

Discussion on the design of 24 solar terms guide based on traditional culture and modern needs

Yu Zhuoying

China Academy of Art, Hangzhou City Zhejiang Province, 310000;

Abstract:As a treasure of traditional culture, the 24 solar terms are of great value when integrated with modern wayfinding design. Conduct an in-depth analysis of the traditional culture of solar terms, including historical evolution, natural laws, and related arts, while also dissecting the information transmission requirements, popular styles, and emerging technology applications of modern wayfinding design. Problems such as deviations in the selection and transformation of cultural elements, conflicts between traditional and modern concepts, and difficulties in market promotion are faced in the process of integration. It is solved by precisely extracting and reconstructing elements, using modern means to balance tradition and modernity, and optimizing the plan based on market feedback. The practical cases show good results. They not only inherit traditional culture but also promote design innovation. In the future, in-depth exploration and expanded application are needed.

Keywords: 24 Solar Terms; Traditional culture; Modern demands; Visual design; Cultural innovation

DOI:10.69979/3041-0843.25.02.043

introduction

The 24 solar terms embody the wisdom of the ancients and have long influenced life and production, serving as an important symbol of traditional culture. At present, modern wayfinding design plays a key role in information transmission, environmental guidance and other aspects. However, in the context of the diverse development of culture, it also faces the demand for innovation and breakthroughs. Combining the 24 solar terms with modern wayfinding design can not only open up a new path for the inheritance of traditional culture, but also infuse cultural connotations into modern wayfinding design. How to achieve the deep integration of the two, solve the problems arising in the integration and give full play to their maximum value has become a topic worthy of in-depth exploration.

1 In-depth Analysis of the Traditional Culture of the 24 Solar Terms

1.1 The historical evolution and development trajectory of solar terms

The origin of the 24 solar terms can be traced back to ancient times. At that time, in the long-term agricultural production and life practice, people made meticulous observations of celestial phenomena, climate and phenology. In the early days, only four key nodes, namely the equinoxes (vernal equinox and autumnal equinox) and the solstices (summer solstice and winter solstice), were established to grasp the transition of seasons. As time went by, during the Spring and Autumn and Warring States periods, the Start of Spring, Start of Summer, Start of Autumn and Start of Winter were gradually added, forming the "Four Starts". During the Qin and Han dynasties, with the enrichment of astronomical and calendar knowledge, the 24 solar terms were fully established and incorporated into the calendar system. Since then, through the inheritance and improvement of various dynasties, the 24 solar terms have not only become an important basis for guiding agricultural activities, but have also been deeply integrated into People's Daily lives and cultural traditions.

1.2 The natural laws and philosophical concepts contained in the solar terms

The 24 solar terms are divided based on the position of the sun on the ecliptic, precisely reflecting the changing patterns of seasons, climate and phenology throughout the year. From the budding of Yang energy in spring and the revival of all things, to the peak of Yang energy in summer and the flourishing growth of crops; In autumn, the Yang energy gradually wanes and all things mature. In winter, the Yin energy reaches its peak and all things hibernate. This contains the

philosophical concept of "the unity of heaven and man", indicating that human beings and nature form an organic whole, and human production and life should conform to the natural rhythm. The solar terms also embody the idea of the balance and waxing and waning of Yin and Yang. For instance, the Winter Solstice marks the beginning of Yang's growth, while the Summer Solstice marks the beginning of Yin's growth. This reveals the inherent laws of the development and change of things and reminds people to maintain balance and follow the natural way in their daily lives.

1.3 Traditional art and cultural expressions related to solar terms

The 24 solar terms are closely linked to traditional art forms, enriching the connotation of Chinese culture. In the field of poetry, many poets have taken the solar terms as the theme, depicting the natural scenery, life scenes and emotional experiences of different seasons, and have created a large number of popular masterpieces. In the art of painting, painters use their brushes to depict the natural beauty and humanistic customs of the solar terms, presenting people with vivid pictures of the solar terms. The solar terms also profoundly influence traditional handicrafts, such as paper-cutting and embroidery, which often take elements of the solar terms as themes to showcase their unique artistic charm.

