

Evolution of the Inscriptions on the Bronze Mirror of Han Dynasty in the Furnace Smoke

Xu Zhongfeng, Doctor

Xu Zhongfeng, Doctor in Art Archaeology and Art History, School of Art, Southeast University; College of fine arts, East China Normal University. Correspondence author: Xu Zhongfeng; x-season@qq.com

Abstract: The Chinese characters evolution from seal script to clerical script in Han Dynasty underwent one a new process of development and stability from top-level design to folk application, where the most important relic, inscriptions of bronze mirror, together with the bamboo slips and stele inscriptions, constituted the basic calligraphy aesthetics at that time, forming historical legends in the smoke of casting. Among the mirrors of Han Dynasty, there are a lot of surviving inscription mirrors, the chirography on which has extremely rich subjective design, showing important aesthetic characteristics. Most of the previous writings have tended to study explanation and entry, and there are few studies based on the chirography. The classification and analysis of the considerable and complex inscriptions of bronze mirror based on archaeological typology indicate that at different stages and in different regions, the sources of popular materials are similar, with typical styles gradually appearing, different creative effects, as well as fresh and interesting cases. Comparing the inscription chirography with bamboo and wood slips and calligraphy on rubbings, it is possible to see the combination of "mirror caster" and "Daobili (petty official drawing up indictments)", new calligraphic patterns appear in the smoke of the fire. The calligraphy is applied to bronze mirrors, and is cut and transformed by the craftsmen to be suitable for deformation, so that the character shape is integrated with bronze and stone tablet casting, presenting a unique decorative taste and design meaning, carrying the open and inclusive spirit of Han Dynasty.

Key words: inscription, furnace smoke, mirror caster, aesthetics

Tob Regul Sci.TM 2021;7(5): 1008-1020

DOI: doi.org/10.18001/TRS.7.5.18

FOREWORD

The "rehabilitating" policy in the early Han Dynasty not only stressed agriculture and restrained commerce, and reduced the burden of taxation and cost, but also inherited from Qin Dynasty, vigorously promoted immortal thoughts, confucianist teachings, and the learning about the Emperor Huang and Lao Tzu, laid equal stress on

the economy and culture, and formed the root of the profound and vigorous national culture and spirit of Han.

With the recovery of the social economy and the accumulation of social wealth, the use of bronze mirrors has become more and more daily, more and more furnace smoke was cast, becoming the main variety of handicraft in Han Dynasty as it was more scientific and

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standardized. The process of making a bronze mirror is complicated from designing, mould-making, casting, polishing, especially the ornamentation and character design. This can be seen comprehensively from the excavation and research process of the mirror mold of Han Dynasty and the mirror casting workshop site in Linzi, Shandong, as well as other mirror moldrelics¹.

The combination of mirrorcaster and "Daobili" made the ornamentation and style of the inscription mirrorsin Han Dynasty change day by day. As for the explanation about "Daobili", it is recorded in theBook of Han Dynasty - Yiwenzhi:

"The clerical script started to be established at that time, from the onerous indictments of jailer

and seeking for convenient and easy writing, which was applied by Tuli."

"Tuli" here refers to the petty officials who managed labor service menand prisoners. Under normal circumstances, they carried knives and brushes for scraping bamboo and wood slips at any time, and registered in clerical script, which is why they were called "Daobili".

It is also recorded in the Book of Han Dynasty: Zhang Tang Biography that:

"Tang has no merits; he started his official career as Daobili, and fortunately, His Majesty confers dignitary, and he has to do his job conscientiously."



Figure 1A single circle of inscriptions bronze mirror

As an art classic in casting fire smoke, the Han mirror can be used for dressing and making up, as well as a ritual and religious tool, which has elegant appearance and contains many visions of auspiciousness, exorcising evil spirits, and blessings. The prevalence of "elaborate funeral" led to huge amount of unearthed and surviving cultural relics, which has always been valued by historians and scholars of epigraphists (see Figure 1).

