

An Exploration of the Historical and Cultural Value of the Yin Ruins Oracle Bone Inscriptions and their Impact on the Evolution of Chinese Calligraphy

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Abstract

This research explores the historical and cultural impact of Oracle Bone Inscriptions (OBIs) on the development of Chinese Calligraphy, employing a systematic literature review approach. Focusing on the period from the Shang Dynasty (1600 to 1050 BCE) to contemporary Chinese Script, the study uncovers the contributions of OBIs to the evolution of the Chinese writing system, character configurations, and linguistic structures during the Shang dynasty. Through an extensive review of primary sourced documents, specifically oracle-bone inscriptions from the late Shang dynasty, and secondary scholarly literature, the research elucidates traditional practices and the origin of the Chinese writing system. The evolution of OBIs into various script forms, including Bronze Inscriptions, Seal Script, Official Script, and Regular Script, reflects linguistic transformation and cultural refinement. This study sheds light on the intricate relationship between OBIs and Chinese Calligraphy, providing insights into how these ancient markings influenced the evolution of calligraphic art. The research illuminates intriguing parallels between Oracle Bone Inscription words, exemplified by "Dingxi" for divination, and their evolved counterparts in Chinese calligraphy. Notably, the character "羊" for sheep in oracle bones undergoes a fascinating evolution in calligraphy, showcasing the dynamic transformation of visual symbols over millennia. By detailing the selection criteria and the systematic approach employed in the literature review, the research enhances transparency and replicability, contributing to a more comprehensive understanding of the enduring cultural and aesthetic influence of Oracle Bone Inscriptions on the calligraphy tradition.

Keywords: Oracle Bones Inscriptions, Shang Dynasty, Chinese Writing Evolution, Chinese Calligraphy, Historical and Cultural Significance of Chinese Writing.

The Yin Ruins in Anyang City, Henan Province, China, yield invaluable historical and cultural knowledge from ancient China by discovering Oracle-bone inscriptions. Dating back to the late Shang dynasty, spanning from 1600 to 1050 BCE, these inscriptions offer a

unique insight into the intricate social structures and spiritual practices of that era (Keightley, 1979). Meticulously recording divination practices and prayers, the late Shang people used materials such as bovine scapulas, tortoise shells, and other animal bones. The central significance

of these inscriptions lies in the interpretation of omens derived from the fractures formed by the burning of these bones.

The relevance of these prophecies extended across the entire spectrum of Shang dynasty, encompassing royal affairs, sacrificial ceremonies, weather patterns, crop yields, military engagements, and even demographic movements. Categorized into different eras based on their formats and contents, the oracle-bone inscriptions offer a rare opportunity to reconstruct the royal lineage of the Shang dynasty and delve into significant events within the royal households, shedding light on the day-to-day experiences of the Shang people.



Figure 1 Historical Map of Shang Dynasty (A. Pokutta, 2017) (Author Edited)

Beyond their historical import, Oracle-bone inscriptions possess substantial linguistic value as crucial artifacts for deciphering the earliest forms of Chinese characters and gaining insights into the nascent development of Chinese grammar. The imperative to preserve and conserve these ancient relics becomes evident, considering their integral role in China's historical records.

Despite their monumental significance, Oracle-bone inscriptions face the looming threat of deterioration and loss over time. Preservation efforts are essential to safeguard these artifacts for future generations and to continue unraveling the rich historical tapestry they encapsulate.

In light of this context, the research aims to assess the Oracle-Bone Inscriptions and explore their historical and cultural aspects during the late Shang Dynasty. Additionally, it seeks to identify the evolution and development of the Chinese writing system, character configuration, and linguistic structures during this period. The study also aims to underscore the influence of the historical and cultural values embedded in Oracle-Bone Inscriptions on the art style of Chinese calligraphy. Three overarching research questions guide the inquiry: How do Oracle-bone inscriptions from the Yin Ruins contribute to the understanding of the historical and cultural aspects of the late Shang dynasty? In what ways do these inscriptions provide insights into the development of Chinese writing systems, character configurations, and linguistic structures during the Shang dynasty? How do they influence the comprehension of early Chinese language and script evolution?

This research endeavors to delve into the historical and cultural significance of the Yin Ruins Oracle Bone Inscriptions, unraveling their multifaceted roles in administrative practices, religious ceremonies, and daily life in Shang society. It further explores the pivotal contributions of these inscriptions to the development of early language systems and Chinese calligraphy. Emphasizing the urgency of preserving these irreplaceable artifacts, the study aims to deepen our understanding of ancient Chinese civilization through a comprehensive analysis of primary and secondary sources.

LITERATURE REVIEW

Chinese calligraphy has been forever altered by the significant historical and cultural importance of the Yin Ruins Oracle Bone (YROB). From the dawn of Chinese civilization, Chinese characters have evolved through a remarkable journey through many phases, including Bronze inscriptions, Oracle Bone Inscriptions (OBIs), Official inscriptions, Seal

inscriptions, and Regular inscriptions. These many stages in the growth of Chinese Script show the depth of culture and creative diversity that continue to influence Chinese calligraphy to this day, in addition to the evolution of language. The continuous relationship between culture, history, and calligraphy is shown by the legacy of TROB and its impact on the development of Chinese writing.

