Alnaciriya: Journal of sociological and Historical Studies
Vol: 17. **Issue** : 01. June 15, 2026
EISSN: 2600-6189/ ISSN: 2170-1822

Pottery Production in North Africa as a Chronological Indicator

Soualmia Mebarka

University of Souk Ahras, m.soualmia@univ-souk-ahras.dz

Received: 27/02/2026 Accepted: 24/05/2026 Published: 15/06/2026

Abstract: Pottery was of great importance in the lives of ancient societies, both in daily life and religious life. It came to meet the needs of man after he settled down and practiced agriculture. Pottery was also used in funerary rituals and was found in most megalithic tombs and accompanied the dead because of their belief in the existence of another life after death.

This study aims to determine the importance of the pottery industry in the ancient Maghreb region in dating processes and extracting its types, patterns and forms, in addition to knowing if there were foreign influences. To reach these goals, we followed a descriptive analytical theoretical methodology based on the available scientific material. We divided this research paper into three main axes, and the following problem falls under it: Can we rely on the pottery industry in dating processes?

One of the most important findings is that pottery is an important material source in dating processes to reveal social and living aspects, because the maker of these pottery tools preserved the local identity. Funerary pottery reflected the extent of material and cultural wealth in the region, which contributed to reimagining and reviving ancient human life.

Keywords: Religious rituals, funerary pottery, material resources, megalithic tombs, North Africa.

Introduction

Pottery has been and continues to be one of the most significant archaeological resources relied upon by researchers across various disciplines as a chronological tool in the process of dating, due to its daily use in ancient periods. It served as a witness to this craft, and its production evolved from one stage to another, reflecting human artistic taste through the diversity of manufacturing techniques and the decorations applied, thereby highlighting the aesthetic dimension of art.

Funerary pottery is considered the bridge between the world of the living and the dead in ancient times, which has facilitated researchers' study of these artifacts to understand various aspects of the civilizations. This material was widely distributed in archaeological sites and funerary monuments and constituted one of the most important components of funerary furnishings in tombs.

This study carries multiplied significance as it sheds light on the connection between the world of the dead and the living through the examination of pottery in funerary architecture, aiming to understand the nature of daily life among the living during this period, as well as to explore the religious and cultural dimensions of the peoples of North Africa. It reveals the cognitive potential offered by pottery as an artistic and archaeological document that can be interpreted to comprehend the way of life of ancient communities, while reinforcing the value of Algerian heritage and calling for a re-examination of material cultural heritage within a broader cultural–civilizational perspective. The study highlights the documentary role of pottery as an important source for understanding the beliefs and religious practices related to society, and restores recognition of Algerian material cultural heritage as a reservoir of historical identity.

Research Problem

The North African region witnessed a wide spread of pottery production in its various types and forms, making it a rich source for studying ancient life. From this emerges the main research problem, which can be summarized in the following question:

To what extent can pottery be relied upon as a chronological indicator in the process of dating, to understand the social, religious, and cultural life of ancient communities? And can this everyday material be considered a tool for understanding the evolutionary

lifestyle of those societies? Several sub-questions arise from the main problem, including:

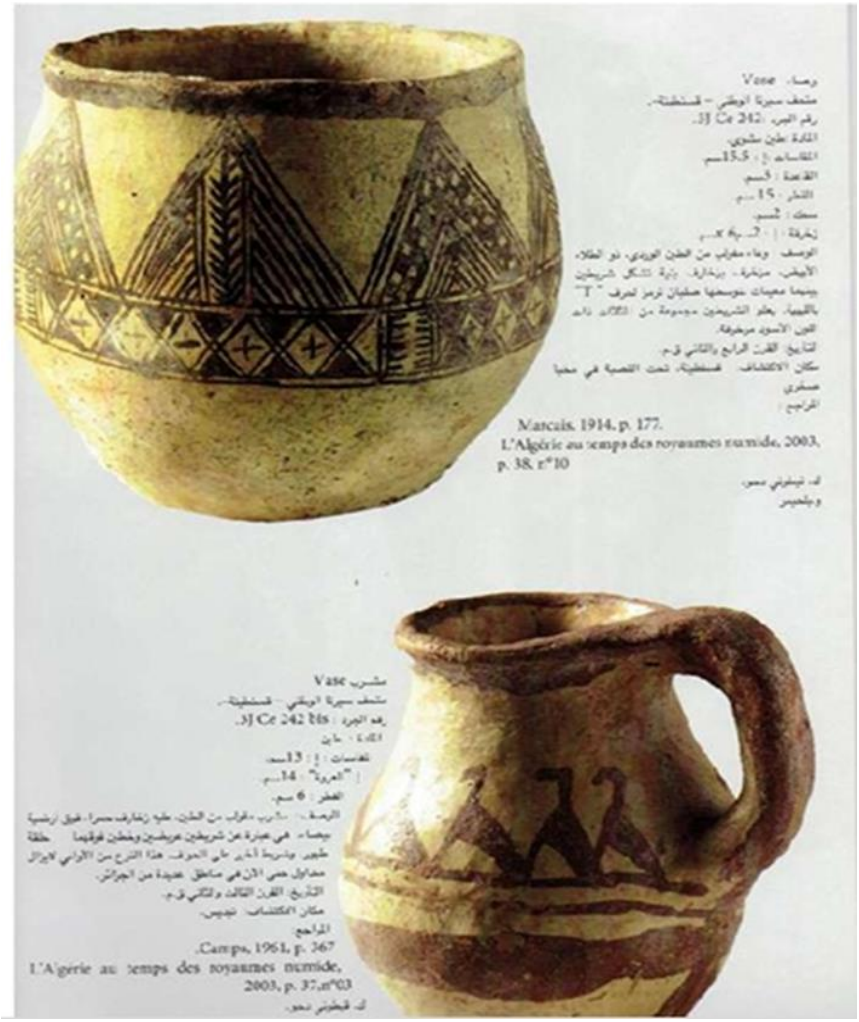
How has pottery contributed to the understanding of ancient peoples' culture and the clarification of religious beliefs, particularly through funerary artifacts?

To what extent did foreign influences affect local pottery production in North Africa?

How can the study of everyday pottery be used to understand the social and economic evolution of ancient communities?

I- Pottery Production in Numidia

Most archaeologists consider pottery to be the most prevalent material evidence at archaeological sites, and therefore a reliable



record of all past cultural periods. Through pottery, it is possible to reconstruct and envision the social, economic, and religious life of ancient communities by utilizing the chronological information it provides. This enables the establishment of a timeline based on the temporal development of specific pottery types, according to their morphological characteristics and the various clay types and manufacturing techniques employed(Akli(N), 2016,p 50).

Pottery production in North Africa as a Chronological Indicator

Numidian pottery: Source: Jamila khalafi, previous reference, p. 47.

I.1- Nature of the Raw Material

Most studies conducted by researchers on various pottery vessels, particularly those discovered in megalithic tombs, have confirmed that the clay used is largely similar. This is attributed to the fact that the raw material was sourced from locations near the tombs(Bouchareb, (S). 2020, p 440)

The quality of the clay begins with the careful selection of the quarry, followed by its tempering to remove moisture, and then sieving to achieve a homogeneous consistency. Water is subsequently added to obtain a workable, moist mixture, which is thoroughly kneaded by hand until the clay becomes ready for use. Additionally, the incorporation of stabilizers is essential, as they play a significant role in absorbing the plastic components present in the clay, thereby enhancing its strength (Zerarga, (M). *2018*, p265).

I.2- Firing Process.

The firing process is considered one of the most critical stages in pottery production due to the significant risks involved, such as breakage, cracking, and damage. It is also a key indicator of the quality of the pottery: an oxidizing atmosphere during firing produces light-colored pottery, while a reducing atmosphere results in darker, blackened pottery.

Before firing, the pottery must be dried and exposed to sunlight and air to prevent cracking, reduce brittleness, and increase durability. Researcher Murad Zararaqa noted that the kilns used by the inhabitants of North Africa in ancient times were not very different from those used today. The firing usually took place outdoors, where the pottery was covered with dry branches and some organic remains from domesticated animals, then the fire was lit. This process caused oxidation, strengthening the pottery, making it more durable, and giving it a red or yellow color depending on the intensity of the fire and the composition of the clay (Zerarga*, (M):* 2018*: p265).*

Ancient Numidian pottery belongs to the category of ordinary pottery that women produced to meet the needs of their households, whether for cooking, eating, or storing surplus beyond the family's requirements. Pottery-making is considered a

distinctive feature of rural communities, particularly among rural women, and this craft has been passed down since ancient times. Women would start shaping the pottery at the end of spring, with manual craftsmanship being predominant*(* Nashar *(*Kh)*.*2015:p 39)

However, the researcher Qazzal claimed that pottery made by rural women was fragile and unsuitable for storing liquids.