The inscription mirror among Han mirrors is a kind of cultural relics of Han Dynasty with a huge

number of remains, with extremely rich design changes and aesthetic characteristics. Its inscriptions are as like:

"Long memories, don't forget each other", "The sun brings light to the world", "Using the mirror of high quality, you are like immortals who live forever and happily".

etc., in addition to expressing thoughts and wishes with words more directly, the design presented in the furnace smoke is unique, highlighting the beauty of the calligraphy of the Chinese characters evolution from seal script to

RESEARCH STATUS OF HAN MIRROR INSCRIPTIONS

Regarding the Han mirror inscriptions, most of the previous research results have tended to explanation and entry, and there are few studies based on the development and aesthetic characteristics of the inscription chirography, which can be said to have not received much attention from the philology circle or art historians.

In the Republic of China, Rong Geng contained 700 to 800 pieces of Han bronzes in the *Compilation of Inscriptions and Continuation of Compilation of Inscriptions*, and summarized and explained the inscriptions on them, making it the first work on the study of inscriptions in the Han Dynasty in the real sense²; in the *Compilation of Inscriptions in Qin and Han Dynasties*, Sun Weizu and Xu Gufu contained more than 500 pieces of Han utensils with inscriptions, clipped and recorded the rubbings of the inscriptions, and analyzed the characteristics of the inscriptions, which is relatively authentic and reliable³; in the *Historical Value of Han Mirror Inscriptions*, Yang Aiguo believed that Han mirror inscriptions can not only reflect the pursuit for wealth and longevity of the people in Han Dynasty, but also reflect the status of the mirror handicraft industry and the advertisement of mirror casting workshops. It is believed that Han mirror inscriptions were all created by craftsmen, playing a very important role in the study of folk writing and calligraphy in Han Dynasty. Before the Emperor Jing of the Western Han Dynasty, the mirror inscriptions were mainly seal script, with round strokes and straight lines. From Emperor Jing to the early reign of Emperor Wu, the strokes turned from round to square, similar to the imperial seals and bronze inscriptions at that time, which was the so-called Mou seal script. From Emperor Wu to Emperor Xuan, deformed seal script was popular, showing a more obvious tendency to simplification and clerical script. From Emperor Xuan to late Western Han Dynasty, the most distinctive feature was the

inscriptions on mirror with arc design, which was neither seal script nor clerical script, with its own style and a lot of simplified strokes and joined-up writing. During the reign of Wang Mang in Xin Dynasty, on the one hand, it inherited the clerical script in the middle and late Western Han Dynasty, and on the other hand, it restarted the seal script and some ancient characters, with a retro style. In the Eastern Han Dynasty, the clerical script was mainly used, with more simplifications, with evolution to cursive script, and the elaborately decorated seal-clerical script⁴; Xu Zhengkao's *Comprehensive Research on Inscriptions on Bronze in Han Dynasty* has a rich collection and complete layout, where the author conducts a certain comprehensive study. Another book, *Compilation of Bronze Inscriptions and Characters in Han Dynasty*, has a more extensive collection, where the author investigates and summarizes the characteristics of philology, and discusses the characteristics of the character configuration from the two aspects of "simplification" and "complication". It is believed that "simplification" is to pursue the neatness and symmetry of the fonts, which directly reduces the radicals and does not conform to the standardization law of Chinese characters. Complication, on the other hand, believes that the requirements for configuration are strict and the characteristics are obvious, which still has a very important enlightening effect on today's researches⁵. There are also some comprehensive theoretical works scattered in some interdisciplinary studies, and careful study on them can also provide ideas for deeper cognition.

Some scholars, especially calligraphy scholars, will pay attention to the lack of research on the evolution of chirography and artistic characteristics of Han mirror inscriptions. For example, Pan Minzhong wrote in *The Evolution of Chirography of Han Mirror Inscriptions and Its Calligraphic Art*: "The emphasis on it is only interpreted by mirror connoisseurs from the perspective of ancient characters; however, in terms of its calligraphic art and its role in the evolution of chirography, only Zhao Zhiqian and especially Huang Shiling in the late Qing Dynasty

Evolution of the Inscriptions on the Bronze Mirror of Han Dynasty in the Furnace Smoke introduced inscriptions from the perspective of artistic beauty”.⁶



Figure 2The patterns of grass leaf bronze mirror

There are a lot of surviving inscription mirrors of Han Dynasty; in addition to archaeological briefs, museum collections and some important private collections, many can also be seen in the auction catalogues, including articles. When categorizing and analyzing the complex bronze mirror inscriptions, it can be found that although the design of chirography has the same source of materials and obvious popular features, they are not the same, which not only achieve the typical styles of each stage, but also create many fresh and interesting characteristic forms (see Figure 2).

