

The Twelve Chinese Zodiac Scripts of Ancient Luo Yue Stone Inscriptions and the Oracle Bone: A Comparative Study

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The 12 animal calendars of the Chinese zodiac are the essence and source of Chinese civilization, and have been deeply rooted in the production, life, and social activities of various ethnic groups in China since ancient times. The ancient Luo Yue stone inscription¹ is a popular ancient script from four to six thousand years ago, and 17,496 characters have been found, which is the earliest script found on the Chinese land so far. A comparative study of Chinese zodiac characters² between the ancient Luo Yue stone inscriptions and the oracle bone through paleographic conformation reveals that the two characters have the same and similar characteristics. Therefore, this paper intends to further investigate the kinship between the two, and to conduct a preliminary exploration of the origin, development, and evolution of the zodiac by combining recent human archaeological data, emerging molecular anthropological data, historical literature, and data from the Chinese Civilization Exploration Project, in an attempt to show the integration and dependence of Chinese civilization, the pluralistic pattern of Chinese culture, and the Chinese nation for thousands of years.

Keywords: ancient Luo Yue stone inscriptions, oracle bone inscriptions, comparative study, pluralistic integration, zodiac script

Preface

The zodiac animal calendar is a treasure of the Chinese nation and Chinese civilization, which has been used for thousands of years, and it is also one of the important representatives of Chinese traditional culture, a “living fossil” of Chinese culture, which is of great significance to the inheritance and development of Chinese traditional culture. The zodiac animal calendar has been born in the ancient times and deeply rooted in the production, life, and social activities of all peoples in China. The value of the Chinese zodiac is mainly due to the extension and development of many related cultural values, such as the exploration of the origin of writing civilization, the generation and evolution of civilization, folk culture phenomena, the exploration of the living conditions and wisdom of ancient ancestors. These cultural phenomena have given the zodiac animal calendar an extremely deep and rich social connotation, and lengthened and broadened its extension as a specific cultural symbol. Therefore, it is especially important to find its origin, which is the basis for the inheritance and development of traditional culture.

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¹ An ancient script carved in stone tablets with a thousand-year history, discovered in 2006 in Guangxi Province, China.

² An engraved on the bones of the ancient with three thousand years ago that Chinese ancestors used to record events.

The history of the zodiac has long been recorded in a large number of ancient documents, such as Wang Chong has written a book called *Analects of the Eastern Han Dynasty* that is regarded as the earliest document recording the 12 zodiac signs. The *Analects of Heng* Volume 3 “The Material Situation”:

Yin on behalf of wood, and its corresponding animal is tiger. Xu on behalf of soil, its corresponding animal is dog; Chou and Wei are also soil, Chou corresponding to the animal is cattle, Wei corresponding to the animal is sheep. Wood to suppress Soil, so the dog, cattle and sheep are suppressed by tigers. Hai on behalf of water, and its corresponding animal is pig, Si on behalf of fire, and its corresponding animal is snakes. Zi on behalf of water also, and its corresponding animal is rat. Wu is also fire, its corresponding animal for the horse. Water goes against fire, so pigs eat snakes; the fire is put out by water, so horse eating rat excrement causes bloating. Wu on behalf of horse, Zi on behalf of rat, You on behalf of chicken, Mou on behalf of rabbit. Water restrain fire, why didn't mice chase horses? Golden restrain wood, why not the chickens pecking at the rabbits? Hai on behalf of pig, Wei on behalf of sheep, Chou on behalf of cows. Soil restrain water, why don't cows and sheep kill pigs? Si on behalf of snake and Shen on behalf of monkey. Fire restrain Golden, why don't the snakes eat the macaques? (p. 14)

The same book Volume 23, *Talk about venomous animals* is clouded:

Chen on behalf of the dragon, Si on behalf of the snake, Chen Si bit in the southeast. Dragon has poison, the snake has a sting, so the viper has a tooth, the dragon has a reverse scale. Wood derives fire, fire for the poison, so the beast of the Canglong³ contains Mars. (p. 23)

