

Evolution of Color Concepts in Interior Design During the Republican Era: A Case Study of Urban Families in Shanghai

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Abstract: This paper investigates the transformation and reasons behind the changing color concepts in the interior design of Chinese households during the Republican era. Given its early influence, the rise of Shanghai was nearly synchronous with China's modernization process, making it an excellent case study for understanding the urban and residential environment changes in modern China. By focusing on urban households in Shanghai, this study employs a combination of literature interpretation and comparison of relevant publications from the Republican era, as well as analysis of designers' concepts and works. It explores the variations and underlying reasons for the color concepts in urban home decor during this period, shedding light on the mutual influence of Chinese and Western decorative design ideas. By offering a specific and nuanced perspective, this research contributes to the comprehension of the transformation and development of modern interior design in China. The findings reveal an unprecedented emphasis on color attributes within the interiors of urban households during the Republican era. Local intellectual elites summarized the traditional color palettes of interior spaces and systematically investigated aspects such as the relationship between color and spatial arrangement, the impact of color on occupants' emotions, and the introduction of Western scientific color systems. These efforts resulted in significant breakthroughs and advancements in the traditional color paradigms. Amidst this transformative period of color concepts, indigenous intellectual elites, designers, relevant publications, and shifts in spatial perception played pivotal roles. Additionally, the influence of professional interior decorators and artists arriving from Europe and America to Shanghai also proved to be instrumental in driving these changes.

Keywords: Twentieth Century, China, Home Decoration, Colour, Evolution of Concepts, Reasons

1. Introduction

The modernization of interior decoration and architecture in China was initiated almost simultaneously in the 1920s and 1930s, [1] driven by factors such as foreign imitation, domestic emulation, the promotion of local reformists, and the introduction of Western materials and scientific technologies. [2] In recent years, this transitional period has gradually gained attention in the field of interior design history. [3] However, current scholarly research primarily focuses on interior furnishings, spatial layouts, decorative materials, and furniture design, particularly new materials and modern furniture. While the visual impact and significant intervention of color in interior spaces are widely recognized, there is a

scarcity of discussions on the conscious and conceptual aspects of color in the interior decoration of the Republican era. Although there have been some targeted studies, such as the restoration of interior colors based on Republican-era films or the analysis of color characteristics in preserved spaces through instrument measurements, it is challenging to accurately depict the original color appearance from old films, and preserved spaces may not truly reflect the color features of the Republican era due to the passage of time or subsequent repairs.

Furthermore, research solely conducted at the data level, although facilitating quantitative descriptions of color and presenting numerical trends, often fails to uncover the underlying social and cultural transformations and shifts in

color concepts. As the most significant non-structural element in interior spaces, color deserves a more profound discussion. For thousands of years, Chinese traditional society has imbued rich cultural connotations into the concept of "color." While critically inheriting from tradition, scholars during the Republican era also conducted in-depth studies on the Western scientific color system and developed innovative approaches to traditional interior decoration concepts. The changes in color concepts in domestic environments during this period not only influenced the color appearance of homes but also provided a tangible window for observing the mutual influence of Eastern and Western decorative ideas. Moreover, it reveals different attitudes of Chinese and Western designers towards traditional Chinese colors during that time, reflecting the impact of Western modern civilization and technological culture on Republican society, as well as the stance and attitudes of Chinese intellectual elites in the face of such influence.

Given that the rise of Shanghai was almost synchronous with China's modernization process, [4] it serves as an excellent case study for understanding the transformations in urban China and changes in residential environments. This paper focuses on the interior color of urban households in Republican-era Shanghai, exploring the topic from two perspectives: Republican-era publications and home design professionals. Through historical documentation analysis, conceptual interpretation, and case studies, this research traces the evolution and reasons behind the color concepts in urban home decor, while investigating the mutual influence of Chinese and Western decorative design ideas, with color as a representative element. By offering a specific and nuanced new perspective, this study contributes to the understanding of

the transformation and development of modern interior design in China.

THE concept of decorative color reflected in publications during the Republic of China era.

Political scientist Benedict Anderson argues that print culture contributes to the imagination of integrated space and time among the public, thus serving as an effective tool in the formation of a nation-state.[5] In the enlightenment movement of modern China, the development of modern printing technology and the publishing industry played a crucial role in popularizing and disseminating knowledge. They were considered important tools for social governance after the establishment of the Nationalist government in Nanjing. The government aimed to shape and discipline the public through the construction of public libraries, the production of common knowledge, and the promotion of mass reading. At the same time, progressive intellectuals used books and speeches to enlighten and educate the public. The popularization of knowledge became a significant field for awakening and enlightening the people. [6] The "Family Daily Use Series," published by the Shanghai Dadian Bookstore, was an essential component of the "field" of "common knowledge production." The series consisted of four books: "Modern Home Decoration," "New Family Life Guidance," "Family Daily Science," and "Flower Gardening." The titles themselves indicate that this series of books focused on providing daily life guidance, from interior decoration to courtyard care, for the construction of the "new family." It offered references for the public to deal with common issues in their lives. Among them, the color aspect of interior decoration in the family became the primary concern of this book series.