First of all, there are several clear points: Firstly, whether it is the square arrangement in the core area or various circle arrangements, the inscriptions are harmoniously integrated with other ornamentation and become a part of the decorative design. The composition combining square and circle is classic, where the square contains the circle; some have regular patterns, and the square and circle patterns have evolved into a natural law. Secondly, if we carry out statistics, the most important inscriptions include:

About auspicious words

"Descendants can live a good and stable life,

living as long as metal and stone" "Wish you dignitary";

About immortals

"Using the mirror of high quality, you are like immortals who live forever and happily, traveling around the world, wandering in famous mountains and picking herbs, living as long as metal and stone." "Go to Huashan Mountain to visit immortals, eat and drink well";

About missing someone

"Wish you riches and honor, endless happiness, long love, never forget each other"etc. It is not difficult to see that such contents literally expressed the prevalence of divination and the faith in immortality that the society of the Han dynasty pursued with great enthusiasm, as well as "the magnificent, simple and vigorous overall atmosphere created by the stability and abundance of the society and the prosperity of culture".⁷

Thirdly, in terms of the evolution of the chirography, there is a great deal of inconsistency between the chirography of the Han mirror inscriptions and the popular chirography at that

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time, so how did this form be created and become popular?

To truly study the mirror inscriptions based on the calligraphic art and combined with the casting process and decorative features, it is possible to first classify via archaeological typology. However, to truly and thoroughly understand the evolution of the chirography of Han mirror inscriptions, and to understand the origin of creation, as well as the aesthetic characteristics in the process of development, inheritance and change, it is necessary to conduct interdisciplinary studies of ancient philology, religion, history, and folklore, as well as empirical study on typical materials from art archaeology.

MAIN FEATURES OF HAN MIRROR INSCRIPTIONS

Taking the time of the development and evolution of the mirror inscription chirography as

a sequence, looking for and selecting the materials of the typical inscription mirrors, stacking and comparing, it is possible to explore the features of the inscription chirography in different periods.

Early Western Han Dynasty

In the early Western Han Dynasty, the people lived in destitution after the war, the bronze ware was not frequently used and the inscriptions were relatively simple. As the society became stable, the agriculture and handicraft industry began to develop rapidly, and the bronze mirror gradually occupied the bulk of bronze production as a practical tool, and its ornamentation and inscriptions also underwent some new changes on the basis of inheriting from the Qin Dynasty and the Warring States Period. As far as decoration is concerned, the patterns of grass blades, Panchi and rules were popular.



Figure 3 The patterns of four “hui” bronze mirror

The features of the era of this period are obvious. The inscriptions on the bronze mirrors were mainly seal script, with relatively few characters, and the strokes were round and straight, which were directly derived from the small seal script of Qin Dynasty. Attention began to be paid to the appearance design from the

market, so that the text and decoration were integrated, showing the wisdom of the craftsmen.

The middle and late Western Han Dynasty

By the reign of Emperor Wu, the territory was expanding and the country was prospering; although bronze was increasingly replaced by

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iron, lacquer, and ceramics, the bronze mirrors did not decrease. From the perspective of mirror decoration, the patterns of continuous arc, grass blades, and Bo Ju were popular.

The inscription chirography gradually changed from small seal to the Han seal, which became more upright and straight, with many simplified designs. It can be seen from the calligraphy of the bamboo slips of Han Dynasty that the clerical script was very popular among the people (see Figure 3). Later, the bronze mirror inscriptions also gradually evolved to clerical script, changing from vertical to flat, and then a nearly cursive clerical script with many continuous strokes was generated, which was rich in form. At the same time, double-circle inscriptions began to be used, which pursued formal characteristics, and

emphasized the harmony and unity of ornamentation and inscriptions.

Wang Mang's reign in Xin Dynasty

During Wang Mang's reign in Xin Dynasty, there were cumbersome government decrees and frequent reforms, including four currency reforms, leaving behind famous currencies such as "Yi dao ping wu qian" and "Six grades of Quan and Ten grades of Bu". Among the bronze mirrors of that period, Siling mirror, Zhaoming mirror and Qingming mirror were extremely beautiful and exquisite. The inscriptions on the bronze mirrors mostly followed the content of the early Western Han Dynasty, and there were many advertising auspicious words of mirror casting workshops.