It is also recorded that the Southern Dynasty Shen Jiong wrote a poem called “Twelve Genera” of the twelve zodiac signs; the Sui Dynasty Wang Du wrote the “ancient mirror” (Wang.Sui dynasty) called “Twelve Chen⁴ animals. During the Tang Dynasty, Han Yu and Liu Zongyuan called “twelve gods” in many works; during the Song Dynasty, Su Shi called “twelve insects” in “Year of the Year”. Li Pu called the 12 Chinese zodiac signs “twelve times” (Qu, 2012a) in “The Five Dynasties”. The 12 zodiac signs are a method of chronology with the names of twelve animals, i.e.: Zi Rat, Chou Ox, Yin Tiger, Mao Rabbit, Chen Dragon, Si Snake, Wu Horse, Wei Sheep, Shen Monkey, You Rooster, Xu Dog, and Hai Pig.

However, there are still many different opinions about the origin and ordering of the Chinese zodiac, so the necessary task of finding its origin has not yet been accomplished. Nowadays, there are archaeological data confirming that as far back as four to six thousand years ago, the ancient Luo Yue people in the Pearl River Valley created stone carvings of ancient Luo Yue writing, and there are 12 zodiac animal calendars and written records of the heavenly stems and earthly branches. As the world-renowned anthropologist Morgan suggested, “the invention and use of writing is the most accurate identification mark of civilization, undoubtedly the beginning of civilization” (2012, p. 35), which undoubtedly provides the strongest supporting material for the study of the origin of the zodiac. This paper intends to conduct a preliminary comparative study of the ancient Luo Yue stone inscriptions and the oracle bone inscriptions, starting from the 12 zodiac animal calendar characters.

The Zodiac Overview

Although the records about the Chinese zodiac are relatively old, the origin of the Chinese zodiac has always been a difficult problem for people, and there are many different opinions, including the astrological, totemic, exoteric, and Buddhist. At present, most scholars believe that the origin of the zodiac is related to the totem worship of the primitive ancestors, but this theory still lacks direct evidence of its origin. As for the external,

³ White dragon.

⁴ The Chen here stands for time.

Zhao Yi of the Qing Dynasty, in his *Gai Yu Cong Kao* is written “the northern custom did not have the twelve zodiac, but was divided into years by rats, cows, tigers and rabbits, which were passed on to China, so they were passed on to each other”. According to this theory, the Chinese zodiac came from outside. Guo Moruo believes that the Chinese zodiac originated from the Zodiac of Babylon, and the western countries in the Han Dynasty imitated the Zodiac and created Chinese zodiacs. Ancient Greece, ancient Egypt, Babylon, and other ancient countries also had similar zodiac signs, differing only in animals, and believed that they were introduced to China from the west during the Qin and Han Dynasties (Guo, 1992a; 1992b). However, the unearthing of Qin Jian⁵ disproved this theory, and similar animal cults were found in all countries of the world, which instead strengthened the rationality of the totem theory.

To sum up, scholars have their own opinions about the origin of the Chinese zodiac, mainly in two categories: foreign and indigenous, and those who support the indigenous theory also have great differences, for example, the Chinese zodiac culture except for the large population. For example, besides the Han Chinese, who have a large population, many ethnic minorities also have a calendar of 12 animals. The Naxi, who live mainly in the southwest, still have a legend of the ranking of 12 animals similar to the Han Chinese “betting race”⁶. The Zhuang and Dong⁷ speaking peoples also have many folk legends and folk songs about the 12 zodiac signs. Why do some ethnic minorities have the same or similar zodiac calendar as the Han Chinese? “Zodiac Culture” is written that “cultural anthropological theory is used to explain this phenomenon, which is obviously the result of cultural exchange, absorption and integration among different ethnic groups” (Qu, 2012b, p. 3). The Chinese zodiac calendar was established in the Han Dynasty and matured in the Qin Dynasty. This view is that the roots of the Chinese zodiac lie in the Han nationality, while the ethnic minorities are the result of cultural exchange, absorption, and fusion by the Han nationality before the 12 zodiac animal calendars came into being. With such divergent views, we can see that there is no definite conclusion in the academic community about the origin of the 12 zodiac animal calendars and the lack of relevant written materials. The discovery of stone tablets with ancient inscriptions in the Gansang Area of Guangxi, which were determined to be ancient Luo Yue stone inscriptions four to six thousand years ago, and the discovery of 17,496 interpreted characters that represent the 12 zodiac animal calendars will provide the first research material for exploring the origin of the 12 zodiac animal calendars.