Courtesy of Yan Shi: *Modern Home Decoration* (Shanghai: Dadao Bookstore, 1933), 1-3.

Figure 1. Cover and arrangement of sections of *Modern Home Decoration*.

"Modern Home Decoration," published in 1933, is the "first type" of the book series and was edited by Professor Shi Yan (1904-1994), a renowned art historian who graduated from the Fine Arts Department of Shanghai University. It fully reflects the emphasis placed by the intellectual elites of the Republic of China on the color aspects of modern interior decoration. In

the book, Professor Shi believes that the artistic techniques of decoration are manifested in the color, form, and material of objects, which he considers the "three major forces" of decorative art. He specifically points out that among these three, "color" is the most important. If the color coordination is appropriate, the slight deficiencies in form and material

would not significantly affect the beauty of decoration. It is worth noting that the book is divided into five chapters, with the second chapter titled "The Importance of Color in Home Decoration" following the introductory chapter. The discussion of form and material is arranged subsequently. This sequence of chapters echoes the author's attitude towards the importance of interior color (Figure 1). Similarly, four years after the publication of "Modern Home Decoration," Zhang Guangyu (1900-1965), one of the pioneers of decorative art in China and a former professor at the Central Academy of Arts and Crafts, wrote and published the first systematic exposition of modern design and theory in the Republic of China, titled "Modern Applied Arts." [7] Despite the high cost of color printing at the time, the book dedicated a special chapter titled "Fine Printing Color Plates" to showcase color photographs of different types of interior spaces. This also reflects the author's emphasis on interior color.

The accurate summary and evaluation of traditional Chinese interior colors is one of the significant contributions of "Modern Home Decoration." Professor Shi believes that traditional interior colors are mostly monotonous, with only white, black, and red being commonly used, and the coordination between colors is often discordant, like fire and water. Specifically, traditional interior walls are mostly painted white with red or purplish-black colors for wooden structural elements, resulting in mismatched combinations. Traditional furniture is often purple or black, with bedroom furniture preferring red. According to the author, black is a lifeless color symbolizing death and should not be used in decoration. While white can provide a sense of cleanliness, excessive use can lead to monotony. From these detailed descriptions, it is evident that traditional interiors have monotonous colors, primarily used in the construction of the house structure and interior furniture, with furniture being the main focus. Traditional Chinese furniture represents the materialization of traditional mainstream culture and folk culture and is one of the most important elements in traditional interior spaces.[8] The interior decoration of feudal extended families emphasizes hierarchy and symmetry, and the interior arrangement dominated by men's "ritual placement"[9] becomes a notable feature. Furniture in the central hall embodies the concept of "ritual" and serves as the core of the decorative layout (Figure 2). In comparison, the walls that enclose or divide spaces are relatively secondary. This difference in "color treatment" between furniture and walls highlights their contrasting importance.

It is commendable that "Modern Home Decoration" goes beyond the superficial level of discussing the relationship between color, furniture, and walls. Professor Shi further explores the relationship between color and emotions, stating that both red and purple are unstable and dangerous colors that can evoke excitement due to their association with blood, thus suggesting limited use of these colors. The book mentions an interesting popular belief at the time that conflicts between spouses could arise due to the excessive use of red in the interior. The author comments, "Although this may not necessarily be correct, it cannot be said to be without reason."

Professor Shi goes on to compare the traditional interior color palette in China with that of Europe and America, pointing out that Europeans and Americans are more "progressive" in their use of color. Their interiors exhibit a harmonious combination of furniture and wall colors, with different rooms having distinct color schemes, some being soft and magnificent, while others are dignified and elegant. This creates a closer relationship between the living space and life. The author believes that the main reason behind this lies in their better understanding of the relationship between color and emotions, knowing that different colors should be selected based on the nature of the interior. It is evident that the author is consciously starting to understand and discuss color from a psychological perspective, emphasizing the importance of considering human emotions and sentiments. This approach was undoubtedly new and progressive at the time.



