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Last Periods of Rock Art and First Writing in the Central Sahara**الفترات الأخيرة من الفن الصخري وبداية الكتابة بوسط الصحراء الكبرى****Samira Hamil Ouicher***Historical and archaeological studies laboratory- Moresli Abdullah University Center- Tipaza (Algeria)***سميرة حميل ويشر**

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belkacemi.dalila@cu-tipaza.dz**الملخص:**

يحتوي الفن الصخري فترة ما قبل التاريخ على أدلة قيمة وتعتبر كوثائق تاريخية، ومعلومات قيمة تشهد عن تاريخ إقامات الإنسان في الصحراء الوسطى من خلال النقوش والصور، هذه الفترة تعرف بفترة الأحصنة والجمال وتتوافق مع آخر فترات ما قبل التاريخ وبداية فجر التاريخ، فالفن الصخري يحتوي على مجموعة متنوعة من الأساليب والمشاهد مثل الحيوانات، الإنسان وتصاميم في شكل رموز وأشكال هندسية، والتي يمكن أن تكون وسيلة اتصال بين المجتمعات القديمة وتعتبر نوعاً من أنواع الكتابة المعروفة لاحقاً بتيفيناغ، تعتبر هذه النقوش من بين الوثائق التاريخية القادرة على تزويدنا بمعلومات قيمة عن تاريخ الإقامة البشرية، لكن تأريخها وتفسيرها يبقى صعباً بشكل عام، وهذا ينطبق على المشاهد الصخرية التي تحتوي على علامات ورموز التي تم الإشارة إليها في بعض الدراسات التي تبين أن الكتابة الليبية البربرية استمدت من تلك الرموز والأشكال المجسدة في الفن الصخري خلال الفترات الأخيرة لما قبل التاريخ، وهي مرحلة الأحصنة والجمال، هذا المقال يقترح بعض الآراء والفرضيات حول أصل الأبجديات الليبية التي مثلت من خلال الفن الصخري، والتي يشهد عليها أكثر من ألف نقش تم جمعها في جميع أنحاء شمال إفريقيا، وخاصة في الصحراء الوسطى.

الكلمات الدالة: الفن الصخري؛ ما قبل التاريخ؛ الصحراء الوسطى؛ الكتابة.**Abstract:**

Rock art in prehistoric times contains valuable evidence, which is considered a historical document, and contains valuable information that testifies to the history of human settlements in the central Sahara through engravings and paintings. This period is known as the Period of Horses and Camels and corresponds to the last periods of prehistory until the beginning of the dawn of history. Rock art contains a variety of styles and scenes, such as animals, humans, and designs in the form of symbols and geometric shapes, which were considered a means of communication between ancient communities and a type of writing known later as Tifinagh. These engravings are among the historical documents, providing us with valuable information about the history of human settlement, but in general, their dating and interpretation remain difficult. This applies to rock scenes that contain signs and symbols that have been referenced in some studies, showing that Libyan Berber writing drew from those symbols and shapes embodied in rock art during the later periods of prehistory, which is the Period of Horses and Camels. This article proposes some opinions and hypotheses about the origin of the Libyan alphabet represented in rock art, as evidenced by more than a thousand engravings collected from all over North Africa, especially in the central desert.

Keywords: Rock art; Prehistory; Central desert; Writing.

Introduction:

The invention of writing around 3200 BC, is considered the most significant event in human history, a phenomenon whose innovation and use by ancient peoples varies from region to region around the world. History is pictorial writing, just as hieroglyphs and cuneiforms in the ancient East, in north Africa, the development of art in late periods is part of a new stage of artistic production, that of a new style which is settled down based on geometric shapes, which express the sequence of several ideas of prehistoric man, and perhaps interpreted as a proto-rock writing, likely to have evolved towards Libyco-Berber writings by integrating an ancient stock of regional signs (tattoos, tribal marks, etc.), this protowriting to be sought among the rock signs. The Libyan inscriptions located in the Saharan zones belong to the last two periods of rock art (the Cabaline and Cameline periods), engraved or drawn on the walls of rock shelters and caves or rock facades. The problem that arises is that these drawings and engravings expressed a succession of several ideas carried out by a prehistoric and protohistoric man, could it be that Libyan writing in the Maghreb countries has its origins in these rock engravings? This is what we will try to address in this subject, which aims to know the characteristics of the last periods of rock art in the central Sahara and the originality of Libyan writing through some examples from various sites.

1. Methodology:

In this study, we will discuss the nature of Libyan writing, the most important points of diffusion, and the history through the rock art containing this writing, then we will try to know the extent of its continuity by comparing it to the writing of Tifinagh, by determining the origin of the latter and the meaning and use of its letters, and the regions of diffusion of its inscriptions in the central Sahara zone, as well as the relationship which links Tifinagh to Libyan writing, addressing some opinions of researchers on the origins of this writing.

This led us to conclude that grace to the similarity is the dominant characteristic of the two writings, the diffusion of the Libyan writing alone in all the countries of the ancient Maghreb in its Tifinagh form first reveals its originality, then the inclusiveness of this writing among its inhabitants,

which is a reflection of the unity of their language and reaches the form that we know today, after several stages which traced its history and its development, the first of which was associated with art, which appeared long before writing and which was a means of expression throughout the ancient world.

2. Rock art in the Central Sahara:

Engraved or painted, the first known artistic representations focused particularly on animal subjects from the natural environment, as well as subjects from daily life. The art, particularly rock art, of this period, is marked by dynamism and transmits to us a true chronicle of the life of the settlements of the time.

Indeed, our ancestors since these ancient times of prehistory have not only been concerned with their daily needs, they have not only transformed their environments, but they also interpreted their ways of life by engraving and painting it on walls and rock slabs, thanks to schematic representations, ingenious modeling, and elaborate symbolism.

In its evolution, rock art has experienced an unparalleled stage of skills, perfectly elaborated image messages, representing faunal elements, gestures, and scenes of daily life as well as geometric and conceptual shapes, by creating shapes and symbols, representing their world, our ancestors created abstraction as a means of communication.