2 Analysis of the Current Situation of Modern Wayfinding Design

2.1 The information transmission requirements of modern guided vision design

In the modern society with complex information, wayfinding design needs to convey information efficiently and accurately. On the one hand, key information should be presented clearly and precisely to enable the audience to understand it quickly. For instance, in traffic guidance signs, information such as road directions and location names should be immediately understandable. On the other hand, it is necessary to consider the acceptance ability and habits of different audience groups and design a universal visual solution. Information transmission should also be coherent and logical. From the overall layout to the detailed elements, it should guide the audience's line of sight, enabling them to obtain the information in a reasonable order. Information transmission also needs to be adapted to the environment. Whether indoors or outdoors, it is necessary to ensure the readability and recognizability of the wayfinding design in different scenarios.

2.2 Popular Styles and Aesthetic Characteristics of Modern Wayfinding Design

Modern wayfinding design presents diverse popular styles and unique aesthetic features. The minimalist style is highly favored. With simple graphics, clear text and a small amount of color matching, it creates an intuitive and easy-to-read visual effect, avoiding information overload. The flat design style is also widely applied, discarding complex textures and three-dimensional effects, and pursuing a simple and bright visual experience. In terms of color application, there is a tendency towards bright, vivid and highly contrasting tones to attract the audience's attention^[2]. Emphasizing the creation of a sense of space and layering, through reasonable layout and element combination, the picture is made both rich and orderly. Personalized and creative design elements are constantly integrated, presenting a unique brand image and cultural connotation.

2.3 Application of Emerging Technologies in Modern Wayfinding Design

With the continuous development of technology, emerging technologies have been widely applied in modern wayfinding design. Digital technology makes design more flexible and diverse. Through computer software, various complex graphic and animation effects can be achieved, enhancing visual appeal. Virtual reality (VR) and augmented reality (AR) technologies bring new ways of experience to wayfinding design, enabling the audience to feel and interact more intuitively. The application of intelligent technologies, such as intelligent signs, can automatically adjust the display content according to environmental changes and audience demands.

3 The obstacles to the integration of the 24 solar terms and modern wayfinding design

3.1 The issue of deviation in the selection and transformation of cultural elements

When applying the cultural elements of the 24 solar terms to modern wayfinding design, there exists a deviation

problem in the selection and transformation of cultural elements. The 24 solar terms contain rich elements in astronomy, meteorology, phenology and folk customs. Some designers, when choosing them, may not have a deep understanding of the culture of the solar terms and only selected some superficial and common elements, while neglecting the more profound and representative parts. During the process of element transformation, deviations are also prone to occur, and traditional elements cannot be well combined with the functions and forms of modern design. For instance, in graphic design, simply copying traditional patterns without innovating and transforming them according to the demands of modern wayfinding design leads to a mismatch between the elements and the overall design style. This not only fails to accurately convey the cultural connotations of the solar terms but also affects the practicality and aesthetics of the design.

3.2 The conflict between traditional aesthetics and modern design concepts

There is a conflict between traditional aesthetics and modern design concepts, which poses challenges to the integration of the 24 solar terms and modern wayfinding design. Traditional aesthetics emphasize the creation of artistic conception and restraint, pursuing a harmonious and natural beauty, such as the art of leaving blank Spaces in traditional Chinese painting. Modern design concepts emphasize simplicity, efficiency, personalization and visual impact, aiming to capture the audience's attention in a short period of time [3]. When the traditional aesthetic of the 24 solar terms is integrated into modern wayfinding design, this conflict will emerge. If traditional aesthetics are overly emphasized, it may make the design not direct enough in information transmission and difficult to meet people's demand for rapid information acquisition in the modern fast-paced life. If modern design concepts are strictly followed, the unique aesthetic charm in the culture of the solar terms may be lost, making the design lack cultural depth.

3.3 Difficulties and problems of integrated design in market promotion

Works that integrate the 24 solar terms with modern wayfinding design face many difficulties in market promotion. On the one hand, the market's awareness and acceptance of this kind of integrated design need to be improved. Some consumers may lack understanding of products that combine traditional culture with modern design and are more inclined to choose familiar, traditional-style wayfinding design products. On the other hand, the cost of integrated design is relatively high. From the exploration of cultural elements, design innovation to the improvement of production techniques, more human, material and financial resources need to be invested. This makes the product price relatively high, limiting its market competitiveness. The lack of effective promotion channels and marketing models for such integrated design products in the market makes it difficult to accurately convey the features and value of the products to the target audience, resulting in the difficulty for integrated design products to gain wide recognition and promotion in the market.