Courtesy of <https://zhuanlan.zhihu.com/p/109019460>

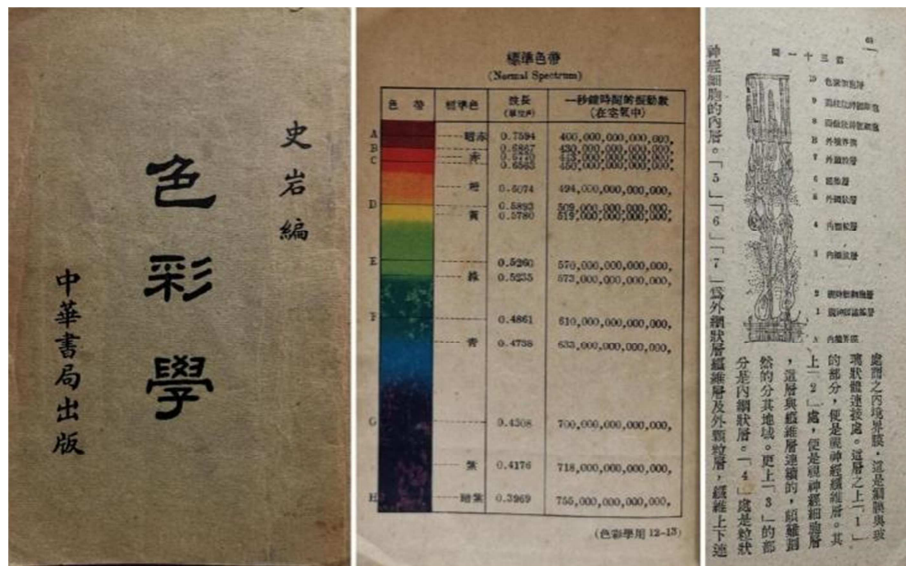
Figure 2. Furniture layout of the nave space arranged according to etiquette in traditional Chinese feudal families.

Indeed, it is important to recognize that the author does not simply praise the West while belittling China. Instead, he emphasizes the idea that "each nation should have its own characteristics... we should take the strengths of foreign cultures while discarding their weaknesses, adapting them to our own lives, and never blindly imitating Western styles." Professor Shi further summarizes four points to consider for improving home decoration in China: 1) selecting the advantages of Western decorative arts to compensate for our own shortcomings, 2) harmonizing these advantages with an Eastern flavor to achieve a sense of national taste, 3) applying Western scientific knowledge to Eastern decorative arts, and 4) exerting efforts to showcase the inherent characteristics of the Chinese nation, allowing Eastern decorative arts to have an independent position in world culture.[10] These viewpoints clearly demonstrate his attitude and stance towards Western decorative color and culture. It shows that while inheriting the excellent color genes of our own nation, he actively seeks to absorb the strengths of foreign cultures, seeking a balance between the East and the West, and enhancing the influence of our own nation's aesthetic sense of decoration on a global scale.

In the face of the impact of Western modern decorative concepts and commercial culture, the author's attitude

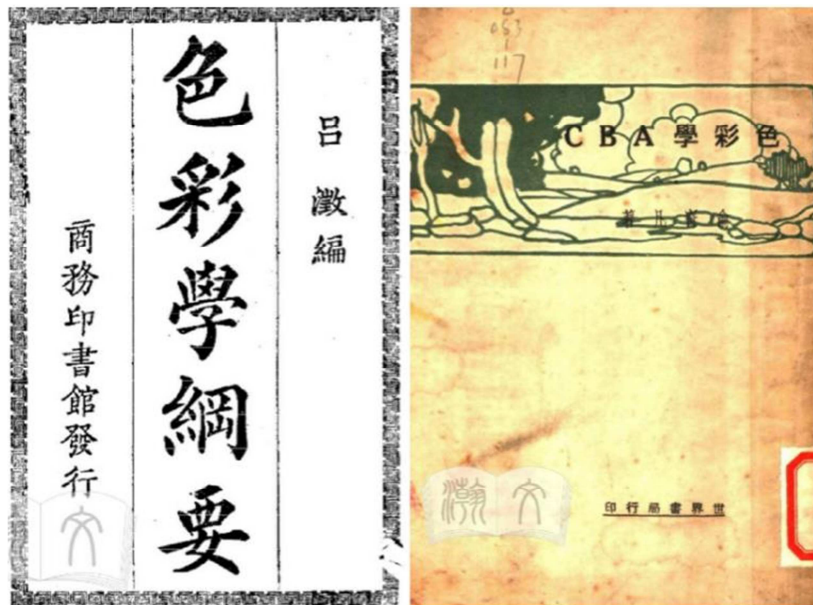
represented the intellectual elite of that time. Through a study of literature from the Republican era, the author found similar viewpoints expressed in publications such as "New Family Living Guide," edited by Chen Yiyi in the same year, "Ideal Residences" published by Shanghai Liangyou Publishing Company in 1936, and series such as "Household Affairs," "Home Decoration," and "Family Handbook," published by Shanghai Commercial Press in 1937. Additionally, lectures and articles by female domestic science elites of that time, such as Qian Yonghe, He Jing'an, and Chen Yi, also discussed the importance of color in home decoration, the harmony of colors in different rooms, the relationship between color and the emotions of the occupants, as well as the integration of Chinese and Western color concepts. It is evident that the

issue of color in interior design had become an independent subject of discussion and research, separate from "materials" and "shapes," and received unprecedented attention from the academic community. Its significance was even considered to surpass that of "materials" and "shapes." The contemplation of this issue reflects the rational thinking and prudent attitude of the intellectual elite of the Republican era in the face of the impact of Western modern civilization and commercial culture. In the same year as the publication of "Modern Home Decoration," Professor Shi Yan separately compiled and published the section on color in the Shanghai "Da Dong Monthly" magazine, further elaborating on the issue of "color harmony" in traditional Chinese interior spaces.