Historical background of Chinese calligraphy

Scholars generally believed that Chinese characters evolved from pictorial motifs similar to those seen on metal objects until markings on Neolithic pottery were discovered. Chinese writing system history began with the idea of "Hsiang-hsing-wen," pictographic during the Shang dynasty (Theodore et al., 1999). These characters were simplified, ultimately developing into today's more conventional versions. However, Yu (2018) argued that academic viewpoints changed once the Oracle Bone Inscriptions were discovered. Archaeologists thought that these dated Oracle Bone passages were older than Bronze Inscriptions.

Over the last few decades, new archaeological discoveries in Cheng-chou have shed further light on the subject. Ancient metal pots from the sixteenth or fifteenth century B.C. with a single graphic word have been discovered (Zhang et al., 2021). These results imply that the characters on these bronzes could be the first Bronze Script pictographs before the carved Oracle Bone Inscriptions. Furthermore, engraved pictographs on Lung-shan black pottery were found at Ch'eng-tzu-yai, Shantung. Moreover, phrases and symbols from the Liangchu civilization near the lower Yangtze River date to the sixteenth or fifteenth century B.C. These words and symbols rank among the first formed written words in ancient China, and they seem to have a direct tie with Bronze Script, predating the Oracle Bone poems.

In this context, Zeng (1993) identified that the earliest traces of calligraphic stamping seals

(jade seal) were found in Zuo traditional writing, which was an ancient Chinese writing style "Tso Chuan", which was compiled during the age of 430-250 BC. The term "Hsit" was used to identify the phrase stamping-seal for the bureaucratic and organizational official working. However, the "Ping Fu Tie" a letter written by "Lu ji" (261-303), to his friend, which actually known to be an earliest well documented calligraphic art.



Figure 2 Ping Fu Tie, Calligraphic Inscription by Lu Ji (运开, 2010)

Additionally, according to Chen (2023), Chinese calligraphy grew from the Shang Dynasty and started being admired by people from the Tang Dynasty. It was admirable and had lasted for more than one thousand years. Only a few changes occurred; the same Chinese calligraphic style of the Tang Dynasty was used for over 10 centuries. After that, when the modernized era opened the path of China to other globalized states, the two components made Chinese calligraphy resonate with the Western world of Arts. The similarities lie in the symbolism and abstraction of Chinese calligraphy and Western arts. With the advancement of the 20th century, Western art started influencing Chinese calligraphy and its traditional calligraphic style to hard pen calligraphic style of art.

Another historical perspective of Chinese calligraphy has been reviewed, which has given reasonable pinpoints for cultural and historical perspectives of Calligraphy. According to Yu (2018), as society advances, calligraphy has transformed into a passionate pursuit for many individuals in the modern era. As society advances, calligraphy has transformed into a fervent pursuit for many individuals in the modern era. It enhances people's appreciation for the beauty of calligraphy and encourages their inner sentiments. Calligraphy symbolizes the continuity of the art of living while simultaneously evoking profound emotions within individuals towards life itself. Throughout China's extensive history, calligraphy has not diminished; instead, it has transformed, incorporating fresh expressions and themes. Simultaneously, employing the profound exploration of calligraphic masterpieces, individuals can acquire profound insights into the inner emotions of the calligraphers and immerse themselves in the cultural atmosphere of the era in which these works originated. This pursuit surpasses a mere examination of calligraphy as a form of artistic expression; it presents a valuable opportunity to showcase the intricate fabric of history and culture.

On the other hand, Chang and Chiang (2022) have given the concept of “cursive script” and “regular script” in the world of artistic writing of Chinese calligraphy. Chang and Chiang (2022) have selected the 28 characters of the regular Script and 24 characters of the cursive Script as a sample under the principle of outlined Chinese characters. They analyzed the types and structure of these characteristics formation through the Kansei engineering analysis method. To understand the sequence of the Kansei vocabulary of these Chinese calligraphic styles, the Grey Relational Analysis method was utilized. This study helps to understand the calligraphic importance and its evolution to a regular script, which has been used in the modern era of the 21st century for Chinese calligraphic

study and artistic work as Chinese calligraphy has evolved from several ancient evolutionary stages such as Bronze inscription, OBI's inscription, Official inscription, seal inscription, and regular inscription. Therefore, the current study analyses the Oracle Bone Inscription and its historical and cultural significance for the evolution of calligraphic art in China.

Historical background of Yin Ruins Oracle Bone Inscriptions

Oracle Bone Inscription (OBI) are the ancient characters excavated from Yin Ruins in China's city of Anyang. These inscriptions were scripted on the tortoise shells, cattle scapulas and animal bones to preserve the revelation of divine wording and praying to gods. To understand the OBI's inscription, Liu et al. (2021) have discovered some methods in the field processing to identify meaningful insights into ancient inscriptions. These methods comprise a single-stage OBI detector built by Meng via extending SSD300 to SSD1024. Another one is the regional-based complete convolutional network introduced by Wang, an algorithm used to detect the characters in the inscription. However, Liu et al. (2021) explored OBIs through a simple detection method. He utilized numerous state-of-art models for object detection. He compared and analyzed their results for fruitful outcomes. With the help of this literature review, the current study can assess the insights of the OBIs and their influential historical and cultural factors for Chinese calligraphic art.