These iconographic witnesses are translated at a higher stage of their evolution into writing, by the development of characters with phonetic values, in this case, the so-called Libyco-Berber or Tamazight writing, hence the Tifinagh used until now by the Tuareg, Many ancient scripts have disappeared, such as cuneiform and hieroglyphics, and they stopped being used early, the Tifinagh script has been preserved to the present day and is used by the Tuareg, who are desert Berbers spread across Libya, Chad, Niger, Mauritania, Mali, and Algeria.

3. Last periods of rock art:

Towards the last period of prehistory, rock art remains the most important source for the beginnings of history in the Sahara, this art has a cultural unity whose key words are: the horse and the chariot, writing, and metal, according to M. Hachid¹ distinguishes two sequences in this period,

¹ HACHID, M., *Les premiers Berbères : entre Méditerranée, Tassili et Nil*, Alger / Aix-en-Provence : Ina-Yas/Edisud, 2000, 317

the first is that of the "Saharan Libyans", the second is the longest and continues in the camel period which can be designated under the name of "Garamantes", the best-known Paleo-Berber people of antiquity.

This period ends with the arrival of the camel, but the horse will continue to live for a long time alongside the newcomer; paintings from the chariot era date back to a period from the first half of the 2nd millennium B.C. to the end of the 1st millennium B.C. In the Fezzan engravings, P. Graziosi suggests the existence of a particular stylistic group, that of the bitriangular man, armed with the javelin and the round shield², wearer of feathers on the head considered him to belong to the final period of pastoral or pre-camel art³, the women mainly wear long dresses tightened at the waist, the weaponry mainly includes the javelin and the round shield (FIG. 1), the bow figured in hunting scenes, then appears the knife hanging from the arm, often associated with alphabetical inscriptions.

We can distinguish several sub-periods⁴ that of the flying galloping tanks (FIG. 2), schematic chariots also corresponding to the appearance of cavalry, horsemen with javelins (FIG. 3), round shield, and a knife hanging from the arm, marking the beginning of the alphabetical period and horse-camel transition sub-period, where both animals are featured in the same scenes.

The chariot disappears and the dromedary appears, the guiding animal of the last period of rock art, it seems that the camel very soon made part of the North African landscape.

It turns out that the camel entered the eastern Libyan desert, on the one hand from Egypt through the region of Gilf Kebir, to arrive in the Kufra oasis and on the other hand from Nubia (FIG. 4), passing through Jebel el-Uweinat, to also reach the Kufra region, progression continues to the periphery of the Maghreb⁵, among these engravings that of the Djerat wadi are red engravings and black engravings, are formed by a series of points, and smooth, large, deep lines, having the section of a low -boring

² GRAZIOSI, P., «A propos de « l'Apolon Garamante» (Oued tel Issaghen-Fezzan)», *Préhistoire africaine, Paris*, 1981, 145-150, 147.

³ TAVERON, M., *La Tadrart. Paysage de la Préhistoire algérienne*, Alger: Année de l'Algérie en France, 2003, 31.

⁴ LHOTE, H., CAMPS, G., et SOUVILLE, G., Art rupestre, Période bubaline ou du buffle antique, Dans C.G., *Encyclopédie berbère*, Peeters Publishers, 1989, 918-939, 930.

⁵ LE QUELLEC, J.L. & DE FLERS P., *Peintures et Gravures d'avant les Pharaons du Sahara au Nil*. Paris: Fayard/Soleb, 2005, 321.

U⁶, among these engravings are inscriptions in tiffinagh characters accompanied by Libyco-Berber camels and the tanks of war, and these final expressions bring back to us images of touareg traditions: antelope and ostrich hunting with dogs, wearing javelins and loose clothing, riding camels, it is in this figurative context that most of the north-African and Saharan rock inscriptions appear, composed of alphabetical signs graphically related to the Libyco-Berber alphabets of North Africa, and to the tiffinaghs of the touaregs⁷, around the middle of the 1st millennium B.C, Berber horsemen and camel riders painted and engraved numerous walls, simultaneously imposing their new ways of living.

4. Geographical distribution:

The researcher Judas 1863 suggested the name Libyco-Berber which dissects both the local language and writing of North Africa⁸, this writing occupies a vast area of North Africa (FIG. 5), since it extends from the oasis of "Siwa" in Egypt in the east to the Canary Islands in the west, and from the Mediterranean coast in the north to the African coast in the south, Tiffinagh writing was used on tomb steles, cave walls, rocks, and carpets, and also engraved on currency and in tattoos.

Noting that the Libyan texts of Numidia (present-day northern Tunisia and eastern Algeria) are generally contemporary with Carthaginian and Roman Antiquity, the majority of Libyan inscriptions are found on funerary steles, where they are sometimes accompanied by Punic or Latin texts, while Tiffinagh inscriptions are generally engraved or painted on the rocks of the central and central-southern Sahara⁹ and the term Libyan Berber writing applies to all Libyan writings discovered in North Africa and to all inscribed and drawn texts from the Saharan Atlas and the central Sahara. Stefano Biagetti's research in Acacus¹⁰ indicates that the spatial distribution of the various inscriptions is related to the path and routes that

⁶ PERRET, R., « Recherches archéologiques et ethnographiques au Tassili des Ajjers (Sahara central). Les gravures rupestres de l'Oued Djaré, la population et les ruines d'Iherir », *Journal de la Société des Africanistes*, TOME 6, fascicule 1, 1936, 41-64, 43.

⁷ AUMASSIP, G., « La période caballine, un renouveau de la vie saharienne », *L'Algérie en héritage, Art et histoire*, Exposition présentée à l'Institut du Monde Arab Paris: *Actes Sud*, 2003, 56.

⁸ JUDAS. A.C., *Sur l'écriture et la langue berbère dans l'antiquité et de nos Jours*, Hachette Bnf, Paris, 1863, 47.