Courtesy of Shi Yan. *Color Theory* (Shanghai: Zhonghua Book Company, 1951)

Figure 3. Cover of *Colorology* and *Scientific Quantitative Description and Biological Explanation of Colors*.





Courtesy of Outline of Color Theory, ABC of Color Theory, Color Theory, Practical Color Theory and Research on Color Theory

Figure 4. Publications on the theme of scientific color published in the Shanghai area of the Republic of China.

It is worth noting that in Mr. Shi's four-point summary for improving home decoration, he specifically mentioned the importance of "applying Western scientific knowledge to the decorative arts of the Eastern style," which was undoubtedly groundbreaking at that time. What is even more commendable is that Mr. Shi did not merely advocate for this idea in words but translated it into action by personally engaging in research on Western color science knowledge. After the establishment of the People's Republic of China, he published the book "Color Science." This book is divided into fifteen chapters and presents a scientific and quantitative study of color, providing a detailed discussion of the basic principles and application principles of color science.[11] The book even delves into research perspectives from the field of biology, such as the visual nervous system, showcasing the scientific and interdisciplinary nature of the research (Figure 3).¹ Of particular interest is that this systematic exploration of scientific color was not an isolated case at that time. Through my research, I have found that besides "Color Science," there were at least eight other research monographs on scientific color during the Republican era, with at least five of them published and circulated in the Shanghai region. Examples include Lv Cheng's "Synopsis of Color Science" in 1925, Yu Jifan's "Color Science ABC" in 1931, Liu Yixiang's "Color Science" in 1934, Li Weici's compilation "Practical Color Science" in 1939, and Wen Zhaotong's compilation "Color Science Research" in 1947 (Figure 4). These monographs cover a wide range of topics, including the relationship between color and psychology, as well as the relationship between color and the living environment. It is evident that the academic community during the Republican era had undertaken a systematic and sizable research effort into the Western scientific color system, which directly influenced the color and decorative concepts in home design. This undoubtedly marked an important breakthrough and development in traditional interior decoration concepts. In these publications, the transformation of the family model during this period, namely the shift from the feudal "extended

family" to the modern "nuclear family," is often mentioned alongside color issues. "In recent years, every young man with reformist ideas, if capable of organizing a small family, desires to do so. Similarly, young women with progressive thoughts, before getting married, all hope to become the housewives of small families. As a result, more and more young men have been forming small families in society, and young women have been assuming the role of housewives in small families day by day." [12] Just as architectural historian Mitsuo Inoue explains in his book "Space in Japanese Architecture," using the concepts of "sculptural composition," "painting composition," "geometric space," and "dynamic space" to illustrate the transformation in Japanese architectural development from a focus on "entity" to a focus on "space," [13] the changing urban family model during the Republican era led to a similar shift in people's perception of interior space. In traditional large families, the arrangement of interiors and placement of furniture emphasized the hierarchical order of space, particularly evident in the symmetrical layout of interiors. No element existed independently but rather subordinate to an overall plan based on parallel or polar coordinate systems derived from analytic geometry. [14] However, in small families, the hierarchical notion of space was loosened. Additionally, the increased value of space itself due to rising housing prices and rents resulting from reduced living areas led to a shift in focus from physical entities such as furniture to the intrinsic value of space. Space, as the "essence," gradually took precedence in interior decoration. The author believes that this transformation in spatial perception may be one of the significant reasons for the increased attention given to the color attributes of space itself.

In addition to books, the high level of attention given to color in the application context by newspapers and magazines during the Republican era also reflected the increased importance of color and the shift in spatial perception. For instance, an article titled "The Color Issue in Interior Decoration" published in the magazine "Happy Family"

presented a color wheel diagram classified according to bright and subdued colors, providing a detailed explanation of color coordination in interior arrangement.[15] The magazine "Women's Pictorial" featured an article titled "New Bride's Essentials" in its "Modern Interior Design" column, which discussed the relationship between color and the orientation of space, emphasizing the need for in-depth research on wall decoration.[16] In the summer of 1938, the Shanghai magazine "Family" timely published an article titled "Cool Furnishing," aiming to teach housewives how to create a cool indoor space by making effective use of blue color,[17] and so on. These reports not only demonstrated that the understanding of color during this period went beyond theoretical constructs, but also transformed into practical decoration guidance through commercial newspapers and magazines. Through the combination of images and texts, they provided applied demonstrations to the public. On the one hand, it showed that the value of space itself had increased, and urban residents had a growing desire and necessity for color planning and decoration in their spaces. They had a practical need for guidance in the decoration process. As profit-oriented commercial publications, they keenly captured this new demand and catered to it by publishing relevant articles. This commercial phenomenon provides a vivid perspective for observing the transformation of color concepts in home interior design during that period.