Recent laboratory studies on some pottery pieces found in megalithic tombs have confirmed that Gazzal's claim is inaccurate and unfairly diminishes the value of ancient Numidian pottery craftsmanship (Khalfi *(*J*)*, Mouqaddem *(*B N*):*2022.p 39)

From a technical standpoint, pottery is classified into two types: Hand-molded pottery, which is the most widespread in North Africa and continues to be practiced today by rural women potters. Researcher Murad Zararaqa, in his study of a group of hand-molded pottery, notes that these techniques closely resemble those used today. He observes that contemporary hand-molded pottery appears as if it belongs to the ancient Punic period. The persistence of these shapes over time is attributed to the lifestyle of North African inhabitants, including certain foods that are still common today, which necessitate the use of the same types of pottery(Zerarga, (M). 2018*,* p152).

Wheel-thrown pottery, a technique predominantly employed by men in workshops. It first appeared in Mesopotamia and Egypt around the fifth millennium BCE, transforming pottery from a craft occupation into a commercial industry across different regions of the ancient world(Cheniti (M B)*.*2013.p 91). In the Maghreb, wheel-thrown pottery is documented, for example, in the city of Djerba (Tunisia)(El-Ayadi(H):2021: p131)

I.3- The Most Important Pottery Production Centers in Algeria

Pottery is considered one of the most important primary sources for studying ancient civilization and uncovering its obscure secrets, as it serves as a chronological thread for the sequence of history. For this reason, researchers in the history of ancient North Africa have turned their attention to pottery remains found in residential sites or burial grounds in order to study them and extract historical data from them(Cheniti (M B):2013:p 96**)**

Pottery production in North Africa as a Chronological Indicator

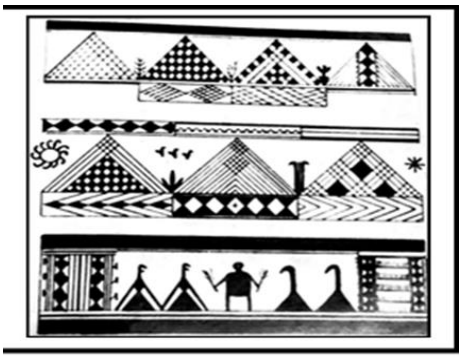
I.3.1- Taddis Pottery:

The city of Taddis gained great fame in pottery production, especially during the Roman period, and its products were exported over a span of five centuries. The reason for this is the methods of organization in production and its wide distribution thanks to maritime trade (Dencau (J):1972:p220) . As Camps mentioned, the pottery found in Taddis's cemetery containing human remains, such as teeth and a mandible, was placed in small vessels Camps(G):1956: p 271).

The pottery discovered in Taddis has been dated to 250 B.C. and 110 B.C. Symbols that are difficult to interpret also appear on the ceramic vessels; some pottery bears marks indicating the owner of the workshop that produced it, or reflects religious beliefs, because the inhabitants of North Africa believed in life after death . These symbols may also indicate religious beliefs and funerary meanings, and Camps interpreted the numerous triangles on the pottery as symbolizing mountains(Camps (G) :1980:p236).

The Most Important Features of Taddis Pottery:

The proper firing of the pottery contributed to giving it a metallic shine, increasing its strength and solidity; this durability helped it resist factors of deterioration during ancient periods, especially the pottery found in cemeteries.



The city of Taddis hosted the best and most skilled potters in the North African region, particularly during the Numidian period, which reflects the skill and distinction of the indigenous inhabitants in this craft.

Taddis pottery enjoyed great fame for five centuries, especially during the Roman era; this was due to the organization of its production and its wide distribution to large areas through maritime trade(Deneauve (J): 1972:p220). Researcher Mohamed Bachir Shniti also confirmed that the city of Taddis maintained its pottery industry until the Islamic period, and that this pottery has historical significance and important cultural continuity, as its cultural characteristics distinguish it from others. Furthermore, this

pottery helped in understanding the element of cultural and ethnological interaction in this region (Cheniti (M B):2013:p 96)

Decorations on Tidis pottery vessels: Camps, G., La Céramique, pp. 155, 203

I.3.2- **Rukniya pottery**: the majority of the ceramics found in the Rukniya cemetery was locally manufactured and did not differ from those of other regions. They were not limited to the utilitarian aspect alone but also carried spiriyual dimensions connected to the religious beliefs of the local population.