⁹ Galand, L., « Du berbère au libyque: une remontée difficile Laliés », *Actes des sessions de linguistique et de littérature (Carthage, 21 août-2 septembre (1995), Paris, Presses de L'ENS, VOL. 16, 1996, 77-98, 77.*

¹⁰ BIAGETTI, S., KACI, A.A., MORI, L., DI LERNIA, S., « Writing the desert: the Tiffinagh rock inscriptions of the Tadart Acacus (southwestern Libya) », *Azania: Archaeological Research in Africa* 47, No. 2, June: 2012, 153-174, 172.

the population takes to move and includes the most stable human groups in the region, which are those rich in horses in suitable places such as the presence of water and facilitate transportation and have social and economic importance.

5. Chronology and Origin of Libyco-Berber writing:

The history of the emergence of Libyco-Berber or Tifinagh writing is difficult to determine its exact date; some researchers date it back to the late Neolithic¹¹ and the protohistoric period.

5.1. External origin:

After the discovery of the Douga inscription determined in 1843, questions began about its origin, the date of publication of A. Hanoteau "Libyco-Berber writing", in 1896 the researcher reiterated his contribution and addressed the origin of the word "Tifinagh"¹² after the name of the touaregs, notes that in certain regions the qāf pronounced like a tifink, by removing the alif to become "taifin" the root of the latter "feng" or "feng" is the same as the word "Phoenician".

From this point, the origin of this writing was attributed to the Phoenicians, and the Libyans were influenced by them, they therefore borrowed their writings to express their languages, this theory supports the publication of the alphabetical list of most people's thanks to the Phoenicians, since the late 19th century, scholars have inherited this theory, which has somewhat guided subsequent studies in this regard.

The second "proof" of the connection of the Libyco-Berber writing to the Phoenicians is the convergence of seven letters in terms of form¹³ and pronunciation in the two writings (Table 1), other proponents of this theory see that the spatial distribution of the inscriptions discovered in North Africa coincides with the geographical¹⁴ area of Phoenician/Punic influence in this region, which confirms according to them, the Phoenician origin of the Libyan-Berber writing, they also rely on the absence of pre-alphabetical writing in north Africa to confirm that the Libyan-Berber writing is of uniquely Phoenician origin because it began directly with letters of the alphabet.

¹¹ CAMPS, G., "Écritures- Écriture libyque", *Encyclopédie Berbère*, XVII, Aix En Provence, 1996, 2564-2573, 2571.

¹² HANOTEAU, A., *Essai de grammaire de la langue tamachek'*, Alger, Jourdan, 1896, 11.

¹³ PRASSE, K., *Manuel de grammaire Touareg (Tahaggart)*, Copenhague, VOL. 2, in « *Écriture* », 1972, 274.

¹⁴ BENABOU, M., *La résistance africaine à la romanisation*, 1896 (1860) Maspéro, Paris, 1976, 475.

Classical studies date this writing to the 2nd century BC. based on the oldest inscription that could be dated with certainty is a bilingual Libyco-Punic, identified with its Punic part a dedication of a sanctuary consecrated in 139 B.C in Massinissa engraved on a steal from Dougga in Tunisia¹⁵, it is the oldest document and the only one in which a date is available¹⁶, it is also believed that any Libyan inscriptions discovered in North Africa cannot be older than the date of the arrival of the Phoenicians in North Africa (814 BC, the date of the founding of Carthage), thus, studies in this area take a direction opposite to historical and scientific truth.

5.2. Local origin:

The presence of a local “written” source in the form of rock inscriptions poses particular problems, linked to the point of initial emergence, their decipherment, and their dating.

As for the origin, this question has been widely debated by specialists, according to some the origin of Libyan writing is simply unknown¹⁷, and that all attempts to derive it from the Egyptian hieroglyphs, the South Arabian, Greek, Iberian, or even Phoenician Punic alphabets have failed to provide decisive proof.

The argument put forward by archaeologists and linguists who defend the local origin is essentially based on the rock documentation distributed across the sites of North Africa and the Sahara, according to them, the process of appearance and genesis of this writing developed from the evolution of rock drawing and its transition from figurative to geometric¹⁸.

Some historians have agreed that Tifinagh is a compound of two words: thiffin, meaning discovery, and anag, meaning our king¹⁹, research into the origin of Libyan writing has long remained hostage to classical theories, and this problem has not been systematically reconsidered, considering the data obtained in the areas archeology, and cultural anthropology, except in recent years by a team of numerous researchers trying as much as possible to objectively orient the problem based on

¹⁵ DROUIN, J., « Les écritures libyco-berbères », *Les Dossiers de l'archéologie*, N°260, 2001, 36-39, 37.

¹⁶ FEVRIER, J.G., *Histoire de l'écriture*, Paris, Payot, 1959, 321 – 332, 327.

¹⁷ COHEN, M., *La grande invention de l'écriture et son évolution*. Imprimerie Nationale et Librairie, Paris, 1958, 470.

¹⁸ DUPUY, C., «Trois mille ans d'histoire pastorale au sud du Sahara», *Travaux du LAPMO* (Préhistoire et anthropologie méditerranéennes), Aix, Université de Provence, 1992, 105-126, 108.

¹⁹ TOUDJI, S., «critures libyco-berbères : Origines et évolutions récentes», *In Actes du Colloque sur «Le» Libyco-berbère ou le Tifinagh. De l'authenticité à l'usage pratique*, 21-22 Mars, Alger, 2007, 142.

purely scientific data, this is consistent with the principles of the scientific method in the humanities.

We will attempt to address all the elements that support an earlier history of this writing and how it comes from a local cultural heritage, all data and hypotheses agree on the opinion of the emergence of the first Libyco-berber writings from the forms and symbols found in rock art, researcher Gabriel Camps dated an inscription found in the Azib Nikiss region of Morocco to around 500 years B.C²⁰, but the thesis of an older use, perhaps from the 4th century B.C being in front of an already perfected alphabet, we can suppose a certain period of development, after completing the study of the archaeological framework of this inscription, the same researcher concluded in 1996 that the date of the appearance of Tifinagh dates back at least to the 6th century B.C²¹, it is represented by a single line of Libyan writing (16 letters) engraved as part of a set of rock carvings executed in the same style and technique, its patina is homogeneous representing characters carrying weapons, from the same point of view, most researchers in the field of rock art believe that certain writings from the Sahara cannot be excluded from the inscriptions and drawings of the Cabaline period, they may date back to this same period, which begins around 1500 years B.C, other, on the other hand, J. Friedrich for his part maintains that the Berber alphabet separated²² from the Semitic alphabet.