According to Liu, Ke et al. (2021), hundreds of thousands of shells and oracle bones were excavated from Henan, Anyang and the last capital city of the Shang Dynasty during the last century. OBI serves as a representation not solely of the earliest recorded form of Chinese writing but also as the oldest surviving documentation about the history of the Shang dynasty. The study has investigated the composition of pigmentation discovered from the indentation of the graphs made by 48 pieces of oracle bones and shells. To investigate the pigmentation, this study used non-invasive micro-Raman spectroscopy. In the

pigmentation of the analysis, the black and red coloured segmentation has been utilized, which helps to figure out the aspects of Shang divination scripted on the oracle bones. This study has given historical and cultural roots of the Oracle Bone inscriptions and helped the current study to understand the importance of the regular inscription of Chinese art of writing style.

THEORETICAL FRAMEWORK

Lev Vygotsky's Zone of Proximal Development (ZPD) has significantly impacted the sociocultural theory that forms the basis of this study's theoretical framework. This approach makes it possible to understand the development of Chinese writing due to a dynamic interaction between individual, societal, and cultural elements. In the light of the Zone of Proximal Development, learners and personal growth mostly progress when one is engaged in challenging learning projects with a little help from those who are either guiding or are more experienced. Developing scripts, e.g., Oracle Bone, Bronze, Seal, Official, Regulars ones, shows how the Chinese culture functions on societal level, according to the sociocultural theory of writing. Social contacts, cultural rituals and historical occurrences are a few of the causes of the social scripts. It underlines the fact that social and cultural customs are leading causes of transmitting skills and knowledge from a generation to another. In case of Chinese imprimatura, traditions, mentoring and apprenticeship play the most critical role in achieving writing skills and creative expression. This research work is intended as a prism to reveal the relationship between historical bond, cultural priority, and individual aesthetic expression in Chinese writing utilizing the sociocultural theory. A unique pattern in Chinese calligraphy results from the fusion of an individual's creativity with a given cultural tradition, emphasizing the importance of a collective character of development and growth.

METHODOLOGY

Appraising the cultural and historical influence of Oracles Bones Inscription on Chinese calligraphy involved an exhaustive literature review organized into a systemic outline of the results of scholarly Studies. It also necessitates a review of the archival materials including ancient inscriptions, the reports and the official documents to back up the argument put forth in the present study. Therefore, the current study has used the systematic literature review method and analyzed the most relevant secondary sources, such as scholarly literature: Books, journal articles, and web articles published by Museums which researched and contained the Oracle Bones Inscriptions. The current study also analyzed the primary sourced documents of Oracle Bones Inscriptions, their understandings and descriptions. The historical and cultural significance have been assessed through the tabulated summative understanding of the primary sourced documents of OBIs. The descriptive understanding under the qualitative approach helped to assess the information extracted from other scholars who deeply regarded the Oracle Bones Inscription and its impact on Chinese Calligraphy. The OBI's deep routes, which date back to the Shang dynasty, persuaded the current study to use a systematic literature review to assess and analyze the most relevant and summative information to support the required argument.

Search Strategy

Four electronic databases have been used to assess the most relevant literature to review. These electronic databases comprise IEEE Explore, Jstor, Google Scholar and PubMed. The selection of databases for this study was strategic. They were chosen for their comprehensive coverage of academic literature and reliable scholarly sources. This ensured a thorough exploration of historical and cultural aspects of Oracle Bone Inscriptions and their impact on Chinese calligraphy. The Keywords: Oracle Bones inscriptions, Historical

background of Oracle Bones Inscriptions, Chinese calligraphy and Oracle Bones Inscriptions, Shang Dynasty and the Historical Written records related to OBIs were used to access the relevant information related to the employed research for the current study.

Table 2 Electronic Databases and Sources

Electronic Databases	Number of Sources
Google Scholar	56
IEEE	18
Jstor	46
PubMed	9
Total Number of Sources	129

The Keywords used to search these sources in the line for assessing existing information related to the Oracle Bones Inscriptions and their historical and cultural influence on Chinese Calligraphy. Those keywords are comprised of the following:

- 1. Historical background of Oracle Bones Inscriptions
- 2. Chinese Writing System and Oracle Bones Inscriptions
- 3. Shang Dynasty and the Historical Written Records
- 4. Chinese Calligraphy and Oracle Bones Inscriptions

5. Historical and cultural values of the Chinese writing system

Inclusion and Exclusion Criteria

The secondary and primary sources have been analyzed to assess the relevant information for OBIs Historical and Cultural Values, the evolution of the Chinese writing system and their impact on Chinese calligraphy. The inclusion criteria best fit with the primary documents of inscriptions, as these documents were extracted from the renowned institute New York| Columbia University’s website. These documents inscribed to understand Chinese history and culture during the Shang dynasty. In contrast, the criteria for including literature comprised of academic article type, in English written articles, Topic and methodology which aimed to transcribe the OBIs characters and highlight the historical and cultural significance. This criterion has the potential to assess the historical development of Chinese writing during the Shang dynasty, the cultural significance of the Chinese Writing system, which influences the cultural beliefs, expressions and artistic works and their impact on Chinese language transformation. The OBI scripts have a transformational impact on the Chinese artistic values in calligraphic styles.

Table 3 Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Primarily sourced inscriptions	OBIs inscriptive documents	The Primary documents which are not related to OBIs are excluded.
Academic Sourced articles and book	Literature which tried to assess the characteristic evolution of OBIs and their historical and cultural values is included in the literature review.	The literature, which needs to assess the characteristic understanding of OBIs, is excluded.
Articles’ Topic and Methodology	The literature aimed to assess the Chinese writing system and its evolution from OBIs from the Shang dynasty.	The literature, which does not give the historical and cultural significance of the OBIs writing style, is excluded.
Language	English language academic articles and books are included in assessing the most relevant information for the current study.	Non-English language literatures are excluded.