Key Features of Rukniya Ceramics:

Most of the pottery found in the Rukniya cemetery shares the same characteristics in terms of production patterns and techniques, such as plates, cups, goblets, and incense burners. Their surfaces are uneven due to their simple manufacturing process, as they were intended for ritual purposes. They relied on raw materials sourced near the cemetery, and the speed of production is evident in their coarse texture. They are devoid of any coating, reflecting their temporary functional nature. From a technical standpoint, this pottery is distinguished by its precision and the technological advancement of ancient societies, which demonstrates the skill of humans in this region (Saib(A), Zrarqa(M): 2025: 581–590).

I.3.3- **Tebessa Ceramics:**

The earliest research in the Tebessa region dates back to prehistoric times, confirming that it was a center of human settlement. This is due to the availability of all the necessary conditions for living, such as the extensive hydrographic network, including Oued Merdjeda and Oued Melghigh, as well as the presence of flint, which is considered an essential material in stone industries at Bir el-Atar,Charaa, Hammamat, and Naqrin (Bahra(N), 2017, pp. 16–71)

Tebessa was also one of the most important regions for the discovery of pottery, with this craft dated to the third century BCE. It was inhabited by the Mozolami tribes, who were not nomadic; however, the predominant feature of the ceramics from this area was their poor quality, with pottery being either black or red in color, while the decorations were generally simple(Camps (G) :1980:p236) .

Camps argues that the ceramics discovered in the Tebessa (Castel) cemetery, dated to the Numidian (Punic) period, numbered approximately 350 pottery vessels, including ten large ones

compared to the others. Plates and cooking pots for daily use were also found. This theory is supported by the absence of decoration, a feature characteristic of cooking vessels, which allows for a reconstruction of the daily life of ancient peoples. These vessels do not differ from the practices of the inhabitants of mountainous regions. Kamps further emphasized that molded pottery extracted from cemeteries served different functions, even when specifically made for funerary purposes. These were small ritual vessels with religious significance, resembling household vessels but less precise and less skillfully made (Camps (G):1997:p101.107) .

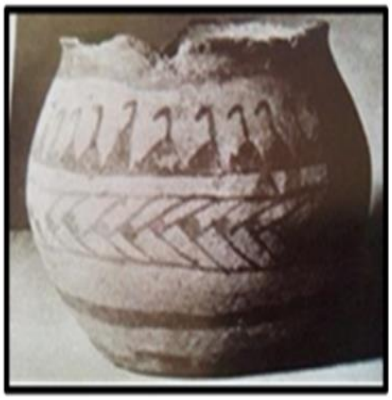
I.4- **Technical Study of Pottery:**

Nature served as a source of inspiration for humans in prehistoric times, from which they drew aesthetic motifs manifested on pottery. The models discovered since the sixth millennium BCE consist of simple lines reflecting the rhythm of surrounding objects. This conceptualization continued to evolve as human thought progressed and the senses developed. Decoration eventually took the form of geometric, animal, and vegetal motifs (Soukhal(M E):(2023):p289.)

Regarding the geometric decorations found on pottery in the Greater Maghreb region, they closely resemble Sicilian decorations. They emerged as a result of commercial exchange or through migration, and this similarity between the two models can also be attributed to the influences exerted by Phoenician traders, who are credited with bringing the region out of isolation (Cheniti (M B):2013:p 90) . Some pottery pieces also feature decorations expressing the movements of the human body, manifested in images of humans or parts of the body, such as the head or face. As for animal decorations, they appear in depictions of lions, bulls, or flocks of birds flying in the sky(Camps (G):1997:p257-260) .

These decorations acquired great importance and artistic value, conveying spiritual meanings materialized in tangible forms, the traces of which remain today, reflecting the nature of humans in ancient times.





Geometric and animal motifs: Source: (Cheniti (M B):2013:p47).

