

# A STUDY ON CULTURAL AND CREATIVE PRODUCT DESIGN MODEL FROM THE PERSPECTIVE OF PAPER CUTTING

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## ABSTRACT

Culture is a valuable asset of mankind, while innovation ensures the extension of culture. Chinese traditional paper cutting is unique in terms of art style, and its art creation and auspicious semantics differ from other pattern systems. This is because a cultural core based paper cutting design model should be the focus of the entire product design application in which the value of a complete design lies. The scope of research is limited to the outcome of the traditional paper-cut word “fu” ( 福, blessing) converted into cultural products, with literature analysis adopted as the main method. The three levels of conversion product attributes in three levels, namely, exterior, function, and interior, shall serve as references. The purpose is to construct a complete and logical design model through the paper-cut word “fu” ( 福) and three conversion attributes, which shall be provided for future designers to reflect on and apply. In terms of the steps of the design model, first the individual attributes of the word “fu” ( 福) are employed as references. Then, “the individual conversion attributes in three levels” are adopted as the method. Finally, the cultural content is used to complete the value-added paper-cutting design, thereby constructing the model system diagram of traditional paper-cut conversion cultural products and specifically converting traditional paper cutting into cultural product designs.

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## 1. Introduction

The content in traditional Chinese paper-cutting is unique and extraordinarily significant. Unlike the realism in Western patterns and the spontaneity in Chinese paintings, the creator expresses his or her personal intuition and impression into a simple and lively piece of creation that specifically applies cultural aesthetics into everyday life. The word "fu" ( 福 , blessing) is one such example. Although traditional paper-cutting itself is desirable, including other cultural features by using modern designs can uncover its trendiness and enhance its appeal. With passing time, even if human psychology were to remain consistent, tools, objects, and cultures around the world are constantly changing. Technology will keep advancing, and while design principles continues to remain unchanged, their methods of application must adjust to new human activities, new technologies and new forms of communication and interaction (Norman, 1988). Therefore, the source of creativity for cultural products is the culture of daily life. Design is a creative behaviour that involves the reinterpretation of cultural meaning, followed by the extraction of inspiring cultural elements, and the use of design techniques to creatively transform these cultural elements into new forms that are meaningful to modern life, thereby integrating with modern lifestyle and satisfying the spiritual needs of consumers. Hence, through the cultural meaning of collective memories, designers can express their creative ideas to inspire consumers, and give purpose to their creative activity (Lin, 2014). To this end, the model for adding value to the character "fu" ( 福 ) paper-cutting involves 3 levels of attribute transfers, namely external transfer, functional transit, and internal transformation. Through such cultural value-added methods, cultural aesthetics can be specifically applied into everyday applications and meet the needs of modern living.

## 2. "Fu" Paper-cutting and Combination Rules

Traditional Chinese paper-cutting is a form of auspicious representation. Its implied cultural significance is not only expressed in the spoken language, but also in the propitious combination of "word" ( 言 ) and "image" ( 象 ) where "the image must be meaningful, and the meaning must be auspicious" ( 言必有意, 意必吉祥 ). Paper-cutting is built upon a profound cultural foundation that reveals a cultural connotation and philosophy that consummate the artistic creation. The character "fu" ( 福 ) is classic in paper-cutting. In the book *Shuowen Jiezi* ( 说文解字 ), Hsu pointed out that the character "fu" ( 福 ) means "bei yeh" ( 备 禘 , sacrificial ritual), and refers to "ji tong yue" ( 既 禘 絜 粢 ), a sacrificial litany. In the Offerings of the Sage, the virtuous will be protected and their sacrifices blessed by the gods. Therefore the significance of making sacrifices is to receive protection and blessing from the gods. The Chinese forefathers believed that happiness is granted by Heaven and their ancestors, and therefore they should offer sacrifices to their ancestors. Such a concept is visible in the construction of the character "fu" ( 福 ), where the

"Shih"( 尸) radical on the left represents the shrine, altar, and other sacrificial concepts while the early form of "fu"( 𠃉) on the right represents respect and ladle type wine vessels. The act of offering up the "fu"( 𠃉) with a pair of hands and pouring wine into the altar represents "chi fu" ( 𠃉, praying for blessing). To this end, when virtuous or accomplished individuals are protected through sacrificial worship, they are blessed with manifestations of happiness and the common people are in turn protected. Hence the expression "wu fu" ( 𠃉, five blessings), namely longevity, wealth, health, love of virtue, and natural death describes the five greatest blessings of living a long and successful life of wealth, health and well-being, good deeds, and dying a natural death. The character "fu" ( 𠃉) is also similar in pronunciation to "fu" ( 富, wealth), and hence symbolizes riches and honour, good fortune, and happiness. Evidently, in addition to the original meaning of wealth and longevity, it defines the meaning and hope of supplication, warding off evil, happiness, and bliss.