However, researcher Hachid. M was able to find in rocks written in Tifinagh and a plaque from the horse chariot bearing the ancient Libyan writing, which could not have appeared before 1500 years B.C, the archaeological discovery²³ which changed the classical data about the origin of this writing.

Among the studies carried out in this regard, an article published by the two researchers Salem Chaker and Slimen Hashi²⁴, in which they approach a new vision of the origin and history of Libyan writing through scientific conclusions in two different research areas in linguistics and

²⁰ CAMPS, G., « Recherches sur les plus anciennes inscriptions libyques de l'Afrique du Nord et du Sahara », *B.A.C.T.H.S*, nouv. sér., 10-11 (1974-1975), Paris, 1978, 143-166, 144.

²¹ CAMPS, "Ecritures- Ecriture libyque", 2571.

²² FRIEDRICH, J., *Geschichte der Schrift*, Heidelberg: Carl Winter, Universitätsverlag, 1966, 94.

²³ HACHID, *Les premiers Berbères : entre Méditerranée, Tassili et Nil*, 317.

²⁴ CHAKER, S., & HACHI, S., « À propos de l'origine et de l'âge de l'écriture libyco-berbère, Dans i. S. Zaborski », *Études berbères et chamito-sémitiques*, Paris/Louvain: Prasse, 2000, 95-111, 95.

prehistory, as well as the spatial distribution of Libyan writing is wider because it goes beyond the borders of the area subject to Punic influence, it extends from the Siwa oasis in Egypt in the east to the Canary Islands in the west and from the mediterranean sea in the north to the African coast in the south, this writing only knows minor regional differences which do not go beyond the shape of a few letters, of content and use, its unity alone justifies the local origin of this written expression.

6. Sign or first writing?:

Libyan writing is based on the formation of its letters on geometric symbols: point, parallel, curved lines, point, line, circle and square, as well as the triangle. It appears, by observing the geometric symbols available in the shapes represented in desert rock art ²⁵ sorting the graphic language in the latest art, the Tifinagh letters derived their shapes from this artistic heritage, some of them were used directly as they are, while others underwent some reduction and change, carved spots, for example, were transformed into dots and continuous straight lines into parallel and intersecting lines.

Their outline is non-cursive, and they are arranged in vertical lines from bottom to top for Libyan texts (FIG. 6.b), vertical or horizontal for texts in Tifinagh and then from right to left (FIG. 6.a), or vice versa, or in a spiral (FIG. 7), we see them in several sites such as the Tit station²⁶ (Ahaggar) where there are alphabetical inscriptions that can be divided into two groups: an ancient, Libyco-berber, which is engraved, the another recent one, made up of decipherable tifinagh.

With the last two periods of rock art in the Central Sahara, we find mythograms, logograms, ideograms or pictograms, “pre-letters” prefiguring a system of transposition of phoneticism, can be transformed into a “writing”, which designates “a set made up of graphic units, minimal, recurring, combinable²⁷, transcribing phonetic units and vertical writing in the majority of Libyan inscriptions these are the funerary texts, starting from the bottom and generally read from left to right, on the other

²⁵ JEAN-LOÏC LE QUELLEC, “Rock Art, Scripts and Proto-Scripts in Africa: The Libyco-Berber Example”, chapter, In *Written Cultures in a Colonial Context*, Publisher: UCT Press Editors: Delmas, Adrien and Penn, Nigel, 2011, 3-29 att: <https://www.researchgate.net/publication/260275329>.

²⁶ LHOTE, H., «Nouvelle contribution à l'étude des gravures et peintures rupestres au Sahara Central: la station du Tit (Ahaggar)», *Journal de la Société des Africanistes*, TOME 29, fascicule 2, 1959, 147-192,192.

²⁷ CHAKER, S. «A propos de la terminologie libyque des titres et fonctions», *Annali Istituto univ, Orient di Napoli*46, N^o.4, 1986, 541-562, 542.

hand, a small number of texts which are read from right to left according to M. Ghaki vertical writing would be the oldest²⁸, the most common which lasted the longest is the first orientation which is maintained despite contact with other writings having a different orientation, on the other hand, the horizontal writing is read from right to left, these are the inscriptions of Dugga whose two bilingual characters are arranged from right to left, perhaps under the Punic influence, horizontal writing read from left to right is only attested in a few cases, and in the inscriptions of Bu Njem in Libya which would be caused by Latin influence.

There are many scripts and lines and they differ from each other, each script has its own alphabet, and if it is the same, it differs in its characteristics, among these multiple lines, Tifinagh is the Berber writing, which has been maintained until today among the touaregs, these same characters which have undergone inevitable variations²⁹, therefore, the attention of researchers has been focused on this issue, opinions are different and multiple, his Libyan writing is used to note the language, mentioned by Herodotus after more than two millennia, its current descendant called tifinagh³⁰, is still used by the touaregs, (Table 2) with some variations, to note their language.

If we look at these signs and symbols in rock art, we distinguish them by their most original aspects from prehistoric rock art and offer a multiplicity of geometric shapes called signs.

There is an abundance of elementary lines, dashes, bars, circles...and in smaller proportions elaborate shapes, such as partitioned quadrilaterals, chains of triangles, alignments of chevrons, etc. These signs are pure forms; they represent nothing, neither being nor object. But for all that, they can represent a jaguar, a giraffe, or a mythical hero: they are graphic symbols covering the multiplicity of meanings that each society, that each culture generates for itself.

There are prehistoric iconographies very rich in signs. Thus, in the region of Mato Grosso in Brazil, there are several shelters for paintings and

²⁸ GHAKI, M., "Le cas de la stèle libyque : Borj Hellal. Note sur la question de l'orientation de l'écriture libyque", *Mélanges F. Rakob., Mitteilungen des Deutsch Archéologie Chen Instituts Roémische Abteilung*, VOL. 104, 1997, 389.