II. The Importance of Pottery in Ancient Tombs as a Chronological Indicator in the Process of Dating

Funerary pottery has provided us with information about the lifestyle of prehistoric societies, and this characteristic is very important because Numidian pottery preserved all the details of its manufacture and continued to use the same production techniques, from raw materials to firing and decoration. Pottery making is considered one of the oldest industries known to the Numidians (Remili(M): 2022: p 248).

II.1- Examples of funerary pottery

Pottery was used as funerary furniture in tombs, and large quantities of it have been found, represented by:

II.1.1- Small figurines

Small examples of these have been found in tombs and temples, most often representing images of deities. They were produced using the wheel technique and display a primitive form. Other parts could also be added by hand to complete the remaining parts of the body. These figurines were decorated with bands and ornaments that varied according to the type and gender of the figure.

Another type of these figurines was mold-made in both El Kala and Carthage, after which the work was completed by painting them in colors such as red and black**.**

II.1.2- Masks and faces:

This type was discovered in tombs, where they were placed beside the deceased rather than over the face. These terracotta faces constituted a blend of artistic creativity; they were not merely decorative elements but were associated with religious beliefs. They were of two types, male and female, and appeared toward the end of the sixth century.

Laughing pottery mask: Source: (Hamdash(F): 2025:p897

These small figurines and faces reflect the extent of human attachment to religious and social beliefs, and they also highlight the craftsman's ability to keep pace with the various cultural influences neighboring the North African region, such as the Egyptian, Greek, and Phoenician civilizations (Hamidache(F):(2025):pp894, 899)**.**

II.1.3- Small pottery vessels:



such as plates, cups, mugs, bowls, goblets, and censers, were found in large quantities in megalithic tombs. They were characterized by uneven surfaces, reflecting their simple mode of manufacture and the ritual function for which they were specifically prepared. They are small in size, coarse in texture, irregular, and imprecise, and appear to have been shaped within a short period of time (Saib(A), Zrarqa(M):2025: p 582)

Most of the pottery vessels discovered in tombs preserved their original form, which facilitated their study by researchers. These studies yielded significant results regarding shaping techniques, methods of manufacture, and even decoration. All these data have contributed to dating processes.

In addition, certain pottery productions were used as honorary symbols, presented as prizes in competitions and especially in athletic activities; they were also offered as gifts to kings. The basic material composing the pottery pieces varied according to region and period (Rhodes (D): 1978:p05).

Through these honorary pottery pieces, it is possible to determine their age, period, and the individuals to whom they were presented, thereby contributing to the process of dating.

II.1.4- Clay pipes:

This craft is among the most common uses of pottery, to the extent that pottery dominated this field for many centuries. There are three types based on usage: the first type consists of pipes for conveying fresh water; the second type is for draining wastewater; and the third type is for draining rainwater from rooftops. This type was also used in baths, especially during the Roman period. These pipes were connected in two ways: either underground or through walls. They are cylindrical pottery pipes, narrow at one end and wider at the other(Ben Jeddo(A E) :2024:p47)

Pottery studies have held great importance for researchers, particularly archaeologists, due to their significant role in dating processes. This is because pottery pieces are frequently found on the surface of archaeological sites during survey or excavation, serving as evidence that the site was inhabited by humans. This initiates the research process, prompting researchers to conduct objective studies of pottery through chemical or physical analyses to develop a typological study of the discovered pottery (Rak(H):1995:p64) .

Chemical and physical analysis played a significant role in dating processes, particularly in identifying manufacturing and firing techniques. Radiocarbon analysis has also contributed to determining the remaining proportion of radioactive carbon in organic materials. Over time, the percentage of carbon decreases, making it possible to establish the approximate or relative age of pottery.

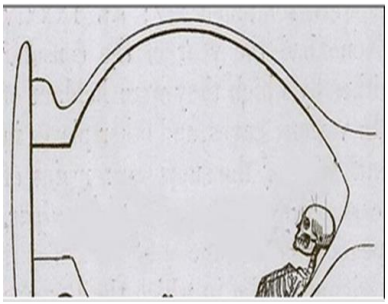
II.1.5- Burial inside pottery vessels:

Pottery was used in burial practices, as evidenced by the ceramic pieces discovered in the cemetery of Sila, inside underground chambers. Each vessel was placed near a skull, and the pottery containers held small, fragmented bone remains. These bones may have belonged to the same individuals whose skulls were arranged along the walls of the chambers. In addition, some pottery vessels contained organic food substances intended for the deceased, reflecting the belief in life after death. This confirms that the pottery found in megalithic tombs possessed ritual dimensions(Zerarga, (M). *2018*, p123).