The paper-cutting culture is particularly significant in that collective rules are formed through cultural heritage. Tao (2003) believes that the rules generated from mascots are derived from (1) Homophonization ( 同音): Homophonic Chinese characters are primarily used as paper cutting themes by utilizing the Chinese characters feature of having the same sound but different meaning to illustrate unique themes in a pattern. For example, the character "fu" ( 福, blessing) has the same pronunciation as the character "fu"( 蝠, bat) pattern. The "fu" ( 福) in the centre surrounded by 5 bats implies "wu fu lin men" ( 𠃉, May fortune descend on your household) and blessings; (2) Representation ( 象形): Meanings are drawn from animal and plant attributes and object shapes. For example, the continuity and incessancy of seawater represents peace and eternity; (3) Demonstration ( 指事): Images and artistic manifestation are derived from familiar and specific logic. For example, ancient "qian" ( 钱, money) represents wealth and honour, and assonates with "qian" ( 前, front) while "fu"( 福) represents "fu qi" ( 福, blessings); hence "fu zai yan qian"( 福在眼前, Blessings before the eyes) represents an abundant wellspring of wealth; (4) Association ( 借代): The meaning in a pattern is borrowed from inspiring tales told by storytellers. For example, the "Si fu" ( 四福, blessing) held in the hands of the heavenly "Caishenyeh" ( 财神, the god of wealth) is a metaphor for "tian gong si fu" ( 天公四福, blessings from heaven and good fortune); (5) Integration ( 综合): Formed by a combination of multiple auspicious elements, the pattern becomes even richer in meaning. For example, as shown in Fig. 1, the pattern combination of the rooster, sun, and bamboo is a metaphor for "yi ming jing ren" ( 一鸣惊人, amazing the world with a single brilliant feat), indicating dazzling career and academic success.

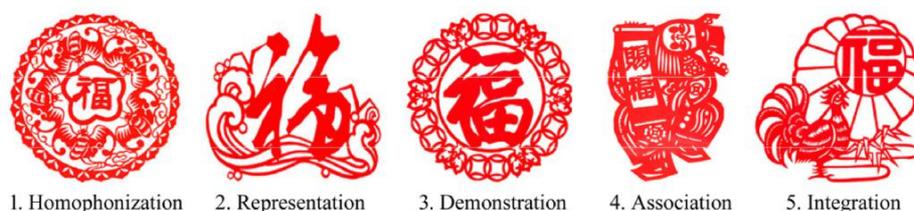


Figure. 1: Paper-cutting rules

## 2.1 Transfer of Cultural Attributes in Paper-cutting

Culture is a common form of life among humans while history is their common memory. In terms of cultural and creative thinking, creativity is the pursuit of consumer inspiration and recognition through transfer of cultural meaning. Therefore, cultural creativity that can reflect common life experiences and common historical memories is most likely to inspire consumers. Hence, a redefinition of design must include a return to cultural thinking. Early design development emphasized the principle of randomness in form, but the contemporary contention of hundreds of schools of thought is that product design is no longer about function and shape, but should be committed to cultural heritage and preservation. Moreover, innovation has always been the driving force of economic growth, and the threshold for technical opportunities has become increasingly low. The challenge of innovation is not the discovery or development of technologies, but the adding of value to these technologies, which is, finding the most meaningful application. Design-driven innovation is precisely a method for adding value and meaning to technology. It emphasizes the creation of more meaningful products and services, and such a pursuit is facilitated by new technologies (Verganti, 2009). As such, in the creation of cultural products, cultural elements inherent in cultural objects must be re-examined and reconsidered, and through design, transferred into new forms that are consistent with the modern era. Moreover, how the use of such objects can facilitate psychological satisfaction should also be explored (Lin, 2004).