PRISMA Framework

The PRISMA Framework supports the systematic literature review, which is crucial for assessing the most relevant literature for the required assessment of the research questions and aims. It helps to organize the literature systematically and enhances the efficacy and validity of the selected literature. The organized literature review has been given in Table 03 for the current study.

Table 4 PRISMA Framework

At first, the literature was explored through relevant keywords such as (Chinese calligraphy and Oracle Bones Inscriptions, Shang Dynasty and the Historical Written records related OBIs) from several electronic databases (IEEE Explore, Jstor, Google Scholar and PubMed).
Irrelevant literature to Topic are 34, which are excluded from the review.
The literature which needs to address the characteristic understanding of OBIs is 25. Therefore, they are excluded.
The literatures which are not give the historical and cultural significance of OBIs writing style are 41, and they are excluded from the review.
Non-English language literatures were 6, and they were excluded.

The remaining 23 is the most relevant literature to the Topic and research question. This literature contained 3 primary source documents and 20 academic articles and books to assess the historical and cultural significance of the OBIs and impact on Chinese calligraphy.

Methodology Limitations

While this study employed a systematic literature review methodology to investigate the historical and cultural impact of Oracle Bone Inscriptions (OBIs) on Chinese calligraphy, certain limitations should be acknowledged. The study primarily relied on existing scholarly literature, potentially omitting recent developments. The existence of linguistic bias is possible, since the inclusion parameters involved only information in English, which means that highly significant publications in other languages can be left out. Another factor which

can affect the study review is the search terms people are using as there is a chance that they could exclude some relevant articles. The concentration of academic materials may give rise to an output bias, and the disregard of non-academic perspectives will thwart the overall decision. Similarly, the core subjectivity in selecting relevant sources and interpreting their content adds the researcher bias aspect. In addition to limitations, the study intended to eliminate bias and boost transparency through the use of a systematic method and well demarcated inclusion and exclusion criteria.

ANALYSIS AND RESULTS

Historical and Cultural Significance of Oracle Bone Inscription

Oracle-bone and turtle plastrons inscriptions, so-called oracle-bone script (OBS), are the inscriptions on animals bones, mainly scapulas, which were written down by the ancient Chinese in different inscriptions. Whereas majority of inscriptions served to forecast future events, others differ. These ancient artefacts gained recognition in 1899 when scholar Wang Yirong recognized their resemblance to inscriptions on Zhou-period bronze vessels, sparking "oracle bone fever (Wang et al., 2022)." Subsequently, collectors and scholars embraced them, fostering a thriving antique market. Luo Zhenyu later unveiled their origin near Anyang, the ruins of Yin, the Shang dynasty's last capital. This revelation led to unregulated excavations, resulting in a dispersed global presence of these inscribed shells and bones.

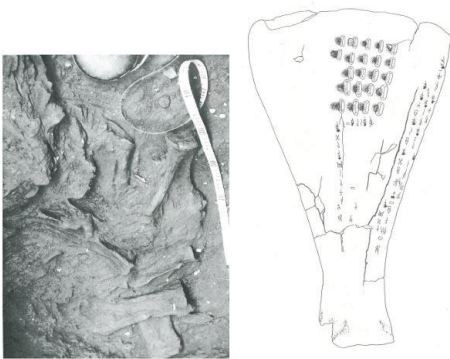


Figure 3 Historical Bone Inscription (Theobald, 2010)

Delving further into the Oracle-Bone Inscriptions (OBI) reveals their profound impact on the spiritual and cultural practices of the Shang civilization. The divinatory records found within these inscriptions offer a captivating glimpse into the intricate beliefs and decision-making processes of this ancient Chinese society, cementing the historical and cultural significance of the Oracle Bone Inscriptions as a vital window into the past.

Divinatory Records of Oracle Bones Inscription

According to the Guang-yuan (1991), Oracle bone inscriptions predominantly focus on "pu-ts'u" or divinatory records, specifically the divinations conducted by the Shang royalty. These inscriptions encompass a wide array of subjects, reflecting the critical concerns of the Shang society during their time (Wang et al., 2022). They include details about offerings to be made in worship to gods and ancestors, weather forecasts, prospects of a successful harvest, decisions regarding warfare and hunting expeditions, interpretations of omens related to illness and dreams, the timing of childbirth, and predictions concerning forthcoming good fortune or calamities.



Figure 4 Letter Inscribed and Their Development (Guang-yuan, 1991)

As described in the Theodore et al. (1999), the Oracle-Bone Inscriptions of the Late Shang Dynasty provide an engrossing look into this ancient Chinese society's religious and divinatory customs. These inscriptions, Engraved with great care into turtle shells and animal bones, were an essential part of Shang society, providing advice for significant choices and a critical channel for connection with the divine.

One of these inscriptions recounts Gu's divination on Yiwei (Day 32), during which Gu concluded that the ruling monarch was being harmed by "Father Yi," who was Wu Ding's father and the twentieth Shang ruler, Xiao Yi. The belief in the impact of ancestor spirits on the affairs of the living is emphasized by this inscription. The fifteenth king and Xiao Yi's father, "Grandfather Ding," is the subject of divination in another pair of inscriptions (9A and 9B) (Theodore et al., 1999). These inscriptions highlight the great significance of ancestral worship and provide light on the Shang people's habit of researching their ancestors. Surprisingly, some inscriptions also address health-related issues. For example, divination No. 10 worries about a diseased tooth and clarifies that the illness is unrelated to "Father Yi." It demonstrates how divination may be used to solve health-related challenges in society.