Ancient Luo Yue Stone Inscriptions

Discovery of Ancient Luo Yue Stone Inscriptions

Ancient Luo Yue stone inscription is a newly discovered ancient script, which was found by local villager Pan Rongguan in 2006 while he was working in the field. It belongs to the ideographic ancient Zhuang-Dong script, which has similarities with the oracle bone script, ancient Shui⁸ script, and ancient Yue script. In “Preliminary Analysis of the Newly Discovered Gansang Stone Inscriptions”, it is written that

Gansang stone inscriptions, newly discovered in the area of Pingguo County, Guangxi, are carved on stone pieces and are a relatively mature pictograph used by the ancient Baiyue people, with some similar characters to oracle bone, Shui book, ancient Yue script and ancient Indian Harappan. (Li & Liu, 2014, p. 1)

⁵ The Qin slips are the general name of the slips left by the Qin state during the Warring States Period (475-221 BC) and the later Qin Dynasty. During the Warring States and Qin Dynasties in ancient China, bamboo slips were used for writing, without modern paper.

⁶ Twelve animals raced to determine their positions.

⁷ The Zhuang and Dong are ethnic minorities in China.

⁸ Shui is ethnic minority in China.

In “Preliminary Study of Gangsang Stone Inscriptions”, it is recorded that

Gangsang stone inscriptions are ancient written stone inscriptions found in Nesang Tun, Sensang Village, Matou Town, Pingguo County, Guangxi Zhuang Autonomous Region, and “Gangsang” is a Zhuang language place name. It means “a high cave” because there are caves high up on the mountain in the area, hence the name. (Ban & Xiao, 2013, p. 1)

Since the discovery of the Gangsang stone inscriptions (also known as ancient Luo Yue stone inscriptions), they have attracted widespread attention from experts and scholars both at home and abroad in the academic community, and in an endless stream of scholars who have gone to the field to investigate them, and considerable research results have been made.

The Age and Number of Ancient Luo Yue Stone Inscriptions

Among the various methods applied to Quaternary chronology, the most classic and technically sound methods are the C14 isotope age method and the potassium-argon method, both of which have a long history and have been continuously improved. On 2020, September 7, Quaternary Dating Experiment, Accelerator Mass Spectrometry Laboratory, Peking University, Beijing, China, “C14 Isotope Age Determination of Shells Attached to Stone” results 6,640+/-40 years ago that can be proved the ancient Luo Yue stone inscriptions are older than the oracle bone inscriptions, and are the oldest script found on the Chinese land.

Nearly 20,000 ancient Luo Yue stone inscriptions have been found, and 17,496 characters have been published in books, each of which has been coded and documented. The existence and flourishing of the ancient Luo Yue Kingdom in the Pearl River Valley and the ancient, long and profound Chinese civilization can be clearly traced from the preliminary interpretations of these published and coded stone inscriptions.

Ancient Luo Yue Stone Inscriptions and Oracle Bone Writing

Several Discussions on the Age of the Stone Inscriptions of Ancient Luo Yue Script and Oracle Bone Script

1. “Later than oracle bone script”: It is believed that the oldest Chinese script is oracle bone script, and the stone carved ancient Luo Yue script is later than oracle bone script, which is a traditional understanding.
2. “The same period”: It is believed that the ancient Luo Yue script and the oracle bone script are the products of the same period, and the characters are very similar in shape, and both are inscribed scripts.
3. “Earlier than the oracle bone script”: This paper agrees with the claim that the ancient Luo Yue script was formed or earlier than the oracle bone script.

From the perspective of human molecular and molecular genetic data, the beginning of Chinese civilization was in the south, and the ancestors of modern man (Lioujiang people 70-130 thousand years ago) originated in the Pearl River basin.