Burial inside jars: (Chinawi(A): 2025:p15).

Pottery had multiple uses in ancient periods, as it was a material readily available in nature and easy to shape and produce. Consequently, ancient peoples employed it in all aspects of life, including religious and daily uses. Even in the present day, pottery continues to be used as decorative objects and for eating and drinking, especially after modern studies have confirmed that the use of pottery in daily life particularly in kitchens is a healthy practice that should be revived.

II.2- **The Importance of Pottery as a Chronological Indicator:**



II.2.1- the begining of interest in the study of pottery

Most researchers, particularly archaeologists, have shown great interest in pottery industries due to their prominent role in the study and dating of archaeological sites, as well as in reconstructing aspects of primitive life among ancient populations in North Africa. Pottery has been used as a chronological tool for dating past events and activities. This was confirmed by Gabriel Camps, who regarded it as an indicator of human settlement in a given region. Its abundance was considered evidence that the area had experienced significant human stability, within which agriculture was practiced (Gabriel (C):1961:p287)

The Neolithic period witnessed a wide use of pottery production in its various forms, whether for daily or religious purposes, which contributed to the flourishing of these industries among ancient peoples. Pottery crafts evolved and diversified in terms of both shape and function. Moreover, the artistic creativity of humans became evident through the decorative motifs that adorned ceramic vessels according to their intended use. This diversity and stylistic development made pottery a reliable indicator in the process of chronological dating (Camps(G): 1963: p 213).

The Protohistoric period was marked by the widespread proliferation of funerary monuments. Through these archaeological remains, scholars have identified diverse burial rituals and practices, as well as the funerary assemblages that accompanied the deceased. Pottery constituted one of the principal components of these grave

goods, which led the majority of researchers to rely upon it as a fundamental indicator in the chronological dating of such tombs (Camps(G): 1963: p 215)

The presence of pottery within megalithic tombs constitutes a significant historical and cultural marker reflecting the transformations experienced by the populations of North Africa. The evolution of its forms and stylistic patterns reveals the extent of external influences on local ceramic production, thereby establishing pottery as a reliable tool for dating archaeological sites and defining chronological phases.

II.2.2- The Importance of Pottery Industries in Writing the Ancient History of North Africa

Pottery constitutes one of the most significant material sources for reconstructing the ancient history of Algeria. The neglect of this important archaeological material deprives archaeological studies of their scientific value and reduces them to mere repetition of earlier works, particularly those produced during the colonial period. It is therefore necessary to re-examine the archaeological collections preserved in museums in accordance with modern scientific methods. The lack of sustained attention to archaeological research in the present day especially in light of technological advancements in analytical equipment makes it difficult to reach crucial findings that could provide answers to many unresolved issues.

From this perspective, it has become essential for archaeologists to rely particularly on ceramic industries as fundamental material sources. Without them, it is impossible to fully understand the patterns of life of the populations of North Africa in ancient times, which would consequently lead to the loss of a substantial part of the local cultural heritage. Pottery, in particular, constituted one of the principal components of the funerary assemblages discovered in megalithic tombs.

Within this framework, the study of these archaeological remains namely pottery discovered in tombs alongside the deceased confirms the existence of religious life during ancient periods. Their preservation today in national museums carries great significance, as it allows for their scientific examination in order to identify the nature of the prevailing religious beliefs in antiquity and to relate them to certain rituals practiced by the populations of that time.

Pottery production in North Africa as a Chronological Indicator

Through the study of ceramic artifacts dating back to ancient periods, we gain insight into how the inhabitants of North Africa preserved their heritage and local identity amid the intense cultural dynamism that characterized that era. Despite the presence of extensive commercial exchanges, they were not profoundly influenced by imported manufactured goods.

Ceramic remains also provide important information about the nature of the industrial activities that prevailed in ancient times. This has necessitated subjecting them to restoration processes and attempts to return them to their original condition in order to facilitate accurate scholarly study.

Conclusion:

This study demonstrates that pottery production in the ancient world played a significant role in social, economic, and religious life.