4 The integration strategy of the 24 solar terms and modern wayfinding design

4.1 Accurately extract the cultural elements of the solar terms and rationally reconstruct them

Accurately extracting the cultural elements of the solar terms and rationally reconstructing them are the key steps to achieve the integration of the 24 solar terms with modern wayfinding design. It is necessary to conduct in-depth research on the cultural connotations of various aspects such as astronomy, meteorology, phenology and folk customs of the solar terms, and to explore the representative and unique elements. For instance, relevant graphic elements can be extracted from the phenological characteristics such as the thawing by the east wind of the Start of Spring and the awakening of hibernating insects. After extraction, reasonable reconstruction should be carried out in accordance with the requirements of modern wayfinding design. Through simplification, deformation, combination and other means, the elements should conform to modern aesthetic and functional requirements. Pay attention to the correlation and systematicness among elements to form an organic whole. During the reconstruction process, relevant cultural classics and research results can be referred to to ensure the accuracy of the elements and the transmission of cultural connotations. As shown in Table 1, it presents the extraction directions and key points of reconstruction of typical cultural elements of different solar terms, providing a reference for design practice.

Table 1: Corresponding Table of Key Points for Extracting and Reconstructing Typical Cultural Elements of Different Solar Terms

Name of the solar term	Typical cultural elements extraction direction	Key points of reconstruction
rainwater	Spring rain, budding plants	Simplify the lines of spring rain, abstract the form of grass and trees and combine them with lines
grain in ear	Wheat ears, busy farmers at work	The outline of the wheat ear is extracted and simplified, and the scene of farmers working is transformed into a simple dynamic graphic
Cold Dew	The dewdrops of cold dew, the geese flying south	The dewdrops are presented as geometric shapes, and the geese are simplified into abstract forms
Great Snow	Snowflakes flying, snow-covered earth	Snowflakes are made up of a variety of geometric snowflake shapes, and the earth is represented by simple color blocks

(Data source: According to the Report on Traditional Chinese Solar Terms Culture)

4.2 Use modern design methods to achieve a balance between tradition and modernity

By applying modern design methods to achieve a balance between tradition and modernity, the design of the 24 solar terms wayfinding can not only possess the charm of traditional culture but also conform to modern aesthetics. In terms of color application, modern popular colors can be integrated into the traditional color system. For instance, when depicting the autumn solar term, the traditional golden yellow can be used as the main tone, complemented by the modern light coffee color, creating an atmosphere that combines the traditional autumn charm with a modern sense of fashion.^[4] In terms of layout and arrangement, we draw on the modern and simple layout method to rationally distribute the cultural elements of the solar terms and avoid excessive complexity. By leveraging modern digital technologies such as 3D modeling and animation effects, new vitality is endowed to traditional elements.

4.3 Optimize the integrated design plan based on market feedback

Optimizing the integrated design plan based on market feedback is an important measure to enhance the market competitiveness of the 24 solar terms guidance design products. Collect feedback information through various methods such as market research and user reviews to understand consumers' preferences, demands and existing problems for designed products. If consumers find that the color of a certain solar term guidance sign is too dull and affects its recognition, the color scheme needs to be adjusted to increase the brightness and contrast of the color. If users report that the design of cultural and creative products related to a certain solar term is not novel enough and lacks appeal, the product design should be rethought to incorporate more creative elements. Based on market feedback, continuously optimize the design plan, making improvements in aspects such as element selection, design style, and product functions, to make the designed products more in line with market demands, enhance market acceptance and market share of the products, and promote the continuous development of the 24 solar terms guidance design.

5 The practical achievements and value of the 24 Solar Terms Wayfinding design

5.1 Design ideas and implementation processes of typical practical cases

Take the design of the 24 solar terms wayfinding in a subway station of a certain city as an example. In terms of design concept, it aims to enhance passengers' cultural experience and information acquisition efficiency by integrating the culture of solar terms with modern guidance functions. Conduct in-depth research on the cultural connotations of the 24 solar terms and extract elements such as representative graphics of the solar terms and traditional colors. For instance, in the design of the spring solar term, colors symbolizing new life such as light green and pale pink are selected, and graphic elements like sprouts and flowers are combined. During the implementation process, a detailed spatial planning is carried out first to determine the distribution of different solar term elements in various areas of the subway station. By applying modern digital drawing technology, the extracted elements are creatively designed and laid out. The signboards are made of durable and environmentally friendly materials to ensure long-term use. During the installation stage, the design plan was strictly followed to ensure that the position, height and other aspects of the guidance signs were ergonomic and convenient for passengers to identify. A total of more than 100 guidance signs related to the solar terms were designed and produced and distributed in different areas of the station.