²⁹ CAMPS, G., *Berbères Aux marges de l'histoire*, Toulouse : Des Hespérides, 1980, 275.

³⁰ AGHALI-ZAKARA, M., "De l'origine et de la survivance des écritures Libyco-berbères", *Actes de colloques organisés à Casablanca par la Fondation du Roi Abdul-Aziz al Saoud, Débuts de l'écriture au Maghreb*, Casablanca : M.H. FANTAR, A. SIRAJ, 2004, 85-90, 86.

engravings and brings together around 2000 signs and only a few dozen animal and human representations.

The signs offer a great diversity of types: the most basic are the most numerous and the most widespread; the most complex delimit the micro-territories of the groups which produced them. Certain geometric shapes are not repeated from one shelter or rock to another, even close, they very probably have the function of designating them as do coats of arms or signs.

Some iconographies are poor in signs, and this is the case of painted art and engraved art from the Sahara and northern Africa. In these vast cave areas, the theme and therefore the symbolism are largely dominated by animal representations, wild fauna and domesticated fauna as well as by human representations whose figurative status varies from bodily and clothing realism to visual delirium and the production of monsters.

Rock art is not only a collection of beautiful images or stories of things in life or pastoral scenes or weapons and hunts, but it also symbolizes the relationships that men weave between themselves, between their groups. distinguished by their own cultural identities, this art punctuates the relationships that societies establish with the landscapes where they live and their territories, the phenomenon of writing in the Sahara desert, we confirm that Tifinagh texts can play an important role in the process of interpreting the natural surroundings³¹, as humans leave marks of their passages in the region after their stays, which appear to have been active and effective at the Tadarart Acacus site, as stated by researcher Stefano Biagetti, as was shown through the work of researcher which was established at the Tin Lallane site, which contains many sites bearing Tifinagh inscriptions (FIG.8), this type of rock inscriptions is an archaeological and historical record that helps us in identifying Its authenticity is achieved through integrated studies such as available ethnographic, historical, and archaeological data.

With the arrival of the horse, alphabetical writing is associated with the latter. These are Tifinagh characters perfectly identical to those used today which are mainly signs of ownership or messages of love³² but the oldest transmit a message that we have not yet been able to decipher. It

³¹ BIAGETTI & OTHERS, «Writing the Desert: the Tifinagh Rock Inscriptions of the Tadrart Acacus (southwestern Libya)», 159.

³² AIN SEBAA, N., *L'art des origines, Algérie deux millions d'années d'histoire*, Djazair une année de l'Algérie en France, 2003, 51.

was long believed that they only intervened with the mounted horse and that the latter was later than the harnessed horse, we tend more and more to synchronize them.

The first Tifinagh signs that we see associated with the chariot on the rocks, seem to occur shortly after this one, they are part of the first alphabetical writings and have a complex structure due to a non-separation of words and the absence of vowels, we do not know their origin, we no longer believe in a loan from the Phoenician, perhaps it would be a local intervention which would be drawn from an old fund of tattoos.

7. Rock art data:

Let us look at the most distant period with the Capsians of the Maghreb, more than 10000 years ago, and among the bovidian proto-berbers of the Sahara, already 7000 years ago, in various ancient signs, then among the Eastern and Saharan Libyans from the beginning of history, it is in this iconographic crucible that certain socio-religious graphic elements are found, which³³ were able to gradually lend themselves to the establishment of a sort of primary ideographic language, it was only with the Garamantes³⁴ that this primary system moved towards a scriptural form to give the first writing characters, this type of rock inscription bearing Libyan writing is concentrated in the areas where the Grammont tribe resides.

The most recent Caballine and Camelline phases, less than 4000 years B.C, specialize in stylization and schematization³⁵ drawing, reduced to its essential features to express itself, unlike the previous phase of fewer and less diversified realities, and it is in this type of graphs that we should seek for the origin of the first signs of north African writing, it is accepted that the Libyan writing dates back to ancient periods, well before the Phoenician/Punic occupation, we refer to the stages of rock art in the central Sahara, with a classification carried out by the first discoverers³⁶, from a chronological and stylistic point of view in the last millennium

³³ HACHI, *Les premiers Berbères : entre Méditerranée, Tassili et Nil*, 185.

³⁴ DI LERNIA, S. & M. GALLINARO, « Working in A UNESCO World Heritage Site. Problems and Practices on the Rock Art of the Tadrart Acacus (SW Libya, Central Sahara) », *Journal of African Archaeology* 9, 2011, 159-175, 162. <http://dx.doi.org/10.3213/2191-5784-10198>

³⁵ HACHI, S., "Djanet, mirage miraculé", *L'année patrimoine*, Alger, 2003, 36-37, 37.

³⁶ LHOTE, H., *Peintures préhistoriques du Sahara. Mission H, Lhote au Tassili*, Pavillon de Palais du Louvre : Musée des Arts Décoratifs, 1957, 67.

before the current era, the style of the last Caballine period coincides with the arrival of the dromedary.

The period of rock art, known as “Libyco-berber” this name was also given to the supposedly recent phase of North African and Saharan rock art, the sites in this category of art are distributed in the Atlas, South Atlas and Saharan zones, a high proportion of engraved images are grouped together, its inscriptions due to their hermetic nature for most Saharans, have been much less studied and they inform us about the area occupied or traveled by Berber speakers, and indirectly, about the evolution of these populations, this writing could be inscriptions of short texts, which indicates its use in personal messages or as riddles³⁷, in addition to the use of signs and symbols that indicate the purpose of not being understood by outsiders³⁸. Some of the figures attested in the Caballin are clearly found both as alphabetical characters and as motifs of the decoration of Berber pottery³⁹ and in tattoos, which we know still receive a semantic interpretation today⁴⁰, like the case of the anthropomorphic sign z which represented and represents man and the value Z in the Tifinagh alphabet⁴¹ in the shelters of the central Sahara representations with abundant signs, animals and human figures, we do not know the meaning of these signs, they could be herd marks or ritual or magical signs, or we could be dealing with signs associated with the origin of writing⁴².