Leong and Clark (2003) proposed a three-level design framework for a comprehensive theory of value-added cultural design, namely the external level, intermediate level and inner level. Hsu (2004) delineated three attributes of cultural design, which Lin (2007) summarized as (1) External or appearance level, including colour, texture, shape, surface motifs, lines, detailed treatment, and other structural relationship; (2) Intermediate or behavioural level, including function, operability, ease of use, safety, and associations; and (3) Internal or psychological level, including special product meaning, product story, product sentiment, and product cultural features. Norman (2004) believes that design must include the following three levels: visceral level, behavioural level, and reflective level, and corresponding product attributes are: (1) Instinctive design: appearance, which includes product appearance, touch and feel; (2) Behavioural design: the use of fun and utility, including functionality, performance, and ease of use; and (3) Reflective design: self-image, personal satisfaction and memory, including feelings, emotions and cognition.

In summary, contemporary product designs must not only meet the functional needs of consumers, but must also predict user mood when using the product. By creating possible scenarios based on product meaning, designers can quickly deduce the information actually needed by users and add value to the product design. In addition to aesthetic appearance, product function must also satisfy behavioural needs in order to create an innovative product that is rich in content, convincing, and fascinating. Through such innovation, culture can be deeply embedded into a product to create meaning and depth in its basic application, and a comprehensive method and framework for cultural product design can be constructed.

### 3. Transferring the "Fu" Character into Cultural Product Design

Through literature review, this study examined combination rules in traditional paper-cutting, and analysed the significance of the shape and meaning of the character "fu" (福). By using attribute transfer to add value to a cultural product design, a model is constructed for the cultural transfer of "fu" (福) in paper-cutting. The design process comprises two major steps: analysing the combination rules and character meaning in the paper-cutting, followed by adding value according to attributes to complete the cultural product. First, paper-cutting rules are analysed and the cultural level clarified. Second, the meaning of the character "fu" (福) is analysed. Here, product cultural level is analysed according to appearance and philosophical meaning. Third, individual attributes are transferred to the products. In this process, after the character "fu" (福) is analysed and the individual attributes transferred, product characteristics are distinguished and value added through design, and finally the cultural products are constructed. All the components of the design framework serve to establish the benchmarks for paper-cutting rules, determine the features and cultural characteristics of the character, and through transferring the characteristics to product attributes, complete the design cycle of value-added cultural products. In other words, the cultural product is created within a cognitive product design framework that comprises methods and order, as shown in Fig. 2.

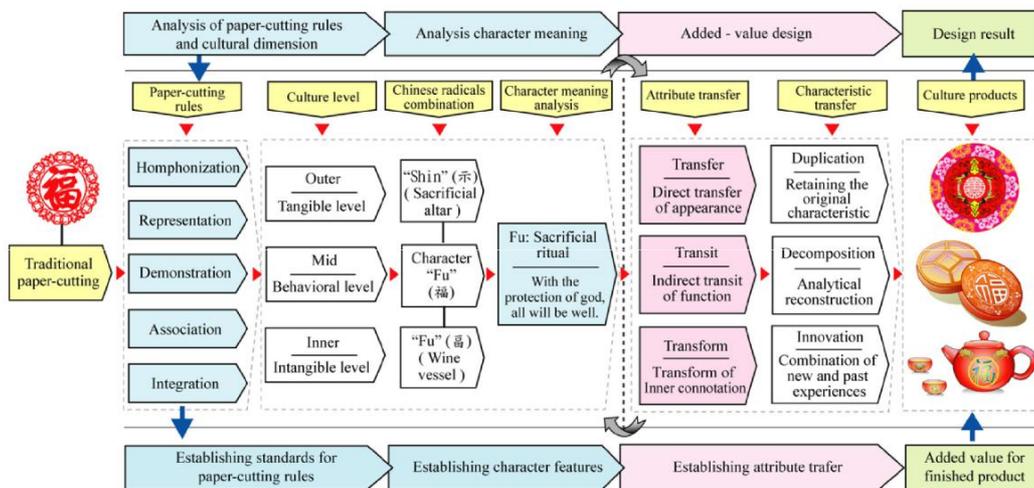


Figure. 2: Product design model for the cultural transfer of the character "fu" (福).