Figure 4 The patterns of "Bo ju" bronze mirror

In terms of the font, while inheriting the tendency to clerical script and advocating the retro style, the seal script and ancient characters were frequently used, which were tight on the top and loose at the bottom, and square and smooth, with extremely strong artistic creation features. They were beautiful, but there were many omissions of radicals and strokes, such as the typical large hanging needle seal characters on "Huobu" (see Figure 4).

Early Eastern Han Dynasty

In the Eastern Han Dynasty, with the times of peace and prosperity during Emperor Guangwu's reign and Judo ruled the country, which beat swords into plowshares, ironware was widely used in agriculture, the silk weaving technology was very advanced, and science and technology developed rapidly, such as papermaking and seismographs. The commercialization of bronze mirror casting is stronger, the filling, grinding, chrome plating and other processes became more and more delicate, and the

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pattern decoration also transformed from thick lines to bas-relief. It was recorded in Huainanzi - Xiuwuxun:

"The profile of mirror was hazy, as it is polished with gray tin and white felt, to clearly reflect the face⁸"

Polishing with gray tin and white felt are some new processing and polishing techniques.





During most periods of the Eastern Han Dynasty, the bronze mirrors were mainly Shangfang mirrors, auspicious animal mirrors, continuous arc mirrors, and privately cast surname mirrors, etc., and the inscriptions were mainly in the form of slender clerical script, which were small but dignified, and the number of characters gradually increased and became more decorative, including many popular simple fonts. In addition to the clerical script, the square and beautiful linear art style was also popular, which paid more attention to the sense of decoration, and was a further innovation of the mirror casters in the affluent society of the Eastern Han Dynasty.

The middle and late Eastern Han Dynasty

In the late Eastern Han Dynasty, culture was prosperous but politics was decayed; despite various contradictions in state governance, the frequent trade and cultural exchanges with neighboring countries had a positive and profound influence on later generations. The bronze mirrors of this period underwent a lot of changes in terms of themes, text, and decorations, most of which were mirrors with mythical creatures, square seals, and statues of immortals.

During this period, the bronze mirror inscriptions were gradually reduced, and only some of the most popular sentences were retained, whose fonts were small and simple; while using the clerical script, there was much font evolution of cursive script, which could explain the key process of the evolution from clerical script to cursive script. On the whole, mirror inscriptions have basically become the lace part of bas-relief images.

Some inscriptions can be called typical devices, such as (see Table 1):

Table 1 Some typical devices			
			
"Never forget each other" comes from "Long love, never forget each other, wish you riches and honor, endless happiness"	"I am sad" comes from "Long time no see, you are gone, I am sad"	"Shangfangzuo" comes from "The mirror made by Shangfang is of high quality, with immortals..."	"The inner quality is pure" comes from "The inner quality is pure, as shining as the sun and the moon..."
Source: Author			

There are also some special inscriptions that are different from their contemporary features, but they are outstanding in their artistic quality and unique, and can also be used for certain discussions.

THE CHIROGRAPHY AESTHETICS OF THE HAN MIRROR INSCRIPTIONS

In Han Dynasty, Chinese chirography continued to evolve and alternate. In the very early time, as a saying goes, "Han Dynasty inherited from Qin", the official font was the small seal of Qin, and the bamboo slips, official scripts, and inscriptions on metals and stones were widely used; the ancient

clerical script was popular among the people, and it was commonly used, also used for the bamboo slips, stone carvings, etc., but it was not yet mature, and the phenomenon of mixed seal and clerical could often be seen. After Emperor Wu, Han clerical was basically mature, and the official script requirements became more and more stringent; only the approved chirography could be cast in gold and bronze and inscribed in the Stele, and the government's explicit intervention directly affected the development of the chirography.

By the end of Han Dynasty, various fonts were basically formed. This can be clearly seen from the rich archaeological materials. The famous remains include Xi Xia Song, Stone Inscriptions in the 2nd Year of Wufeng, Xin Mang Tong Liang, and YuanAn Stele, Bamboo Slips of Han Dynasty on Wuwei Etiquette, etc. (see Figure 3).

