local Berber production systems, often tied to handcraft traditions. Yet some pieces exhibit influences from Mediterranean stylistic currents, particularly in terms of shaping techniques and finishing precision. The variability in craftsmanship and contents indicates social differentiation within the tombs, underscoring the role of pottery in expressing status as well as ritual.

Moreover, a comparative view reveals meaningful intersections between these funerary practices and those observed across the broader Mediterranean—such as in Punic, Libyan, and Roman burial contexts—particularly regarding the deposition of ashes or bones inside vessels, or the presentation of symbolic meals for the deceased. These patterns reflect enduring beliefs in soul transition, purification by fire, and ritual reenactment of life within the domain of death. Although this study focuses on a limited set of examples, it highlights the necessity of approaching funerary ceramics as material texts that, in their silence, communicate a discourse about death culture and belief systems in North African megalithic societies. It also demonstrates the value of combining archaeological evidence with anthropological analysis to interpret burial rites as socially and culturally embedded actions, revealing the mental structures and collective identities that shaped them. This integrated approach—bridging technique and symbol, the local and the trans-regional—opens new horizons for comparative research. It may contribute to redrawing the cultural map of ancient funerary practices and clarifying the role of ceramics in structuring the relationship between the living and the dead within a comprehensive worldview of death, memory, and transcendence.

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