The inscriptions also include divinations (19A, 19B, 20A, and 20B) about choices for building and the blessing or curse of Di, a celestial being. These inscriptions highlight the Shang people's confidence in the heavenly direction in decision-making processes and their dependence on divination for even the most fundamental problems.

Furthermore, a few inscriptions (22A, 22B, 23, and 24A) discuss Di's part in damaging or not damaging the crop and allude to Di's participation in enemy assaults. Through the symbols, it manifests that Shang people saw the line between the divine, the crops and the reasoning of the people in the reality of the world. The primary working source on the Shang civilization, found in "The Oracle at Shang," (Theodore et al, 1999), provided a highly

valuable perspective on their cultural, religious and divinatory practices. These graffiti are the evidence of the attachment of the people to ancestors worshipping, divination, which always help in taking right decisions, and the conviction in natural supernatural powers, they always control quarrels, health and agriculture. These texts are an outstanding historical immaterial legacy that furnishes us with the knowledge about spiritual and cultural situation of northern part of the China. The divinary records recorded in Oracle Inscriptions's dedicated not only demonstrated the Shang society's daily queries and decision-making but also laid the foundation for a deeper understanding of their supernatural world and strategic considerations, primarily in the area of warfare.

Table 5 Summary of Oracle-Bone Inscriptions and Their Significance in Shang Dynasty Beliefs and Practices (Theodore et al., 1999)

Inscription	Description	Significance
Day 32 (Yiwei)	Gu divines harm caused by "Father Yi" (Xiao Yi) to the king.	Reflects belief in ancestral influence on the ruler.
Divination 9A/B	Divination about "Grandfather Ding" (father of Xiao Yi).	Illustrates the practice of seeking answers about ancestors and ancestral worship.
Divination 10	Concerns a sick tooth and absolves "Father Yi" of blame.	Shows the role of divination in addressing health issues.
Inscriptions 19A/B	Divinations related to settlement construction and Di's approval.	Highlights reliance on divination for decision-making in infrastructure projects.
Inscriptions 20A/B	Touches on Di's approval of the king's actions.	Reveals belief in divine involvement in human affairs and decision-making.
Inscriptions 22A/B	Discusses Di's role in harming or not harming the harvest.	Demonstrates the link between the divine, agriculture, and the need for divine intervention.
Inscriptions 23/24A	Addresses enemy attacks by the Fang and Di's involvement.	Reflects the belief in supernatural forces influencing conflicts and disasters.

The Spiritual and Tactical Significance of Oracle Bone Inscriptions in Warfare

The Oracle Bone Inscriptions about the Warfare in the Late Shang Dynasty are a fascinating as well as valuable source, which provides us with a unique perspective on the military tactics and war preparations of this period. The texts inscribed on various bones

from animals and turtles demonstrate that the outcome of the conflict was not gained by the practical military strategy alone, but also the willpower of the gods, besides the spirituality and divination. In general, "Di", the goddess of war, is repeatedly mentioned in this saga. Divinations such as the one made in "Dingmao" (day 4) were important in the kingdoms and

major governments because the kings and rulers wanted to get advice from Di on their battles. They asked about how their alliances would work, who they could ally themselves with against General Zhi Guo, as well as the outcomes of operations against groups like Shaofang and Ma-fang (Theodore et al., 1999). The Shang dynasty's kings relied on the help of Di in battles and this shows their dependence or reliance on winning the war according to the inscriptions' modern decifiers.

Besides their cosmological belief, the expression of the mystique of spiritualization of war and the paranormal are also seen in these engravings. It is revealed through inscription 23 that the Shang people would hold accountable claimed misfortunes such as threats from enemy groups to their deities like the god Di. These thoughts reinforced the conviction that in a sense this war was divine, then, and hence to have a divine favor, for success, became essential.



Figure 5 Oracle Bone Character (UNESCO, 2017)

The Oracle Bone Inscriptions on Warfare during the Later Period of Shang Dynasty give a clear view of military diplomacy used by ancient Chinese Emperors. The battle historians shed light on the complicated Shang empire art of warfare as well as their views of war being the interplay between tactical maneuvers,

divination, and spiritual practices. These inscriptions are not just historical documents; they give us a glimpse into a society in which the holy and the material world were closely intertwined, mainly regarding important issues like war.

Table 6 Summary table for the inscription and their Historical and Cultural Significance during the Shang Dynasty (Theodore et al., 1999)

Oracle Bone Inscription	Significance
6. On dingo (day 4)	Seeking divine guidance for an alliance in warfare.
23. [Divined:] "The Fang	Attributing harm from enemy groups to the divine will.
24A. Divined: "(Because)	The decision to raise an army in response to threats.
24B. Divined: "It is not Di	Clarification of divine intentions in warfare.
25. Crack-making in kitchen	Seeking divine assistance for an impending attack.

Childbirth Divination in the Late Shang Dynasty: Insights from Oracle-Bone Inscriptions (Inscriptions 15A and 15B)

The Oracle-Bone Inscriptions originating from the Late Shang Dynasty significantly contribute to the knowledge of the ideas and customs prevalent throughout this ancient Chinese civilization. Childbearing is a topic of particular fascination among the numerous facets of life addressed in these inscriptions. Inscriptions 15A and 15B analysis provide valuable insights into the Shang civilization's use of divination to anticipate the results of births and their profound reverence for specific dates within the lunar calendar.