During the Paleolithic period, the first group of modern people came out of Africa, reached the Arabian Peninsula in West Asia, along the coast of the Indian Ocean, headed east, reached the northern Thailand-Laos-North Vietnam-Beibu Gulf China-Two Canton region in Southeast Asia, and stayed for a long time. (Zong, 2015, p. 178)

The Pearl River basin is located in the Tropic of Cancer region and the climate is mild and suitable for survival; after this group of modern people stayed and began to farm rice, Guangxi Long’an County found wild rice, the experts found that the wild rice contains silica, and the dating results for 16,000 years ago, and the production of farming rice means that the matriarchal society will enter the patriarchal society, which also laid the foundation for the production of ancient Luo Viet language. This laid the foundation for the creation of the ancient Luo Yue language.

From archaeological and geological data, on April 10, 2020, the Ministry of Land and Resources Karst Geological Resources and Environmental Supervision and Testing Center (2020a; 2020b) conducted a C14 isotopic age determination of the calcium wafers attached to the ancient Luo Yue stone tablets, which was more than 5,000 years ago, while the shells attached to the stone tablets were tested to be 6,000 years ago. The age of the oracle bones has been controversial for many years, and the Xia-Shang-Zhou Dating Project Expert Group's *Report on the 1996-2000 Phase Results of the Xia-Shang-Zhou Dating Project* (2000) was set at 3,600-3,100 years ago. This also confirms that the ancient Luo Yue script predates the oracle bone script.

Discussion on the Kinship between the Two

Some scholars believe that the ancient Luo Yue stone inscriptions and the oracle bone inscriptions have the same and similar characteristics, and may be related to each other. The other part of scholars believe that this claim has insufficient evidence and lacks more theoretical support.

Prof. Luo Man⁹ found that the grammatical structure of the form of the title is very similar to or identical to that of the title of the Buyi, Zhuang, Dai, and Dong-Tai (Zhuang-Dong language group), which is a “transitive construction and transitive title” from the linguistic and ancient literature studies, the imperial and royal titles of the Xia and Shang Dynasties, and the form of the title of the Shang royal family in the oracle bone inscriptions. In *Records of the Five Emperors* emperors such as Di Yao, Di Shun, and Di Hong¹⁰ are referred to as “Yue-style appellations”, and in *Xia Benji*, as long as they are emperors, they are first referred to as emperors and then their names, which are all “Yue-style appellations” (Zong, 2015, p. 179).

Prof. Luo Zuyu proposed:

Southwest and southern China is the place where the Baiyue nation was born and reproduced. The Baiyue nation, in the late Neolithic period equivalent to the Xia Dynasty era or before, entered the Central Plains, took the lead in the political arena, experienced the rule of the Baiyue nation for more than 1,000 years in the Xia and Shang Dynasties, and created the brilliant main culture of the ancestors of China. (Luo, 2016, p. 149)

It is also confirmed by the “Preliminary conclusion of the Chinese Civilization Exploration Project—DNA Data”, molecular anthropology, molecular genetics, and other data. This can explain why most of the grammatical structures in the Yin-Shang period are similar to those of the present-day Zhuang-Dong ethnic group, and the similarity of the 12 zodiac animal calendar scripts is also extremely high, which also provides strong theoretical support for the view that the ancient Luo-Yue script is related to the oracle bone script in some way.

Comparative Study of the 12 Chinese Zodiac Scripts

From the perspective of textual conformation, the ancient Luo Yue stone inscriptions are closer to the prototypical than the oracle bone inscriptions, the number of lines is greater than that of the oracle bone, and the intuitive characteristics is significant. Professor Li Jinfang divided it into “overall pictogram”, “partial pictogram”, “dissimilar pictogram”, and “additive pictogram”, while “overall pictogram” includes two cases.

These types of engravings are reflected in the 12 characters of the zodiac animal calendar, for example: “rat”, “tiger”, “dragon”, “snake”, “monkey”, “chicken” are in accordance with the overall image of the animal sketch, more detailed carving, specific preservation of the animal's image, and belong to the “overall pictogram”; the other is to depict the outline of things, not to depict some small details, such as “horse”, “dog”, “pig” these three

⁹ Luo Man: Born in 1956, a native of Guizhou, he is currently a professor and dean of the College of Arts and Letters at Central South University for Nationalities.

¹⁰ The name of the emperor in ancient China.