2. Color Concepts and Decorative Practices of Interior Designers

In addition to publications, interior designers during the Republican era also demonstrated a special focus on color. The community of home designers in Shanghai during this period consisted mainly of professional interior decorators and artists from Europe and America who had come to Shanghai, as well as a group of local Chinese craftsmen and artists. Many of the Western decorators and artists were women. In addition to their design practices, they actively participated in decoration knowledge lectures organized by unions or clubs, directly promoting the dissemination of Western modern decorative concepts in Shanghai. Through studying the records of their speeches and analyzing their design works, it is evident that these women had extensive experience in interior decoration, particularly in terms of color knowledge. They showed a high level of attention to the relationship between color and space, as well as the influence of color on the emotions of the users.

Mrs. Louise Gilman was the founder of the Caravan Studio in Shanghai. Her design schemes were particularly remarkable in terms of color coordination and often left a deep impression on visitors. In a lecture titled "Color in the Home" in 1932, she discussed the instinctive human response to color, recognizing the need for specialized research on the psychological aspects of color in interior spaces. She believed that color could have a special impact on patients and children, and thus, it was important to study human reactions in different color

environments and make appropriate choices in design.[18] She further summarized the different psychological effects of various colors, cautioning against the use of colors like red and purple that could potentially evoke negative emotions. In another lecture titled "How to Use and Where to Buy Chinese Furniture," she introduced the basic principles of interior decoration, including the relationship between color and space, as well as how to incorporate Chinese artworks.[19] It is evident from Mrs. Gilman's speeches that her understanding of color had distinct scientific features, even incorporating perspectives from evolutionary biology. Her exploration of the relationship between color and patients bears a striking resemblance to the core principles of "Evidence-Based Design,"² which emerged half a century later. These ideas were undoubtedly innovative for the evolving field of home design in Shanghai at that time.

Mrs. Louise Gilman's emphasis on color and depth of understanding was not an isolated case among Western interior designers and artists in Republican-era Shanghai. Through my review of literature, I discovered that H. L. Gilman from The Lotus Lingerie Co. also emphasized the importance of color as one of the key elements in evoking sensitive emotional responses during space decoration.[20] Similarly, artists and interior decorators such as Mrs. Alfred H. Swan and Miss Katherine M. Ball, an Oriental art expert and art collector, expressed similar views on the significance of interior color, as well as the harmonious relationship between color and space. While there is no direct evidence to support this claim, based on the similarity in content and timing of their publications, it is conceivable that local intellectuals like Mr. Shi Yan may have been influenced by these Western designers in terms of their psychological and biological perspectives on color understanding.

Miss Cleome Carrol, a professional interior decorator and architectural theorist from New York, also demonstrated a significant focus on the relationship between color and space, as well as the impact on users' emotions in the works of both Chinese and foreign designers during this period. In 1933, Miss Carrol arrived in Shanghai and established a design studio in Hamilton House (now Fuzhou Building). She believed that color and color combinations were essential factors in evoking excitement and stimulating emotions in modern interior spaces. Her own designed studio-apartment showcased her understanding of modern home decor, with a particularly remarkable display of colors within the space. Some even commented that her design works exhibited the most outstanding creativity in color throughout the entire Oriental world. [21] Records indicate that she specifically differentiated spaces using different hues. For example, the bedroom/living room had a dominant yellow color scheme, while the dining room/office space was primarily red. Furthermore, the peach-red wardrobe and black dining table were indicative of the intentional use of color to delineate functional spaces. The richness of color design in this residence, as well as the intention to differentiate spaces through color, was something traditional Chinese homes did not possess. Reports specifically mentioned that such small

apartments were prevalent in Shanghai and other major cities like New York at that time, emphasizing the need for meticulous space design to expand functionality. These accounts also reflect the influence of the growing value of spatial entities on interior decorating strategies.

In addition, the "presence" of color significantly increased in the works of local designers during this period. Mr. Zhong Huang a pioneer of Chinese modern design and deeply involved in the transformation of Chinese interior design, proposed in his book "Talking About Living" that "various colors should be used to render and highlight, and different lines should be used to coordinate and harmonize, so that ordinary people in society can feel the influence of beauty anytime and anywhere and find suitable comfort in their lives." [22] In one of the living rooms he designed, the ceiling was adorned with a combination of golden and black lines. In line with this, the walls were painted in gold and black, while red was used to highlight the corners and create a concave-convex style. In another modern residence he designed, the walls were painted with abstract geometric patterns in a Constructivist style, echoing the similar style of the fabric sofas, tables, chairs, and abstract sculptures displayed in the living room. This contrasted with the rich Oriental charm of porcelain and the traditional Chinese patterned carpets on the floor, creating a harmonious color atmosphere (Figure 5). Furthermore, Mr. Cai Zhenhua, a renowned interior designer in Shanghai, once illustrated an "ochre-themed" bedroom designed by Wan Qihong and wrote an article titled "The Ochre Bedroom," providing detailed insights into various aspects of color design (Figure 6). The article clearly demonstrates his contemplation of color coordination issues concerning the ceiling, floor, walls, and various types of furniture. From the design drawings, it is evident that the interior accessories, decorative patterns, and furniture styles all strive to align with the design goal of "harmonious color tones." [23] Clearly, in this design scheme, color has transitioned from being a "supporting role" to the "protagonist," becoming the core that governs interior design.