The complexity of calligraphy at that time can be seen in Xu Shen's *Shuo Wen Jie Zi*:

"One is ancient writing, and the books hidden in Confucius's wall; the second is strange characters, that is, the bizarre ones in ancient writings; the third is seal script, which refers to small seal created Cheng Miao at the order of the First Emperor of Qin; the fourth is the supplementary script, which refers to the clerical script of Qin; the fifth is Mou seal, which refers to the ancient imperial seal script; the sixth is Bird-and-Insect Script, which refers to Shufanxin."⁹

Li Si's small seal was balanced, round and strong, uniform and symmetrical; as an official script, the strokes were complex and the form was strange, which was is laborious to write, but it had large space for change, and was very suitable for inscriptions. However, as a unique font formed in Han Dynasty, clerical script had a silkworm head

and a dovetail with twists and turns, which was more concise and convenient to write, with rich and varied lines, and a sense of dignity and beauty.

The prosperity of the society also directly drove the scale and standard of calligraphy education; the ability to write and handwriting also became one of the main criteria for investigating and selecting officials. It was recorded in the *Book of Han Dynasty - Yiwenzhi*:

"Students begin to take the exam after 17, and only those who can read and write 9,000 Chinese characters can become officials. They further have an exam on "eight scripts". After passing the county test, they are transferred to the Central Taishiling for another test, and the person with the highest score is hired as officials. The officials who write documents and memorials incorrectly will be reported and impeached."

The so-called "eight scripts" here means "the eight scripts of Qin Dynasty"¹⁰, which refers to different applications of different scripts. For example: the "Bird-and-Insect Script" was used in imperial seals and weapons; clerical script was used in bamboo slips and inscription, each with its own strengths.

There were many types of bronze wares in Han Dynasty; with the exquisite casting skills, there were more and more daily-use and practical utensils. A large number of bronze mirrors also gradually went into the life of ordinary people. In the unique cultural system formed by the Han mirrors, the style was unified and the ornamentation was developed, which was simple and honest, but also dexterous and fresh, presenting a distinctive aesthetic and cultural connotation, which still looks gorgeous and sophisticated today.



Figure 5The patterns of dragon and tiger bronze mirror

Regarding the inscriptions on bronze mirrors, whether it was an official script or folk writing, from writing to the presentation on the mirror surface, the mirror casting workshop and mirror caster needed to redesign according to the casting process, which was a new creative process. Comparing the inscription script with the bamboo and wood slips of Han Dynasty and inscription calligraphy, this process can be found clearly. The combination of "mirror caster" and "Daobili" allows us to see a variety of inscription scripts, as well as free, romantic, and original artistic creation styles (see Figure 5).

This kind of creation is commendable. When a character merges into the mirror decoration, it may no longer look like a character, but changes into a line or square. Sometimes, decorative characters are added between the characters and they are presented separately. A few examples can be used for specific analysis:

1. The simplification of strokes always emphasizes the first place of the modeling effect, rather than simply reproduce the characters;
2. In the design of circular inscription belt, the characters close to the inner circle are compressed compactly to suit the scattering-like effect. The

characters filled in the square in the middle of the mirror emphasize straight lines, which are more square, focusing on the coordination and unity of strokes and ornamentation; 3. The bottom of the line is wide while the top is narrow, and the beveled cutting marks are obvious, which highlights the three-dimensional sense and texture of the chirography from the requirements of engraving and casting processes; 4. It emphasizes the effect of integrating the character into the whole, and the inscription becomes an increasingly mature decorative element. The inscription shows an increasingly stable sense of form in both content and shape. Changes and unity, orderliness and repetition appear unconsciously, and they all look fashionable now.

There were officially cast and privately cast mirrors in Han Dynasty. Official cast mirrors referred to the so-called "Shangfang" cast mirrors, or some official custom-made mirrors, which was common in the early days, such as "Shangfang-made mirrors, Youjiangongshang"; the quality of privately cast mirrors was not as good as that of officially cast mirrors, but they had more changes, and gradually replaced official casting; there were many advertising slogans in the inscription, such as "Cai's mirror is good,

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bright like moon, rare in the world", etc. Many models in the surviving mirrors are not very good, indicating the large casting volume. To

understand the beauty of the chirography of the Han mirror inscriptions, it is also necessary to understand the process of bronze casting.