The fifteenth inscription, designated as 15A, pertains to divination conducted on Jiashen, specifically Day 21. This particular inscription centres on Lady Hao, who served as a consort to King Wu Ding. According to the divination, her fertility prospects are predicted to be favourable. The interpretation of the oracle bone cracks by King Wu Ding led him to anticipate that the occurrence of Lady Hao's childbirth on a Ding day would result in an extended period of

auspiciousness. Nevertheless, the subsequent confirmation of this prophecy, which occurred after thirty-one days on Jiayin (Day 51), demonstrated that the birth outcome was unfavourable, as it culminated in the arrival of a female child (Keightley, 1979). The presented inscription is a testament to the Shang civilization's custom of requesting divine intervention during delivery and their conviction in the significance of propitious dates.

Inscription 15B elaborates on the subject matter of divination related to childbirth. According to King Wu Ding, the analysis of the fractures in oracle bones indicates a correlation between the delivery timing and the particular day within the lunar calendar. The event will be seen as auspicious if it occurs on a Ding-day. However, if it falls on a Geng day, there will be an extended period of good fortune. Conversely, favourable outcomes will not be accompanied if the event happens on a Renxu day (Day 59). The inscription highlights the careful consideration given to lunar dates and their supposed influence on the welfare of the kid and the household.

The inscriptions provide valuable insight into the intricate belief system of the Shang civilization, whereby divination had a pivotal position in the decision-making process, including even very personal and momentous events such as childbirth. Including auspicious and unfavourable days in the lunar calendar indicates profound superstitious beliefs and the human inclination to exert influence over and anticipate the results of significant life occurrences.

"Oracle-Bone" refers to an ancient artefact with significant historical value. The inscriptions designated as 15A and 15B provide significant historical and cultural perspectives on the worldview and birthing practices of the Shang Dynasty. Lunar Calendars and Divination being the evidence of the process in which their belief system was developed and choices about birthing were made, the spiritual and the mundane part of their existence play a deep interrelation.

Divination practices during the Late Shang Dynasty, as depicted in Oracle-Bone Inscriptions 15A and 15B, provide us with an intimate understanding of how individuals in that era relied on spiritual and divine advice for momentous life transitions. From the deep-rooted personal divinations, the explication of the Chinese writing progression still highlights the everlasting cultural imprints related to the ancient Chinese artefacts and inscriptions.

The Evolution of Chinese Writing: Pictographic Preservation and its Origins

Symbolic and alphabetical systems developed in other regions, which differ from Chinese writing that keeps its intensive archaic pictographic construction (Lu & Aiken, 2004). This isolated trait makes Chinese Inscription from any early writing system's other paths. In order to elucidate the origins and evolutionary path of the Chinese writing system, scholars depend on two principal sources: The narratives as recorded in the historical books and from archaeological excavations like the inscriptions on pottery, oracle bones, and bronze vessels (Odinye & Odinye, 2020). Zhang et al. argue that Chinese characters can be divided into multiple successive evolutionary periods Fig. 6).

Table 7 Summary Table (Theodore et al., 1999)

Oracle Bone Inscriptions	Significance
15A Jiashen (Day 21)	This reflects the Shang belief in divination for matters of childbirth, even though the prediction did not come true.
15B Jiashen (Day 21)	Demonstrates the Shang king's involvement in interpreting divination cracks and seeking favourable outcomes for childbirth.



Figure 6 Evolutionary Stages of Chinese Writing Characters (Odinye & Odinye, 2020)

Since early writing was probably done chiefly on brittle materials like wood, bamboo, or silk, the exact beginnings of writing in China still need to be discovered. In late Neolithic pottery, symbols or emblems have been found, which might be some of the first examples of Chinese characters. Remarkably, these symbols also resemble early bronzes from the Shang Dynasty, suggesting that written language may have evolved at some point.

The oracle bones from the late Shang Dynasty provide the first verifiable proof of whole sentences in Chinese writing. These writings, mainly used for divination, clearly show that the language used during the Shang Dynasty was directly related to the present Chinese. In addition, they used a written alphabet that was later developed into the accepted Chinese logographic writing system that is still in use today.

Historical and cultural Insights of Chinese Writing system

The Oracle Bone Inscriptions are a valuable source for understanding the evolution of the Chinese alphabet. They mostly appeared in the latter part of the Shang Dynasty (1766–1122 BC). Writings discovered on animal bones and turtle shells provide a fascinating window into

the written message system and ancient Chinese society.

Formative Principles of Chinese Characters

The value of Oracle Bone Inscriptions is in their function as ancient written documents. According to Demattè (2010), the data presented suggests that the basic rules controlling Chinese characters were already established during the Shang Dynasty. This observation implies that the Chinese writing system has seen significant advancements beyond the first stage of using primary pictographic characters. The Shang displays have almost two thousand characters, demonstrating notable differences from contemporary Chinese characters. However, it is essential to note that these characters adhere to fundamental principles shared with current Chinese characters. Maintaining continuity is of utmost importance when examining the progression of Chinese writing. The utilitarian aspects of these inscriptions, ranging from recording political and economic events to facilitating divination and early accounting practices, highlight their multifaceted role in shaping the historical and cultural landscape of Chinese writing.