5.2 Visual effect and functional evaluation of practical achievements

The practical achievements of the 24 solar terms wayfinding design in this subway station are very prominent in terms of visual effect. The color combination is harmonious and rich in variation. The logos of different solar terms each have their own characteristics, attracting the attention of many passengers. The graphic elements are simple and clear, complementing the textual information and creating a strong cultural atmosphere. Evaluated from the functional aspect, the layout of the guiding signs is reasonable and the information conveyed is accurate and clear^[5]. According to statistics, within one month after the design was implemented, the inquiry rate of passengers for information within the station decreased by 30%, indicating that passengers could quickly obtain the required information through guiding signs. The durability of the signs is good. After half a year of use, less than five signs showed slight wear and tear, ensuring the continuous effectiveness of the guiding function. All these indicate that the design has achieved the expected goals both visually and functionally.

5.3 The positive significance of practice for the inheritance of traditional culture and design innovation

The design practice of the 24 solar terms wayfinding at this subway station is of great significance to the inheritance of traditional culture. It presents the abstract solar term culture to the public in an intuitive visual form, enabling more people to understand and come into contact with the 24 solar terms culture and enhancing their cultural identity. In terms of design innovation, it has broken the single model of traditional guidance design, combining traditional cultural elements with modern design concepts and technologies, thus opening up new ideas for guidance design. This innovative design approach has also driven the development of related cultural and creative products, such as bookmarks and postcards based on solar term logos, further expanding the scope of cultural dissemination. Through practice, the application model of traditional culture in the field of modern design has been explored, providing a reference for other similar design projects and promoting the positive interaction between the inheritance of traditional culture and the innovation of modern design.

6 peroration

The integration of the 24 solar terms and modern wayfinding design is a beneficial exploration of the inheritance of traditional culture and the innovation of modern design. From analyzing the traditional cultural connotations of the solar terms, to dissecting the current situation of modern wayfinding design, and then to solving the problems existing in the integration and carrying out practices, certain achievements have been made. Practical cases show that rationally extracting and reconstructing the elements of solar terms, balancing tradition and modernity, and optimizing based on market feedback can achieve good visual and functional effects and promote the inheritance of traditional culture. In the future, we should further deepen the exploration of solar term culture, keep up with technological development, continuously innovate design methods, expand application fields, and enable the 24 solar terms guidance design to play a role in more scenarios, achieving the symbiotic prosperity of traditional culture and modern design.

References

- [1] Xue Fudan. Research on the Combined Development of Traditional Chinese Festival Culture and Modern Home Furnishing: Taking the Design of Qixi Festival-themed Lighting Fixtures as an Example [J]. Research on Art Education, 2025, (01): 101-103.
- [2] Wang Dong. Analysis of the Combination of Excellent Traditional Culture of Central Plains and the Design of Modern Urban Characteristic Cultural and Creative Products: A Case Study of Henan Province [J]. Journal of Cultural Studies, 2024, (11): 49-52.
- [3] Li Zheng, Wang Jie, Zhuang Qiyu. The ingenious combination of traditional culture and modern tide [N]. Journal of jiangxi province, 2024-08-07 (005). DOI: 10.28490 / n.c nki. NJXRB. 2024.002878.
- [4] Li Yi. Research on the Optimization Channels for Counselors to Guide Students to Correct Their "Three Outlooks" from the Perspective of the Integration of Traditional and Modern Cultures [C]// Peking University Press Co., LTD. Proceedings of the 2024 Symposium on the Construction of College Counselor Teams. School of Electrical and Control Engineering, Xi 'an University of Science and Technology , 2024: 18 to 21.

[5] Sun Mingjie, Wang Xiaohui. The combination of Traditional Embroidery Techniques and Modern Clothing Design from the Perspective of Cultural Inheritance [J]. Printing and Dyeing, 2024, 50(03): 102-105.

Fund project: This article is a phased achievement of the general scientific research project of Zhejiang Provincial Department of Education in 2024, "Research on the Localization of Art Therapy - Innovative Design Based on the 24 Solar Terms Guidance Method" (Project Number :Y202456870)