Figure 6The patterns of arc bronze mirror

Generally speaking, the mirror casters in Han Dynasty did not have very high cultural level, and they also had great differences between each other. They would change the font more or less according to the words written by "Daobili" and the needs of carving and beauty, and integrated the popular patterns for new changes or creations. After carving out the samples, they cast them. In such a process, after subjective processing and appropriated formation, there was a brand-new change between the mirror inscription script and the popular writing, and formed various unique

artistic effects based on the different artistic levels of different craftsmen, presenting a new version or becoming a blueprint. The application of calligraphy on the bronze mirror, after subjective processing and appropriate deformation by the craftsmen, presented unique decoration and design meaning. From seal to clerical, the development and evolution path was clear, which was expressed as the integration of calligraphy and metal and stone casting, with obvious creative aesthetics and complex information bearing (see Figure 6).



Figure 7The patterns of beast inscription bronze mirror

Through empirical study and comparison, it is not difficult to find that the connotations carried by the script of Han mirror inscriptions are diverse and even extraordinary. First of all, established in the process of a great change in writing, the inscription mirrors of different periods and different regions can be used as an important basis for textual research on the popular writing at that time. Folk writing was free and unruly, orderly and unrestrained; attached to official constraints and promotion, the application of various scripts could be formed and developed; secondly, when the mirror caster engraved the template, they would change the texts provided by “Daobili” in various ways, such as deformation, deletion, and interchange. Such change must not be a sign of low education level, but a subjective artistic processing and an innovation based on local conditions. Considering these creations, it is necessary to make overall judgments from the perspective of iconography, so as to have a deeper understanding of the information carrying of these artistic chirography, and obtain more perspectives on the development of the aesthetics of the Han nationality characters; in addition, the chirography performance of the inscription mirror of Han Dynasty more showed the "shape", "power" and "force" of the characters, which were dignified and natural, with clear directions, forming a different aesthetic space of Han Dynasty. The typical Han mirrors and the inscriptions on them subtly linked the meanings of calligraphy, epigraph, decoration, etc., showing the unchanging vitality for two thousand years (see Figure 7).

Such artistic processing was not done by artists but was better than artists, which not only facilitated carving and casting, but also inadvertently improved the cutting technique and layout. In the museum collections and auction catalogues in the past few years, some direct new materials can be collected. By listing and comparing the important ones among them, we can clearly discover such creative characteristic, which gradually merged into the traditional art symbolic system of "words must be auspicious, and pictures must be meaningful" as it prevailed and evolved in the Han culture (see Table 2).