For some researchers, the rock engravings of the Libyan Messak consider them to be ideograms⁴³, the graphic proximity of certain Libyan or Tifinagh letters with geometric figures, such as the triangle, the quadrangular, the chevron, and parallel or crossed lines (FIG. 9) can constitute the matrix from which the Libyan alphabet took shape⁴⁴, the case of some engraved signs represent animals such as the ox of Khanget

³⁷ AIT KACI, A., Recherche sur l'ancetre des alphabets libyco-berberes. *Libyan Studies*, 2007, 13-17, 13.

³⁸ AGHALI-ZAKARA, M. & J. DROUIN, *Inscriptions Rupestres Libyco-Berbe`Res, Sahel Nigero- Malien, Sites D'iwelen Et D'adar-En-Bukar*, Droz, Geneva, 2007, 125.

³⁹ MOREAU, J.B., *Les grands symboles méditerranéens dans la poterie algérienne*, Alger: SNED, 1976, 191.

⁴⁰ DEVULDER, M., «Peintures murales et pratiques magiques dans la tribu des Ouadhia», *Revue africaine*, 1951, 63-102, 63.

⁴¹ CHAKER, & HACHI, «A propos de l'origine et de l'âge de l'écriture libyco- berbère – réflexion du linguiste et du préhistorien», 95.

⁴² CHAKER, S., « Le berbère », *Les langues de France* (sous la direction de Bernard Cerquiglini), Paris: PUF, 2003, 215-227.

⁴³ MASFERRER, S., SERRA, N., JOAN, N., & JORDI, E., *Sahara Occidental: Passat i present d'un poble*, Université de Gérone, Gérone, 1999, 133.

⁴⁴ LUTZ, G., & RUDIGER, «From Picture to Hieroglyphic Inscription, The Trapping Stone and its Function in the Messak Settafet (Fezzan, Libya)», *Sahara* 5, 1992, 71-79, 78.

el-Hadjar in southern Constantine and the horse of Guerrar el-Hamra, and he sees this as confirmation of «the antiquity of the language and the presence of certain primitive alphabetic signs», he distinguishes⁴⁵ extremely schematic representations of horsemen as resulting from the association of the Libyan letters X (/Z/), split to form the legs and tail of the mount, and n (/N/) placed above to represent the rider.

8. Status and current mode for writing:

- The location of speakers in Amazigh.
- Egypt: the oasis of Siwa.
- Libya: in Jbel Nafoussa, in Zwara, as well as in the oases of Ghadamés, Ghat and Augila and the Touareg regions of the south.
- Tunisia: villages on the island of Jerba and Daas le Matmata. Tunis and Gabès welcomed during the 20th century, part of the Imazighen of the Matmata as part of the rural exodus.
- Algeria: Kabylia is strongly Amazigh-speaking, Amazigh languages are still practiced in Mزاب, Aurès and in the south of Algeria, the capital, Algiers has a large Kabyle community.
- Morocco: three regions are strongly Amazigh: the Rif, central Morocco and southern Morocco; which amounts to saying that this concerns a large part of the population of the kingdom.
- We also distinguish periods that may be evolutionary for this writing, according to researcher Lhote⁴⁶, he distinguished between three types of this writing, groups of rock inscriptions in the central and southern desert, and each group is specific to a time period:
 - The first was before the camel period, and represents the image of a mythical hero, known as Imamelin, in the oral tradition of the Tuareg.
 - The second appears in the form of some current signs.
 - The third group consists of Tifinagh letters in circulation at the present time.

⁴⁵ Amara, I., « Nouvelle approche de l'art rupestre de l'Atlas saharien : les figurations de la période tardive », *L'Anthropologie* 107, 2003, 533-555, 553.

⁴⁶ HACHID, M., «Le contexte archéologique et historique de l'alphabet libyque. Retour sur la date de l'inscription rupestre d'Azzib n'Ikkis (Haut Atlas) et sa troublante convergence avec celles du Sahara central », *In Actes du Colloque sur « Le » Libyco-berbère ou le Tifinagh. De l'authenticité à l'usage pratique*, 21-22 Mars, Alger, 2007, 1-88, 8.

- As we currently find that the Amazigh language in Algeria, as a model, consists of several different dialects that share the same script, namely:
 - kabylie, referring to the kabylie region located east of the city of Algiers, and spread in the states of Tizi Ouzou, Bejaia, Bouira, Boumerdes, Bordj Bou Arreridj, Jijel, and North Setif, and it is the most spoken in terms of number.
 - Chaouia is spread in eastern Algeria, especially in the cities of Batna the capital of the Aures, Khenchela, Oum El Bouaghi, Tebessa, Souk Ahras, Guelma, south of Setif, Constantine and the entrances to the city of Biskra.
 - The Touareg in the far south of the Algerian Sahara, especially in the cities of Tamanrasset, Illizi, Ain Salah and Djanet, Timimoun, Adrar.
 - The Mozabite is named after the Mozab region and the city of Ghardaia, it is also spread in the Wadi Souf region which is called the “Gate of the Desert.”
 - Chleuh is spread in the regions of Cherchell, Tipaza and Tenes, in the northwest of the city of Algiers and the city of Béchar in the southwest of Algeria.
 - In addition to Chlef, Tiaret, El-Baidh Naama, Tlemcen, Oran, which is closer to the Chaoui dialect.
 - The Blidian Atlas is spread in Blida, Medea, Sanhaja and is close in pronunciation to the kabylie region.

Discussion:

The expression of man through rock art in line with the development and crystallization of human thought in all parts of the globe, he moved from symbolism to the objective, natural style, passing through the semi-natural style, then the schematic, to finally reach abstraction from which writing emerged, The conclusion of research currently considers that writing is the dividing line between human prehistory and history, however, we find the circumstances of its appearance, as we indicated above, as old as the appearance of man himself, and they are basically divided into two types: the first type is that which contributed indirectly to the emergence of writing and is very ancient, centering between the stage of acquiring written expression through several methods, including rock art, as for the second type, it is modern and is embodied in the stage of planning and symbolism through a physical representation of intellectual knowledge, through the stages of artistic expression in the desert, we find that the latter began with symbolism, then developed into a natural,

objective style, then turned into a semi-naturalistic style, then schematic, and finally abstract, which led to the emergence of writing.