Oracle Bone Inscription and Utilitarian Functions

Oracle Bone Inscriptions served various utilitarian functions in Shang society. They recorded various information, including political, economic, and religious events. One notable application was divination, reflecting the superstitious beliefs of the Shang people. These inscriptions enabled individuals to seek guidance from the spiritual realm by interpreting cracks in the bones. Additionally, some inscriptions contain counting records, regarded as some of the earliest accounting records in human history. The Oracle Bone Inscriptions also provided a space to record numeric information, this empowers an understanding of ancient accounting practices. Thus, giving evidence of the functional aspects of recording and providing information about significant events in the Shang society.

Accounting and Numerical Records

The Oracle Bone Inscriptions hold a treasury of numerical information. Notable fragments include:

1. No.1 (fragment 16) records divination expenses, detailing the number of animals used.
2. No.2 (fragment 17) mentions the capture of fifty-six deer, showcasing an early form of numerical notation.
3. Divination information is connected with No.3 (part 20) which is also related to numbers concerning game caught, such as sixty-two deer, one hundred and fourteen pigs, ten rabbits and others.
4. No.4 (fragment 22) contains records capturing eight deer and thirty-two pigs.

These numbers form the earliest known accounting practices and accentuate the strategic uses of writing in tracking components and recording important occurrences (Lu & Aiken, 2004). The Shang Dynasty experienced a notable change through engravings being made on bronze vessels. This was a break from the complexity of Oracle Bone Inscription, as bronze vessel inscription in a sense emphasized a more concise mode, often involving images of animals and symbols that were culturally and closely associated with the ancient Chinese society.

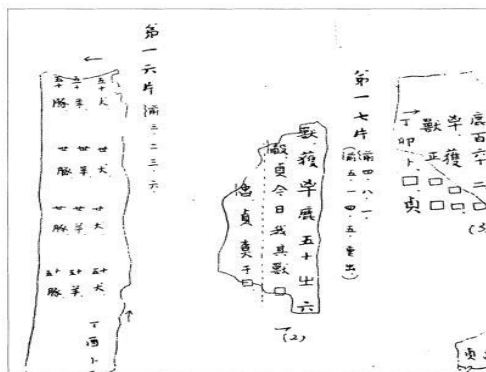


Figure 7 Character and Writing Records of Oracle Bones Inscription (Lu & Aiken, 2004)

Bronze Vessel Inscriptions

The most prominent development of the Shang Dynasty were, undoubtedly, the inscriptions which first appeared on bronze vessels. Unlike the Oracle Bone Inscriptions, these inscriptions possessed a serial and short nature as they contained less number of characters. From the article of Yang et al. (2019), the font style in metal inscriptions is much more regular and then those oracle bones that are usually small and curved. Many of these properties are synonymous with birds, pigs, and other types of terrestrial & aquatic animals, piscine creatures, reptiles represented by other symbolic cultural practices. These entities came up with their own labels for examples of identities of persons or for their representations in families. Also in conjunction with names of land and lineage owners.

Advancements in Bronze Script

Bronze vessel production technological advancements during the Western Zhou Dynasty (1100–771 BC) were quite remarkable. As a result, the number of lettered metal boxes considerably increased. As for the last stage of the Western Zhou rule, there was a radical change in the middle of bronze inscriptions that was brighter with the cutting angels and thinner designs (Olson 2019). The Mao Kong Ding, a famous bronze vessel from the Western Zhou period, is renowned for its character of 497 characters that directly correlates with the progress of Chinese writing.

The evolution of the Chinese writing system went through some important steps, such as initially with the invention of Oracle bone inscriptions and progressively with the introduction of bronze vessel inscriptions. Epigraphs are a source of precious knowledge about the historical setting. For example, they tell us how writing developed through the ages, they enable us to see the first uses of mathematics, and they demonstrate the usefulness of writing to our predecessors. Therefore, these objects, which exist as proof, show that the written language has been an

eternal factor in shaping Chinese culture and civilisation for many years.

DISCUSSION

Evolution of Chinese Writing: From Oracle Bone Inscriptions to Calligraphy

Since the start of Chinese civilisation, the evolution of Chinese letterwriting has gone through somewhat separate steps in the form of transformations. Wang et al. (2022) describe the steps as the OBI, Bronze Inscriptions, Seal Script, Official Script, and Regular Scripts shown in Fig. 6. In the late period of Spring and Autumn and Warring States, before the rise of the Small Seal Script after the unification of China by Qin's First Emperor, ancient characters were collectively called by this name (Qian & Fang, 2007). The examination and interpretation of OBIs have been unparalleled in any age range, whether in the past or the modern era. They are mostly compared to other ancient figures using the comparison method, the main tool used in this case. Researchers employ this technique to juxtapose unidentified OBIs with recognized ancient inscriptions, such as Bronze Inscriptions and Seal Scripts, using the latter as a reference to deduce the meaning of OBIs, thereby facilitating their decipherment. Research concerning the evolution of Chinese characters represents a vital approach to deciphering OBIs. For instance, Yang et al. (2019) employed Yolov2 to detect the foundational elements within OBIs and examine the evolutionary trajectory of Oracle Bone script structures. Nevertheless, only a limited number of studies have delved into the intricacies of Chinese character evolution.