#### 3.1. Tangible Level Transfer

Tangible level transfer is an application of outer shape. Creators select or reorganize their thinking based on attributes such as shape characteristics, colour meaning or lines, and then create value-added design that reveals a new dimension. Zuo (1998) points out that in Chinese folk art, the circle is an important feature representing perfection, that is, successful conclusion, completeness and happiness. Objectively, it reflects the perfection of the universe. This concept has become the psychological ideal of completeness, and hence folk art emphasizes successful

conclusion and completeness in its pattern features, and paper cutting is one such example. Therefore, transferring the circle into product characteristic to fulfil human hope for perfection is likely the most symbolically meaningful form of expression.

The appearance combination of the character "fu" (福) can be divided into two parts: First, in terms of shape, the character is a symmetrical. The radical on the left, "shih" (示), is associated with the altar or celestial sacrifices while the "fu" (畺) on the right is related to wine vessels and people. Second, in terms of righteousness, using two hands to offer up wine to the altar signifies praying to the heaven for success and protection from disaster. To this end, conceptualizing design transfer to products at the tangible level is divided into four parts:

- (1) External features: Commanding the circular dish shape to manifest the feature of perfection;
- (2) Colour and space: Alternating red and yellow to deliver a visual sense of auspicious feature;
- (3) Design presentation: Centrally positioned and balanced form illustrates harmony and complement; and
- (4) Connotation: Using "liang" (兩, two) and patterns to connote the merging of two into one. In the dish, the "fu" (蝠) as in the two bats, "bian fu" (蝙蝠), and the "fu" (福) as in the character for blessing, are homophonic. Their circular and symmetrical arrangement with the character "shou" (壽, happiness and longevity) in the middle is derived from the expression "fu shou shuang chuan" (福壽雙全, blessed with both happiness and longevity). It is a contemporary sacrificial dish showing a design that expresses complete perfection, as shown in Fig. 3.

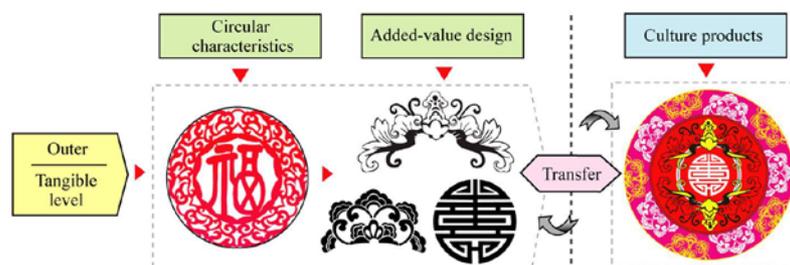


Figure. 3: External transfer of perfection into product design.

### 3.2. Behavioural Level Transit

In behavioural level transit, user behaviour becomes the indirect mid-level application. The creator analyses or re-deconstruct product function, convenience, and safety to achieve product transformation. Hollows are the most important feature in paper-cut silhouettes. Hollows are cut or carved out of paper to create connected and unbroken positive lines and connected and unbroken negative lines. Such rule is foundational in paper-cutting because a fragmented, incomplete pattern is imperfect. In paper-cutting, the pattern structure must be compact and neither disjointed nor messy, and the components must be simple and evenly laid out. Uniformity must be found in variation; rhythm in balance, and accord in symmetry so that the pattern is not fragmented and remains complete and beautiful (Bao, 1999). To this end, in the structure design of paper-cutting, the centre of the pattern must first be found, then aligned with the centre of the paper to achieve the best and most representative result. Then through folding and cutting, a complete hollow pattern is obtained, thereby achieving the

design goal. Hence, in paper-cutting, centrality, smoothness, and stability are important in the structure design, and its basic structure must remain intact and unbroken regardless of the number of cuts. Therefore, in transferring paper-cutting to a product design, hollow but connected patterns and balanced negative and positive lines are the most important characteristics that should be manifested.