The Libyan-Berber script did not disappear throughout these ages and remained in use by the Touareg Berbers in the Sahara desert of North Africa, and they preserved it until the present time, this oral language has its original writing, known as Tifinagh, which has existed since the prehistoric period, the Phoenicians may be the who took the writing from the Libyan, noting that Tifinagh is much older than the Phoenician writing, which dates back to the tenth century BC, it is a recent date compared to the date of the appearance of Libyan writing in 1500 B.C such studies require specialists, such as archaeologists, historians, or specialists in the Amazigh language, to conduct precise research that leads to inevitable results, and more precise and expanded research by specialists, enabling us to prove hypotheses about the local origins of this script. We distinguish that the same symbols we find in rock art scenes dating back, to the late Neolithic period and the beginning of history were used as calligraphy, known as Tifinagh, by these people, for example, we find some symbols and signs in rock art that indicate special letters in the Libyan Berber language, and we do not find them in letters of other languages like the letter K, which we find in the word, and the pronunciation of a certain word like (akkal) which means the floor, and the letter g (agw) which means the fog, historically Tifinagh may have changed some of its meanings since then until today.

Writing has in fact, before reaching the form that we currently know, gone through several stages which trace its history and its evolution at the same time as that of its inventor. This evolution seems from the beginning linked to another form of expression and representation used by man since the dawn of time, it is art, well before writing, art in general was the means of expression of human groups all over the world, which gave an important artistic production, and consider as a need ornamentation with figurations of objects, the origin of which cannot be dated⁴⁷, but which is far before writing, manifested differently depending on the populations, in the ornaments of the body and objects, engraving, drawing, painting, sculpture, from there developed from the drawn or engraved line and

⁴⁷ COHEN, *la grande invention de l'écriture et son évolution*, 2.

which cannot be detached from the latter, and therefore from rock art one of the oldest forms of artistic production.

Results:

Among the most important results that can be highlighted through this study:

-The locality of Libyan Berber writing in its various sections, despite the difference in its letters, with the possibility of it emerging from rock art scenes due to the fact that they share the style and techniques of completion.

-The geometric shapes that accompanied rock art scenes may have been reduced to the form of pre-alphabetic symbols that paved the way for the emergence of writing, thus the scenes of symbols through rock art can be considered as pictorial writing.

-The importance of this writing is evident in its later mixing with Punic writing

- The precedence of symbols and geometric shapes through the rock bed, which dates back to the stage of round heads, which appear in the form of symbols to communicate with the period of horses and camels, which may serve as pre-alphabet symbols that paved the way for the emergence of writing.

Conclusion:

In the last Cabaline and Cameline periods, man did not create writing from an unknown practice, but rather developed it from figurations and diagrams with symbolic signs to simplify and clarify communication between human groups.

The same thing is for Libyco-Berber writing, this intellectual effort through which the first human groups in the region were able to simplify the images of which we find traces in all parts of North Africa, their mountains, and their deserts. It seems that Libyan Berber writing was derived from the symbols and shapes embodied in rock art from the stage of horses and camels. However, this requires a comprehensive study of the thousands of graffiti scattered throughout the desert, using archaeological, historical, and ethnographic evidence to understand their meanings and their evolution over time in the central desert.

However, the problem remains unresolved unless the scattered inscription texts from all over North Africa, including the Sahara and its adjacent regions, are collected, classified, and compared to each other, and their geographical distribution determined, they should be studied from all aspects (technical, chronological, cultural, etc.). Most of the contents of the texts remain mysterious to this day, except for the bilingual North texts (Libyan-Berber or Libyan-Latin), which have been reassembled through comparison, helping to decode 22 out of 24 characters, and some ancient Saharan texts whose content has been understood through comparison with current Tifinagh, while most of the writings remain unknown in content.

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Catalogue:



(FIG. 1) Caballine characters, Eberer, Tassili -n- Ajjer <https://www.futura-sciences.com/sciences/dossiers/prehistoire-sahara-neolithique-232/page/9> Accessed on January 2024.



(FIG. 2) Painting in caballine style
Tahunt Tehosekit. Tassili-n-Ajjer <https://aars.fr/etat-des-connaissances/> Accessed on Decembre 2023.



(FIG. 3) Chariot with flying gallop with stick-headed figures (Tamadjer, Central Tassili / Archer of Jabarin (Tassili -n-Ajjer) probably masked, holding a curved weapon in one hand and his bow and arrow in the other
<https://www.google.com/imgres?imgurl=https%3A%2F%2F1450v.alamy.com/> Accessed on December 2023.

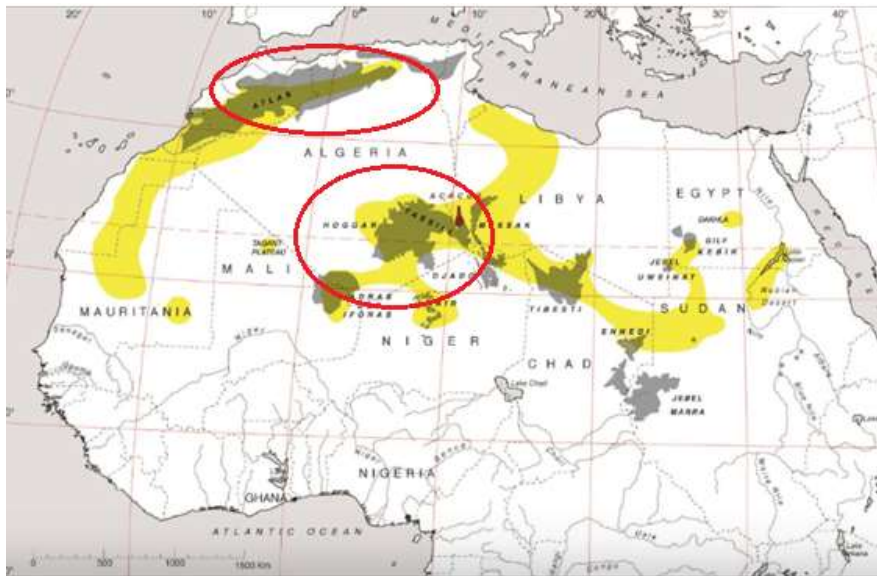


(FIG. 4) A very characteristic station of the times the most recent rock art of Tin Itinen, Tassili-n-Ajjer: tiffinagh, associated with horsemen; and camel drivers hunting.