Chinese zodiac animal characters are this principle. The other is to depict the outline of things without depicting some small details, such as “horse”, “dog”, and “pig”, which belong to this principle, but of course, this also belongs to the category of “overall pictogram”; partial pictogram is to replace the whole with local features, such as “cow”, which simply carves out the head of the cow, highlighting the image of its two horns, and the face with a vertical embodiment. The image of “rabbit” is the two ears and two cheeks of the rabbit, while “sheep” and “cow” are the same, with the difference of the “horns”. The difference between these two characters is that the two horns of the word “cow” face upward, while the two horns of the word “sheep” face downward, a detail that highly restores the real characteristics of the animal. This detail also highly reproduces the real characteristics of the animal, which brings out the most typical image of the animal, although it is only partial, but it can be recognized at a glance. Another way of writing “dog” is the image of a dog sitting sideways on the ground plus its guarding function, the image of a dog sitting sideways is like the Chinese character “入”, and sitting frontally is like a triangle. Its guarding function is represented by the Chinese character “戈”, which is written in an “additive pictogram” style.

The oracle bone script is more varied and has developed to the stage of “Pictographic Characters” construction, such as “rat” in ancient Luo Yue script becoming “子”; and “酉” in the ancient Luo-yue script is form of two fighting chickens, but in the oracle bone script, it has evolved into the morphological character “酉” for “wine jug”; the character “申” was originally the overall or partial image of a monkey, but it has been transformed into the character “申” in the form of the phonetic character “伸”, which means “to stretch” in a huddled state. For example, “戌” was originally a simplification of the abstract meaning of the animal archetype: a dog sitting on the ground in the form of a guard, which later evolved into a combination of the functional “戈” form of a guard to form the character “戌”. The character “午” is represented by the image of a horse’s bridle or a wooden stake on the ground, and is also highly variable, being a combination of morphological sound and allegorical meaning. The original form of the character “卯”, “寅”, “亥”, “丑”, etc., is retained.

The following is a comparison between the ancient Luo Yue stone inscription and the oracle bone zodiac script.

汉文	子	丑	寅	卯	辰	巳	午	未	申	酉	戌	亥
古骆越文												
甲骨文												

Figure 1. Table of comparison between ancient Luoyue and oracle bone inscriptions on the zodiac

Conclusion

With the development of time, people’s communication and exchange formed cultural contact and integration, and the zodiac civilization spread from the south to the north. The zodiac jade carvings excavated from the Yangtze River Valley’s Sanxingdui civilization, the jade pillars, and jade discs of the “Jade Canon” have the same form, type, and order as the ancient Luo Yue stone inscriptions. This also confirms Professor Luo Zuoyu’s claim that the Baiyue people communicated and spread from the south to the north and entered the Central Plains, and thus the ancient Luo Yue script and the oracle bone script have the same and similar characteristics.

From the ancient Luo Yue script in the Pearl River basin to the Yin Shang oracle bone script in the Yellow River basin, from the west to the east, and then from the south to the north, through exchanges, integration, mutual absorption and reference, and continuous development and evolution process are appear phonogram characters, and many characters have been different from the ancient Luo Yue script, but this is the law of script development, as society continues to develop, people continue to progress, and the script will be increasingly simplified. The zodiac animal calendar script shows a certain kinship between the two, with the same and similar characteristics. It shows the origin and development of ethnic groups and scripts, revealing the process of the formation and development of the Chinese ethnic community, it's exchanging, learning from each other, and developing together, forging the splendid culture of the Chinese nation in its diversity and unity.