In the product function level, design transfer can be divided into four parts: (1) First, external features: Understanding the circular shape of the candy box to show the integrity of the product; (2) Colour and space: using rich colours and openwork lid to display product features; (3) Component display: Configuring the character "fu"(福) in the middle of the hollow and coordinating with the 5 bats to create a balanced pattern that demonstrates a balance between the negative and positive; and (4) Connotation: Manifesting meaning using a candy dish with five "fu" (幅, pieces) of compartments, which is the homophonic of "fu" (富, wealth), arranged in a circular fashion. In addition to signifying "wu fu" (五福, five blessings), with the character "fu" (福) on the openwork lid, the act of taking snacks or sacrificial objects from the dish means receiving the five blessings, and is a contemporary design on a candy to symbolizes success and good fortune, as shown in Fig. 4.

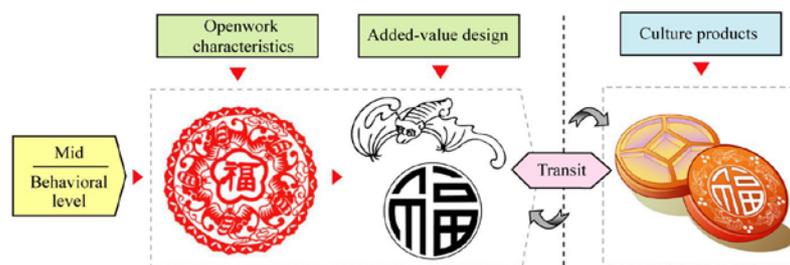


Figure. 4: Functional transit of openwork into product design.

### 3.3. Intangible Level Transform

Intangible level transformation is the application of inner spiritual meaning, and the focus is on the resulting combination of new and old significance, story, or cultural features. The concept of auspicious is central to paper-cutting, and the implied culture is deeply influenced by traditional Chinese culture thoughts, which affect artistic connotation and manifestation. In addition to perfect form, the pursuit of techniques for creating images is even more important, and methods that demonstrate "zhong he" (中和, compromise and harmony) are used to convey aesthetic consciousness. Peng (2007) points out that in Chinese art, "zhong" (中, compromise) is a principle for correctly dealing with contradictions, and is both a standard and method; "he" (和, harmony) refers to uniting diversities or oppositions, and is both a state of form and mechanism for achieving complete harmony and unity. In ancient wisdom, everything comes in two, such as yin (阴) and yang (阳), false and true, hard and soft, and inverse and converse. In fact, everything is characterized by opposite and complementary attributes that

are both connected and mutually dependant, where "one becomes two"( ), and "two becomes one"( ). An overall aesthetic sense of fullness, wholeness, completeness, and brilliance is pursued, while in pattern structures, uniformity, symmetry, perfection and completeness are emphasized, and irregularity and brokenness are taboo. Most pictures are in pairs because symmetry and even numbers engender peace and perfection. In terms of colours, red, gold, and yellow are commonly used by the people while lines used are clean, simple, vibrant, rhythmic, and regular (Tong, 1996). Therefore, to connote auspiciousness, designs should focus on transferring spiritual harmony and health to product design.

Our forefathers had absolute imagination and awe for the infinite universe, and so respectfully offer supplications to the heaven and unknowns using articles or food. "Zun" ( , wine vessels) were receptacles used by the ancients in their worship and supplication, and corresponding product used in modern sacrifice is the "hu" ( , pot), where the integration of external and functional features becomes foundational to overall transfer. The transfer in product design can be divided into four parts: (1) External features: Understanding the round shape of the pot to construct the external appearance, and using openwork in the body of the pot to manifest perfect auspicious characteristics; (2) Colour and space: The configuration of red, yellow, and white portrays a visual perception of auspiciousness; (3) Component display: The character "fu" ( ) in the middle configured with ancient money produces a symmetrical and smooth pattern; and (4) Connotation: The combining of "hu" ( , pot) and "bei" ( , cup) represents the uniting of two objects into one. At the same time, "hu" ( , pot), "fu" ( , blessing) and "fu" ( , wealth) are homophonic, and imply wealth. The addition of the character "fu" (blessing) and ancient money further connotes "fu zai yan qian" ( , fortune or happiness before one's eyes, implying blessing), and also transforms the pattern into a contemporary pot for practical and sacrificial use, with a design that symbolizes auspiciousness, bliss, and plentiful sources of wealth, as shown in Fig. 5.