RANDO, T., peintures rupestres du Tassili n-Ajjer

<http://thierry-rando.over-blog.com/2014/08/peintures-rupestres-du-tassili-n-ajjer/>

Accessed on November 2023.



(FIG. 5) Concentration of rock art in north Africa

<https://www.ingall-niger.org/avant-hier/le-neolithic/l-art-rupestre#galleryad18d165a1-5/>

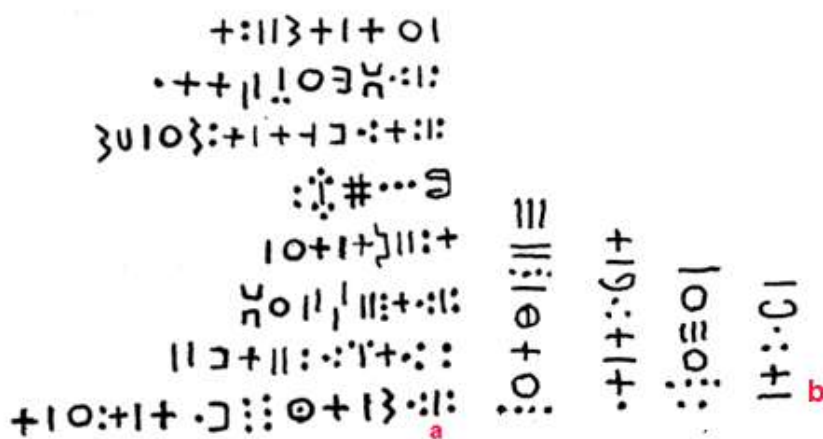
Accessed on November 2023.

Phénicienne	Punique	Grec	Latin	Tifinagh	Libyque
K	ⵏ	A	A	ⵏ	ⵏ
ⵏ	ⵏ	B	B	ⵏ	ⵏ
ⵏ	ⵏ	Γ	G	ⵏ	ⵏ
ⵏ	ⵏ	Δ	D	ⵏ	ⵏ
ⵏ	ⵏ	E	E		
ⵏ	ⵏ		V	ⵏ	ⵏ
ⵏ	ⵏ	Λ	L	ⵏ	ⵏ
ⵏ	ⵏ	M	M	ⵏ	ⵏ
ⵏ	ⵏ	N	N	ⵏ	ⵏ
ⵏ	ⵏ	O	O		
ⵏ	ⵏ	Π	P		
ⵏ	ⵏ	Φ	Q	ⵏ	ⵏ
ⵏ	ⵏ	P	R	ⵏ	ⵏ
ⵏ	ⵏ	Σ	S	ⵏ	ⵏ
ⵏ	ⵏ	T	T	ⵏ	ⵏ

(Table 1) The different ancient writings

<http://ethnopolis-net.over-blog.com/2018/09/a-1-origine-du-tifinagh-du-numidique-et-du-libyque.html>

Accessed on December 2023.



(FIG. 6) Alphabetical inscriptions Libyco-Berber from the Tit station (Ahaggar).

LHOTE, «Nouvelle contribution à l'étude des gravures et peintures rupestres au Sahara Central : la station du Tit (Ahaggar)» 154.



(FIG. 7) Saharan inscription in characters Tifinagh, Tadrart Akukas

(Le Quellec, "Rock Art, Scripts and Proto-Scripts in Africa: The Libyco-Berber Example", 13.

<https://journals.openedition.org/afriques/docannexe/image/716/img-2.jpg> Accessed on December 2023

	Ahaggar (Algérie)	Ghat (Libye)	Aïr (Niger)	Azawagh (Niger-Mali)	Adghagh (Mali)
a	·	·	·	·	·
b	⊙	⊙	⊙	⊙	⊙
d	⊥	⊥	⊥	⊥	⊥
f	E	E	E	E	E
g	⊥	⊥	⊥	⊥	⊥
h	X	X	X	X	X
p	⊥	⊥	⊥	⊥	⊥
y	⋮	⋮	⋮	⋮	⋮
h	⋮	⋮	⋮	⋮	⋮
j	X	X	X	X	X
k	⋮	⋮	⋮	⋮	⋮
l	⋮	⋮	⋮	⋮	⋮
m	⊥	⊥	⊥	⊥	⊥
n	⊥	⊥	⊥	⊥	⊥
m	⊥	⊥	⊥	⊥	⊥
q	⋮	⋮	⋮	⋮	⋮
r	⋮	⋮	⋮	⋮	⋮
s	⋮	⋮	⋮	⋮	⋮
t	⋮	⋮	⋮	⋮	⋮
w	⋮	⋮	⋮	⋮	⋮
x	⋮	⋮	⋮	⋮	⋮
y	⋮	⋮	⋮	⋮	⋮
z	⋮	⋮	⋮	⋮	⋮
e	⋮	⋮	⋮	⋮	⋮

(Table 2) Tifinagh (Touareg alphabet)

AGHALI-ZAKARA, "Les lettres et les chiffres. Écrire en berbère", 147.



(FIG. 8) Inscriptions of the Tin Lalan Tdrart region of Akakus
BIAGETTI & OTHERS, «Writing the desert: The Tifinagh Rock Inscriptions of the Tadarat Acacus
(southwestern Libya)», 158.



(FIG. 8) Engraving from Tifinagh containing horses
AÏN-SEBA, *l'art des origines*, 78.