Figure 5. New Residence with Harmonious Colors Designed by Zhong Hong.

Courtesy of Anonymous, "Latest Residence Interior Design," *LiangYou*, no. 50 (January 1930): 29.

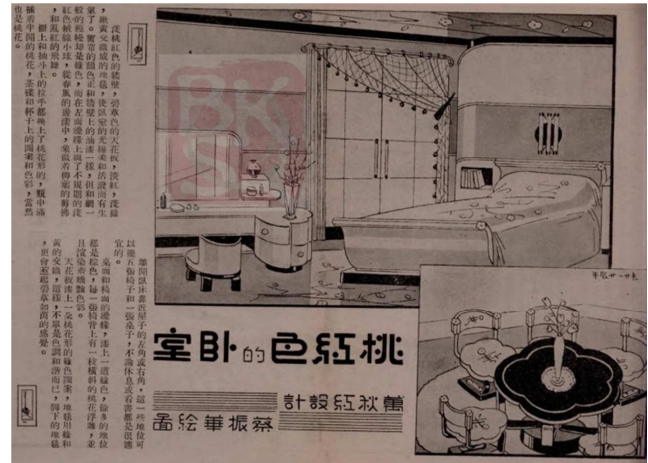


Figure 6. Peach Pink Bedroom.

Courtesy of Qihong Wan. "The Peach Pink Bedroom," *Happy Family* 1, no. 2 (January 1936): 49-50.

An intriguing detail worth further contemplation is the contrasting attitudes towards traditional Chinese interior colors between local intellectuals and Western decorators or artists. As mentioned earlier, Miss Cleome Carrol, a New York-based interior decorator and architectural theorist, delved deeply into the treatment of vibrant colors in traditional Chinese interior spaces. She believed that Chinese people have a profound influence on colors, considering the traditional Chinese color combinations to be exemplary in their rarity of error and freedom, embodying resilient spiritual power. [24] She even predicted that the dawn of the 20th century would illuminate a world with color consciousness, and the Chinese had already achieved remarkable accomplishments in the realm of color. She praised China as the only nation to understand the subtle value of colors and apply it to everyday life. Through extensive research on traditional Chinese colors, she put forth an intriguing insight: Chinese people hold superstitious beliefs about colors, attributing different meanings to each hue. In the realm of interior decoration, Chinese people are adept at harnessing colors, particularly in the application of rich and intense hues. However, in China, although bold colors have long been applied in the design of clothing and home furnishings, the mainstream aesthetic values of Chinese painting and porcelain art tend to favor and appreciate a colorless palette. Based on this observation, she proposed that the utilization of traditional Chinese colors exhibits contrasting aesthetic aims in the domains of spatial design and traditional art.³ Clearly, in comparison to the intricately adorned traditional Chinese furniture, Western designers have shown a keen interest in traditional Chinese colors, exemplifying the influence of Eastern hues on Western designers.

This influence is not limited to designers who come to China, even some Western designers in the Republic era were affected.⁴ In an interior work designed by German architect Alfred Fischer (1881-1950) in 1929, although the furniture had a sleek modern style, documented records indicate that its interior colors exhibited distinct Eastern characteristics. The

rubber floor featured a combination of black and gray, while the interior woodwork was black. The chair cushions and glass in the interior had a subtle yellow tint, complemented by red roses, creating a harmonious color atmosphere (Figure 7). The colors in this space closely aligned with Mr. Shi Yan's summary of traditional Chinese interior color features, yet it received considerable acclaim in the West. [25] This not only reflects the differences in color aesthetics between East and West but also demonstrates that, during the process of modernizing interior design in China, the influence of decorative aesthetics did not solely flow from the West to China. With the increasing frequency of cultural exchanges between East and West, the Eastern traditional decorative aesthetics, represented by interior decoration colors, have also exerted an influence on Western countries in a reciprocal manner. This highlights the interdependence and complexity of aesthetic influences in decoration, which aligns with the basic principles of communication studies.

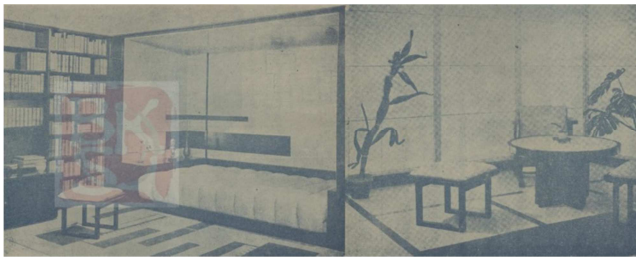


Figure 7. Modern interior design work with Oriental color features, designed by a German designer in 1929.