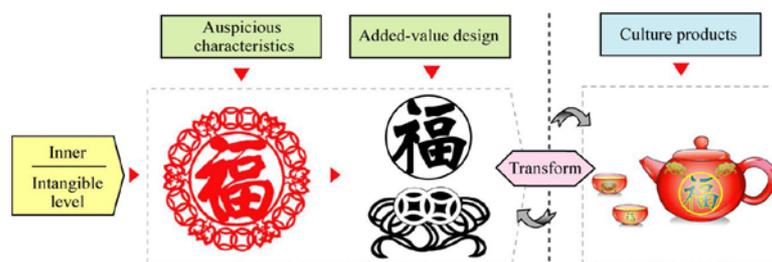


Figure. 5: Intangible level transfer of auspiciousness into product design.

#### 4. Conclusion

In this paper, the traditional paper-cutting of the character "fu" ( , blessing) is used as a framework for conceptualizing design. A design model with the transfer of three levels of

attributes to products is also used to demonstrate the meaning and characteristics of cultural products, and the following conclusions are made:

**(1) External Transfer:** A circular shape represents completeness and no defect, and symbolizes perfection and absolute auspiciousness. To this end, transfer is based on the perfection of external features. The shape and meaning of the character "fu" (福) in paper-cutting are closely tied to human supplication for success. Hence, using the circular shape of a dish, the two bats evenly configured around the circularly shaped character "shou" (寿, longevity) constitute the basic external thematic pattern for product transfer. In addition, the primary use of red colour emphasizes the auspicious symbol, and the merging of two into one in the pattern configuration manifests the absolute "fu shou shuan chuan" (福寿双全, complete in both blessing and longevity) symbol of perfection in the cultural product design.

**(2) Functional Transit:** The hollow feature with unbroken and connected lines is the greatest characteristic of paper-cutting while the character "fu" (福) is closely associated with the utensils used in sacrifices and worship. Hence, the design is applied to the candy dish which have both sacrificial and practical uses. The five "fu" (幅, pieces, homophone with "fu" 富, wealth) are the compartments in the candy dish, and are arranged in a circular pattern to imply "wu fu" (五福, five blessings). In addition, the auspicious colour, the main use of the character "fu" (福) on the lid, which is laid in openwork characterized by hollows and complements of negative and positive, are smoothly and symmetrically integrated. In addition to using the dish for snacks or sacrifice and the connotation of receiving the "wu fu" (五福), the specific application of the silhouette cutting of human philosophy into the design allows for better appreciation of the cultural imagination and fun in a culturally meaningful contemporary candy dish design that exhibits success and good luck.

**(3) Internal Transform:** Traditional thinking in Chinese culture is characterized by the common psychological phenomenon of auspiciousness. Our ancient forefathers had absolute imagination and awe for natural phenomena and celestial bodies that affect everyday life, and "chi fu" (祈福, praying for blessings) became a psychological assurance for their hope of success and protection from bad luck. Therefore in the transfer of designs to auspicious pots for sacrificial or practical uses, the external shapes are round to symbolize perfection and auspicious colours are also used to create a sense of visual psychology. In the pattern design, the character "fu" (福, blessing) in the middle configured with ancient money produced a symmetrical, smooth, and solid structure. On the body of the pots, the openwork negatives and positives characterizing paper-cutting are used to demonstrate the ultimate brilliance of the product. The product combines "hu" (壶, pot) and "bei" (杯, cup) to convey the uniting of two objects into one. At the same time, "hu" (壶), "fu" (福), and "fu" (福) are homophonic, and thus not only imply wealth and honour, but with the pattern combination of the character "fu" (福) and ancient money, also creates the vision of "fu zai yan qian" (福在眼前, fortune or happiness before one's eyes).

Overall, the form and content in paper-cutting are dominated by Chinese philosophy and transmit cultural aesthetics into everyday application. However, the circle represents the psychological hope for perfection, and hence the birth of the character "fu" (福). Whether divided into two parts or merged as one, the font remains aesthetically balanced in its symmetry or complements of negatives and positives. The seemingly complex paper-cut patterns nevertheless conform to the rule of seeking similarities among differences. Such conceptualization simplifies the complex, and allows for ease of completing the creation. The invariable dual relationship of yin (阴) and yang (阳) or complement and opposition is the most concrete demonstration of the principle of compromise and harmony. Its absolute wisdom also made it the highest rule and thought pursued in traditional Chinese culture and art.

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