Chinese character	Oracle Bone Inscriptions	Bronze Inscriptions	Seal Script	Official Script	Regular Script
册 Volume					
鸣 Sing					
蛇 Snake					
左 Left					

Figure 8 Historical Evolution of Chinese Characters (Wang et al., 2022)

Yang et al. (2019) have used the radical detection model to obtain the oracle bone characters. The 14 types of oracle bone inscriptions have been used to assess the characters and their evolution to the modern Chinese writing art "Calligraphy". Fig. 9 identified the oracle characters and their link with Chinese modern Writing Characters and their style.

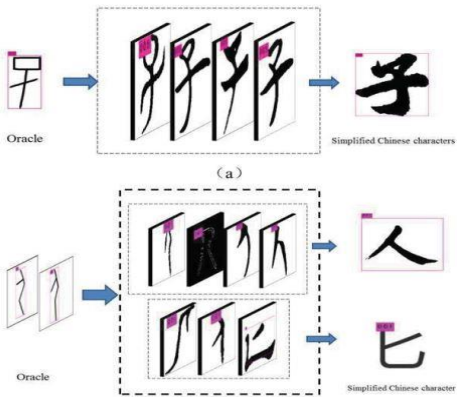


Figure 9 Comparison of Oracle Character with Chinese Writing Characters (Yang et al., 2019)

The evolution of Chinese writing, from its humble origins in the Shang Dynasty's Oracle Bone Inscriptions (OBIs) to the sophisticated art

form of Chinese calligraphy today, is a remarkable journey spanning thousands of years. This concrete metamorphosis is characterised by two processes: the development of a script and the cultural and artistic part of the Chinese civilization. (Siqu & Jiaotong, 2018). It reflects the evolution from rudimentary inscriptions on oracle bones to the exquisite strokes of Chinese calligraphy, a journey marked by critical stages of development.

During the late Shang Dynasty (1766-1122 BC), Oracle Bone Inscriptions served primarily as tools for divination. These inscriptions were engraved into turtle shells and animal bones using simple characters, often pictorial. They reflected the worldview and ideas of that period while also imparting religious importance and helpful knowledge. On the other hand, these characters were refined and standardized throughout the Zhou Dynasty, which succeeded (Chen, 2023). During this time, bronze inscriptions became more complex and angular, moving farther away from the Shang Dynasty's pictographic roots. Future advancements in Chinese writing were made possible by this shift.

The invention of the Seal Script during the Han Dynasty marked a profound change. Characters in this style were stylized and angular, and they paved the way for later writing that was more expressive. However, a significant change occurred with the advent of Cursive Script (草书) during the Eastern Han dynasty (Schlombs, 1998). This condensed and flexible Script promoted artistic expression and spontaneity, allowing for more creative flexibility. The Wei and Jin Dynasties in the following period saw the emergence of the Regular Script (楷书) (Dong, 2022). The modern day's Chinese writing style system is the prior version of this script. Regular Script is distinguished by its clean, well-organized strokes, allowing artistic expression without sacrificing legibility. The development of Script demonstrates the smooth integration of both structure and function.

The country's rich cultural legacy is on display, from the practical oracle bone writing to the complex realm of Chinese calligraphy. It highlights the continued importance of writing in Chinese culture, which has developed from a tool for simple communication to an artistic medium that captures feelings, ideas, and aesthetic appeal (Kraus, 1991). With its many forms and styles, Chinese calligraphy has developed into a highly regarded art form and cultural asset. Calligraphy artists, often called "shūfǎ" masters, use brushes and ink to create characters that express meaning, emotion, and aesthetic beauty (Ezinne & Ifeanyi Odinye, 2020). As characters summarize the soul of the Chinese culture, they are not an alone word image. They reflect the physical and psychological aspects of the human condition.

The continuous value of written culture is due to the upward flow of Chinese writing, from the prehistoric Shang Dynasty inscriptions of oracle bones to the gracefulness of Chinese calligraphy. Every step in this staging gives a new angle to the plot and is understood as an artistic and cultural achievement that has fascinated viewers around the globe. It depicts the long-lasting impact of Chinese civilization, which contributed significantly to the development of arts and culture.

CONCLUSION

The paper has defined the historical and cultural influence of OBIs on Chinese calligraphy. The research addressed the background of OBIs by referring to a systematic literature review, including the origins of the Shang Dynasty and its role in shaping the personality and art of the Chinese people.

The OBIs, traditionally used as divination tools, supposedly created the most important characters for Chinese writing. These pictorial inscriptions appeared gradually over time, and many scripts were subsequently created, such as Regular Script, Government Script, Seal Script, and Bronze Inscriptions. The whole process of

growing up was in unison with the OBIs, which left permanent records showing the changes in culture and art as well as languages. The study highlighted the intricate link between Chinese calligraphy and what came to be understood as its mother language, OBIs. The culture of China is revealed in the transition from crude hieroglyphs to beautiful calligraphy as the development went on for centuries.

Moreover, assessing the original and supplemental materials made it clear the ongoing importance of OBIs in outlining the essence of Chinese calligraphy to its past, present and

future. The combination of the views of historical figures, the traditions and the creative expressions helped to show the notable contribution of OBIs into calligraphy—a sign of the lasting power of written language in Chinese culture. At the end of the day, this research has not only left an indelible mark in the calligraphy community, but also it has deepened the knowledge of the historical development of the Chinese writing and shed light on the narrative treasure of the humanistic and aesthetic legacy of the Oracle Bone Inscriptions.

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