Courtesy of Anonymous. "Modern Decoration," *Modern Women* 11, (January 1929): 20.

3. Conclusion

This study focused on urban households in Shanghai during the Republican era and examined the evolution and underlying reasons behind the conceptual changes in color in home interior design through literature research and case analysis. By doing so, it revealed the reciprocal nature of influences between modern Chinese and Western decorative designs.

The research reveals that the color attributes within urban households during the Republican era received unprecedented attention. Local intellectual elites summarized the color characteristics of traditional interiors, noting their monotonous use and predominance in architectural structures and furniture. Furthermore, they distinguished "color" as an independent element from "form" and "material," considering it as a distinct focus of design and research, even emphasizing its importance above the latter two. Building upon this foundation, they conducted systematic studies on the relationship between color and space, the influence of color on users' emotions, and Western scientific color systems, leading to significant breakthroughs and advancements in the understanding of tradition. The newspapers and magazines of the Republican era keenly recognized the demand among urban households for guidance in interior color design.

Through articles combining text and illustrations, they transformed color decoration knowledge into practical design guidance, providing demonstrations and spreading this knowledge to the public.

The Republican era was a crucial period of transformation in Chinese society. In terms of family patterns, urban households, exemplified by Shanghai, underwent a transition from the feudal "extended family system" to the modern "nuclear family system." With changes in the composition of core family members, relaxed notions of spatial hierarchy, reduced living spaces, and soaring housing prices and rents, the value of the living space itself increased. It gradually replaced "tangible" elements such as furniture and became the focal point of consideration in home decoration design. This research further demonstrates that this shift in spatial perception may have contributed to the recognition and emphasis on the color attributes of the living space "itself," making it an objective factor in the significant attention paid to color in design research during the Republican era.

In the process of this transformation of color concepts during that period, the role played by professional interior decorators and artists from Europe and America who came to Shanghai was crucial, in addition to the contributions of local intellectuals, designers, relevant publications, and the shift in spatial perception. These Western professionals, predominantly women, had extensive experience in interior decoration and possessed abundant knowledge of color, demonstrating a particular emphasis on the relationship between color and space, as well as the impact of color on users' emotions. Their explanations regarding the relationship between color and patients even bear a striking resemblance to the core ideas of Evidence-Based Design, which emerged half a century later, showcasing distinct scientific characteristics in color theory. Apart from their design practice, these professionals actively participated in lectures on decorative knowledge organized by unions or clubs, directly promoting the dissemination of Western modern decorative color concepts in Shanghai. Interestingly, in contrast to the criticisms of traditional Chinese interior colors by local intellectuals, Western designers highly praised the use of vibrant color combinations. These color combinations even directly influenced the works of Western designers, revealing the influence of Eastern traditional aesthetic interests, represented by interior decorative colors, on the West. Unlike previous discussions on the modernity of Chinese design, which focused on the unidirectional dissemination of Western design concepts to the East, this research further demonstrates the interdependence and complexity of the influences between modern Chinese and Western decorative ideas. It provides a specific, nuanced, and multidimensional new perspective for understanding the transformation and development of modern Chinese interior design.

After the establishment of the People's Republic of China and before the era of economic reform and opening up, color experienced a brief period of "fading" in various aspects of urban construction,[26] interior decoration, and even clothing

design, due to the government's attitude towards urbanism and modernist architecture, as well as the control of urban living spaces and time by the new regime. The blue-black-gray attire of the population became a color memory of that era, and home interiors returned to a more plain and subdued state. With the development of a market economy following the reform and opening up, color once again began to shine in the broader realm of design, including interior decoration. The academic study of color became more systematic and scientific, simultaneously expanding the application scope of color. [27] The transformation of color concepts during the Republican era, the construction of color theories by local intellectuals, the practices of home decorators, the introduction of Western scientific color concepts, and the mutual influence of Eastern and Western color ideologies undoubtedly laid a solid foundation for the study of color in the new era.