References

- Ban, C. (2013). *Gansang stone inscription copy and character set*. Guangzhou: Guangdong Science and Technology Press.
- Ban, C., & Xiao, R. Q. (2013). Preliminary study of Gansang stone inscriptions. *Cultural Heritage*, 7(5), 100-105+158.
- Braden, G. (2012.04). *Buried Truths: Rethinking the Origins, History, Future and Destiny of Mankind*. (H. Y. Liang & W. Y. Cao, Trans.). Beijing: CITIC Publishing House.
- Chen, J. (1993). "Pan-vietnamese Culture" and "Original Vietnamese Culture Theory". *Guangxi Ethnic Studies*, 9(3), 66-72.
- Collier, M., & Manley, B. (2015). *A guide to the words of ancient Egyptian Holy Books*. Beijing: The Commercial Press.
- Didier, J. (2014.03). *History of Climate Change* (X. R. Wang, Ed. and Trans.). Beijing: Gold Wall Press.
- Guo, M. R. (1992a). *Explain Heavenly stems and Earthly branches*. Beijing: Science Press.
- Guo, M. R. (1992b). *The complete works of Guo, M. R. Archaeological piece*. Beijing: Science Press.
- Hu, H. X. (Ed.). (1983). *Oracle bone inscriptions and Yin Shang History*. Shanghai: Shanghai Chinese Classics Press
- Huang, D. G. (2015). *Chinese Paleography*. Shanghai: Shanghai Chinese Classics Press.
- Li, H. (2002). One-variable quadratic of genetic structure in Baiyue. *Guangxi Ethnic Studies*, 18(4), 26-31.
- Li, J. F., & Liu, Y. (2014). Preliminary analysis of the newly discovered Gansang stone inscriptions. *Journal of Baise University*, 27(4), 45-54.
- Li, P. (1995). *Oracle bone philology*. Shanghai: Xuelin Press.
- Li, Z. Q. (2018). *Pingguo Gansang stone inscriptions image narrative copy and character set*. Beijing: China Social Sciences Press.
- Liu, J. (2011). *Archaic script configuration*. Fuzhou: Fujian People's Press
- Luo, Z. Y. (2016). *The first investigation and research of ancient Baiyue characters of Buyi nationality in China*. Kunming: Yunnan Nationalities Publishing House.
- Luo, Z. Y., Wei, X. H., & Dai, C. C. (2020.12). *Discussion on 14C isotope dating of ancient Luoyue characters in Gansang stone carvings in Pingguo, Guangxi. Buyi studies: Ten year album of the Estuary Buyi Society*. Kunming: Yunnan Nationalities Publishing House.
- Meng, S. K. (2009). *Oracle bone dictionary*. Shanghai: Shanghai People's Publishing House.
- Ministry of Land and Resources Karst Geological Resources and Environmental Supervision and Testing Center. (10/04/2020a). *《Test report》 • 〈calc-sinter〉*, No.T2019-229-5450.
- Ministry of Land and Resources Karst Geological Resources and Environmental Supervision and Testing Center. (10/04/2020b). *《Test report》 • 〈shell〉*, No.T2019-229-9449.
- Qu, Y. B. (2012a). Zodiac Culture Examination (Part 1). *Culture Journal*, 7(4), 87-98.
- Qu, Y. B. (2012b). Zodiac Culture Examination (Part 2). *Culture Journal*, 7(4), 90-102.
- Quaternary Dating Experiment, Accelerator Mass Spectrometry Laboratory, Peking University. (07/09/2020). *《Accelerator Mass Spectrometry (AMS) Carbon-14 Test Report》*, Shell attached to Gansang stone inscription, No.BA20552.
- Shang, C. Z. (1991). *A study of Oracle bone writing*. Tianjin: Tianjin Ancient Books Publishing House.
- Tian, M. Z., & Cheng, J. (2009.04). *Quaternary Geology and Geomorphology*. Beijing: Science Press.
- Wang, Y. X. (1982). *Oracle bone inscriptions since the founding of China*. Beijing: China Social Sciences Press.
- Wang, Z., & Yi, G. Y. (1995). *Ancient man and Liujiang man*. Nanning: Guangxi Science and Technology Press.
- Xia-Shang-Zhou Dating Project Expert Group. (2000.10). *Report on the 1996-2000 Phase Results of the Xia-Shang-Zhou Dating Project*. Beijing: World Publishing Corporation.

Xu, J. H. (2014.05). *Climate makes history* (X. A. Gan, Trans.). Shanghai: Life, Reading and New Knowledge Bookstore.

Zhang, D. S. (2004). *A collection of three thousand years of meteorological records in China*. Nanjing: Phoenix Publishing House
Jiangsu Education Publishing House.

Zheng, Z. F. (2006). *Study on the system of Oracle bone writing configuration*. Shanghai: Shanghai Educational Publishing House.

Zong, Y. (n.d.). *A Preliminary study on Baiyue Nationality and its relationship with China and Shang Dynasty*. Yunnan: Yunnan Nationalities Publishing House.