Pottery reflects the extent of human engagement with religious beliefs, as manifested in the rituals practiced, where ceramic vessels constituted some of the most important grave goods in tombs, indicating the existence of religious life and a belief in an afterlife.

The abundant presence of pottery in megalithic tombs serves as a historical and cultural indicator that can be relied upon in dating ancient periods, due to its widespread occurrence at archaeological sites and within these tombs.

The technical development of pottery industries shows that humans advanced their craft in terms of shaping, firing, decoration, and functional use.

The discovered ceramic artifacts reveal aspects of social life and the living patterns of the populations, as well as the artistic and aesthetic dimensions of humans in ancient times.

Pottery was not merely a tool used to meet daily needs or to perform posthumous religious rituals; rather, it served as a tangible witness to a comprehensive world of beliefs and daily life in antiquity. Finally, this study highlights the significant contribution of pottery industries to chronological studies, with researchers considering them as reliable chronological indicators.

Bibliography

- (Khalfi)J(& Mouqaddem)B N).(2022)"Pottery Production In Ancient Algeria" Maghreb Journal Of Manuscripts. Vol. 18. No1.
- Akli(N). (2016). "Small Figurines As A Model Of Numidian Society". Afaad Fikriya Journal. N7. Nashar)Kh). (2015): "Pottery Of The Greater Kabylie Region: Maâtqa As A Model", Journal Of The General Union Of Arab Archaeologists.
- Bahra(N).(2017)"Sites of the Paleolithic Period in the Tebessa Region (Upper Plains of Southeastern Algeria". PhD Thesis.Institute of Archaeology.University of Algiers.
- Ben Jeddo(A E).2024(."Pottery And Ceramics In Islamic Tlemcen Until The End Of The 18th Century", Journal Of Research, Vol. 09, No. 01.
- Bouchareb (S).(2020)."The Kalma region and its surroundings: A monographic study from prehistory to the end of the Roman occupation through material and literary sources" (Doctoral dissertation. University of Batna 1.
- Camps (G)(1997). "Le Style De Gastal (Etude Des Céramiques D'une Nécropole Protohistorique d'Algérie " Antiquités Africanes , V33 .
- Camps (G). (1961) "Aux Origine De La Barber .M Massinissa Ou Le Début De L'histoire . Imprimerie Officielle . Alger.
- Camps(G) : (2007).Les Barbares Manière Et Identité Algérie .Barzak.
- Camps(G).(1956) ."La Céramique Des Sépultures De Tiddis " Libyca.T6.
- Cheniti (M B)(2013). Reading Into The Roots Of History And Civilizational Monuments. Dar Al-Huda, Aïn M'lila, Algeria.
- Dencau (J) .(1972). " Céramique Et Lampes Africaines Sur Les Côtes De Province Antique Africaine ". Antiquités Africanes , T6.
- El-Ayadi(H).(2021)."Pottery Production In Ancient Maghreb", Algerian Historical Journal, Vol. 5, No2.
- Hamidache(F)(2025)."Models Of Carthaginian Pottery Production – Small Figurines And Masks. Al-Bahith Journal, Vol. 17, N2.
- Rak(H). (1995). *Methods Of Archaeological And Historical Research.* Dar Al-Fikr Al-Lubnani, Beirut.
- Remili(M). (2022)."The Cultural And Civilizational Manifestations Of Protohistory In The Ancient Maghreb.Drassat Trathia, Vol16. N1.
- Rhodes (D).(1978). La Potier Les Formes .Edition Dessin Et Toba.

- Saib(A), Zrarqa(M).(2025)"A Note On Funerary And Ritual Pottery Extracted From The Rukniya"Tombs. Bardo Museum Collection" .Al-Ahyaa Journal, Vol. 25, No. 37.
- Saib)A) Zrarqa (M). (2025) “A Study On The Hannaizian Pottery And Rituals Extracted From The Rukniya Tombs”.Al-Ihyaa Journal. Vol25. n37.
- Soukhal(M E) .(2023) “Analytical Technical Study Of The Decorations Represented On Some Pottery Artifacts In The National Public Museum Ahmed Zabana. Oran”. Journal Of Studies And Research. Vol 15. n1.
- Zerarga, (M). (2018). “Funerary landmarks and residential structures” (Doctoral dissertation. University of Algiers).