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References

- [1] Jijun Chen, "Exploring the Modern Origin of Chinese Interior Decoration through Republican Era Newspaper Advertisements," *New Art* 40, no. 11 (January 2019): 105-113.
- [2] Wenhao Duan, "A Comparison of Soft Decoration in the Republican Era and Modern Interior Soft Decoration Design," *Design* 19, no. 158 (January 2017): 158-160.
- [3] Wenwen Song: *Interior Color Environment Design* (Beijing: China Architecture & Building Press, 2021), 10.
- [4] Hanchao Lu: *Beyond Neon Lights: Shanghai in the Early 20th Century Daily Life* (Shanxi: Shanxi People's Publishing House, 2018), 20-30.
- [5] ANDERSON B: *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso, 2006), 22-36.
- [6] Shuang Shen: *Popularization of Knowledge and its Development* (Shanghai: East China Normal University, 2021), 104-110.
- [7] Yuxi Zhou. "Analysis of Interior Design Practices by Artisans in the Republican Era," *Art and Design (Theory)* 2, no. 11 (January 2015): 66-68.
- [8] Meiqi Xu. "Cultural Genes of Chinese Traditional Furniture," *Furniture and Interior Decoration* 212, no. 10 (January 2016): 11-13.
- [9] Zheng Gao. "Transformation of Female Consumption and Interior Display Paradigm in Late Qing and Republican Era," *Journal of Zhengzhou University (Philosophy and Social Sciences Edition)* 52, no. 6 (January 2019): 106-111.
- [10] Yan Shi: *Modern Home Decoration* (Shanghai: Dadao Bookstore, 1933), 15-16.
- [11] Yan Shi: *Color Science* (Shanghai Zhonghua Bookstore, 1951), 20-35.
- [12] Zaoxiong Huang. "Common Knowledge for Women in Small Families," *Women's Youth Magazine* 6, no. 7 (January 1927): 14-17.
- [13] Inoue M and Watanabe H (Trans.): *Space in Japanese Architecture* (New York: John Weatherhill, Inc., 1985), 24-38.
- [14] Delin Lai. "The Perspective of Architecture: Comparative Reading of Three Japanese Urban and Architectural Space Research Works," *New Architecture* 176, no. 1 (January 2018): 32-39.
- [15] Jinpei Li. "The Color Issue in Interior Decoration." *Happy Home* 1, no. 2 (January 1936): 1-2.
- [16] Chen Hong. "New Bride's Essential Knowledge," *Women's Pictorial* 4, (January 1933): 19.
- [17] QiuHong Wan. "Cool Arrangements," *Family* 3, no. 3 (January 1938): 42.
- [18] The China Press, (April 27, 1932) Purple-shaded room might drive one insane, says A. W. C. speaker Mrs. Louise Gilman tells of methods of decoration in home; red also is slightly taboo.
- [19] The Shanghai Times, (November 5, 1930) Interior decorator at A. W. Club, how to use and where to buy Chinese furniture.
- [20] The North - China Herald and Supreme Court & Consular Gazette (1870-1941) (November 11, 1930) CHINESE FURNITURE AND ITS USE.
- [21] The China Press, (June 25, 1934) Designers has new ideas on use of color, Miss Cleome Carrol says Chinese have anticipated modern tendency, noted authority gives hints on decoration.
- [22] Yuxi Zhou. "The Buried Pioneer of Chinese Modern Design: A Study of Zhong Hong and His Architectural Decoration Company," *Decoration*, no. 10 (January 2019): 80-83.
- [23] QiuHong Wan. "The Peach Pink Bedroom," *Happy Family* 1, no. 2 (January 1936): 49-50.
- [24] The China Press (1925-1938)(June 10, 1933) Modern Trends of Decoration shown Art Club: Peiping Alter Praised by Miss Carroll; New Design is Interpreted.
- [25] Anonymous. "Modern Decoration," *Modern Women* 11, (January 1929): 20.
- [26] Delin Lai. "Shanghai of Configurational Socialism: Urban Space, Architecture, and Gender in the 1959 Film 'Today I Rest'," *Journal of Architectural History* 3, no. 4 (January 2022): 107-115.
- [27] Wenwen Song. "Color Science Theory and Color Design Application in the Entire Industry Chain," *Decoration* 325, no. 5 (January 2020): 46-57.
- [28] The China Press (1925-1938)(June 8, 1933). Local Artist Exhibits.
- [29] Huang Zhong. "Chinese-style Interior Decoration," *Shanghai Cartoons*, no. 64 (January 1929): 2.

Biography

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¹ In addition to "Modern Home Decoration" and "Color Science," Mr. Shi Yan also published a research monograph on interior design titled "Interior Decorative Art." The author believes that Mr. Shi Yan's contributions to the modernization of interior decoration in the Republican era and his research on scientific color have been severely overlooked due to his outstanding achievements in art history.

² In 1984, Professor Roger Ulrich from the School of Architecture at Texas A&M University published an article titled "View through a Window May Influence Recovery from Surgery" in the journal "Science." This article is considered a milestone in the emergence of Evidence-Based Design thinking.

³ The understanding of traditional Chinese painting and porcelain colors in this context is likely influenced by Chinese literati painting and Song Dynasty porcelain. There are records indicating that Carol was invited to participate in exhibitions related to traditional Chinese art after arriving in Shanghai. [28] It is speculated that Carol may have come into contact with relevant artworks during these exhibition processes.

⁴ The researcher's findings indicate that designers such as Zhong Hong have previously created "Chinese-style interior decoration works" in Europe, [29] providing a possible pathway for Western designers to understand traditional Chinese interior decoration and color aesthetics.