Table 2 The interpretation of the bronze mirror inscription of the Han Dynasty

No.	Original (deletion, deformation, etc.)	Source and interpretation
1	"Du's mirrors are famous in the world, we congratulate people having new houses and good life, exterminating Hulu and resurrecting the world, good harvest, happiness of parents for long, and great blessings to the future generations."	"Shu" means "ripe." "The ripe grains" is also referred to as "the grains are ripe". <i>Book of Rites - Yue Le Ji</i> : "When virtue is prosperous and education is respected, and when the grains are ripe, people can enjoy music."
2	"Liu's mirrors are famous in the world, we congratulate people having new houses and good life, exterminating Hulu and resurrecting the world, good harvest, great blessings to the parents for long, longevity like metal and stone, good luck for descendants."	Huns' intrusion on the borders of the Han Dynasty was repeatedly recorded in the <i>Historical Records</i> . "Famous in the world" and "resurrecting the world" are both political auspicious words, expressing the common people's desire for peace and prosperity. "Great blessings to the parents for long" is also referred to as "great blessings to the parents forever".
3	"We have always made good mirrors for long, and the craftsman engrave texts. There are ancient beasts avoiding bad luck, blessing for longevity and dignity."	<i>Xiao Erya - Guangyan</i> : "Pi means eliminating." "Pifeiyang" is also referred to as "eliminating bad luck". People pray for the elimination of bad luck and evil. At this time, the bronze mirror possesses a certain power to ward off evil and protect people.
4	"Zhi's mirrors are really great. There is immortal on the right to ward off evil spirits, and green dragon on the left, and there is no misfortune, long live forever."	During the Qin and Han Dynasties, "Yang" was used more. "Yang (misfortune)" is the same as "Yang". <i>Shuihudi Qin Bamboo Slips Rishu - Daozhe</i> : "None of these can be killed, small-scale killing leads to slight misfortune, and large-scale killing leads to serious misfortune."
5	"A poem with seven characters to a line on the mirror, eliminating the evil, and the mirror blesses many sons and grandsons, extreme happiness to parents for long, longevity like metal and stone."	"Yi Sun Zi" is also referred to as "Yi Zi" and "Yi Zi Sun", which means many children and grandchildren. "Shou Bi Jin Shi Xi Wang Mu" expresses the belief in immortals and the thought of becoming immortals in Han Dynasty.
6	"Wealth for long, happiness, joy, abundance."	"Xi" means "joy", in <i>The Book of Songs - Xiaoya - Qingqingzhe</i> , there is "When I see you, I am so joyful." In <i>Shuowen</i> , there is "Xi, joy." It means joy and happiness.
7	"Hou's mirrors are perfect, and the work is ingenious. The dragon on the left and the tiger on the right exorcise misfortune, the seven sons and nine grandchildren in the center, and the husband and wife protect each other."	Here, "Yang" means "fortune". "Ingenious work" has the meaning of advertising.
8	"Polishing the copper clear to make a mirror clear and decorate it, blessing longevity and exorcising misfortune, shining like the sun, long live forever, and happiness forever."	In <i>The Book of Songs - Xiaoya - Tianbao</i> , there is "Longevity as the southern mountain, never collapsing." It uses metaphors, contrasts and other rhetorical techniques to express the desire for immortality.

Source: Author

children and grandchildren" ¹¹

CONCLUSION

"I make mirrors with ingenious work, there are four officials, exorcising misfortune, blessing wealth and fortune, happiness of parents for long, harmony between husband and wife, and many

Whether the smoke billows from the stove, or the casting noise, the inscriptions of the Han mirrors showed not only the aesthetic design integrated with the ornamentation, but also the clear chirography characteristics, which appropriately demonstrated the

broad, majestic, natural and free social culture of Han Dynasty. The emotional connotation is worthy of in-depth study.

There are several questions to discuss with the researchers:

1. When studying the inscriptions of the Han mirrors, while focusing on archaeological materials and museum collections, is it necessary to pay attention to some fine materials in the auction market and folk collections? Under normal circumstances, scholars who do not pay attention to identification are reluctant to use materials without archaeological provenance, which objectively leads to imperfect and incomplete research. I believe that a cultural relic, regardless of its origin, should not be turned away when the identification is undoubted, and what it brings is more surprises;

2. The inscription mirrors with obvious staging characteristics will also show distinctive personality from time to time, or derived from changes in government decrees, regional popularity, or the furnace smoke creation of the mirror caster which resulted in rich changes in the chirography for the Han mirror inscriptions, with many interchangeable characters, variant characters, and wrongly written characters. Some researchers take a part for the whole, which is wrong. Research and appreciation are equally important, and it is scientific to look at the whole inscription mirror from the perspective of artistic characteristics and picture aesthetics, and to explore its aesthetic and personalized creation.

3. To study the entire process from seal to clerical, Han mirror inscription must also be an important material, which must be equally important as bamboo slips, seals, stele inscriptions, silk manuscripts, etc.;

4. By using bronze mirror inscriptions as an important content of mirror-forensics research, combining with other disciplines such as sociology, folklore, and religious studies, based on predecessors' records and textual interpretations, emphasizing the research methods of iconography, ancient philology and archeological typology, summarizing the artistic essence in the mirror inscriptions of Han Dynasty, and discovering the beauty of casting fireworks of Han calligraphy, it is possible to obtain more

cultural connotation about the temperament and spirit of the Han Dynasty.

Author Declaration

This research is not funded by any organization related to tobacco production.

Acknowledgments

This paper is a phased outcome of the key project of the National Social Science Fund "Archaeological Chronicles of Chinese Religious Art" (17AZJ002).

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- 11 Nanyang Institute of Cultural Relics and Archaeology: Bronze Mirrors Unearthed in Nanyang, *Cultural Relics Publishing House*, December 2020, Page. 116.