



# Analysis of Cover Design Styles of Magazines

## Taking *THE SHORT STORY MAGAZINE* (1910–1932) as an Example

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**Abstract.** Magazine cover design is usually an epitome of such factors as historical background, politics and economy, social aesthetics and crowd psychology. The culture showed a landscape of diversity in the turbulent and complex times in the earlier period of the Republic of China. This research takes the cover design of the magazine *THE SHORT STORY MAGAZINE* (1910–1932) as an Example and adopting a quantitative empirical research method, the paper studies the cognitive pattern of the contemporary readers towards the magazine cover design style in the context of past times. Design style shows the characteristics of “periodic circle development”. Therefore, the research is of great significance to the formation of design styles at present and in the future. The results of the research reveal: 1. The cover design of magazines in the Chinese mainland in the early 20th century displayed six styles. 2. Among the cover designs of magazines in history, the contemporary audience prefer the design styles with distinctive characteristics. 3. Among the style attributes, the harmonious, regular and elegant design styles are most popular among the contemporary audience. Hopefully the results of the research will provide references for the field of design at present and in the future.

**Keywords:** Historical context · Cover design · Magazine cover · Design style · Cognition of style

## 1 Introduction

It is widely believed that the mainstream modern design history started at the turn of the 19th and 20th century. In this period, the world was turbulent and restless politically and economically and the trend of culture and ideology was surging. It was the most impacting era in the humankind’s history when two World Wars happened, the population declined abruptly, economic crisis and unemployment were serious. In this

special era, the design trend of “Modernism” developed rapidly. Starting from the mid-19th century, the trend of complicated decoration style was prevailing, represented by fine arts and new artistic design, behind which was the fact that the European powers plundered wealth from the colonies and concentrated the wealth in the European continent and made their own politics, economy and culture reach a summit. By the early 20th century, the world’s economic crisis broke out in 1907, the World War I broke out in 1914, a second global economic crisis happened in 1929 and the World War II took place in 1939. The economic depression forced the design style to shift to simple and practical styles. Under such a context, design styles of modernism such as Bauhaus that stressed “ornament is a crime” came into being. However, the US and France, two beneficiary countries in the World War I, refused concise forms as their politics and economy were flourishing. As a result, complicated decorative artistic design continued to develop. The World War II was over in 1945, the Korean War broke out in 1950 and the African-American Civil Rights Movement was launched in 1955. In the turbulence of the times and political situation, the concise and simple abstractionist design developed and its influence swept the whole world. After 1980, as science and technology, civilization and economy were growing rapidly, the abstractionism was replaced by the complicated post-modernism design style which became the mainstream design style in this period. The aforesaid indicates that the development of design styles is closely related with the historical background of the society.

The historical background not only covers political and economic aspects, but also covers the crowd psychology, which is also an important factor. Design is a link in our social activities. Kawazoe Noboru, a Japanese scholar, proposed a “Kawazoe Noboru” program in the book *What is Design*, taking “human, nature and society” as three constituents of the world and pointing out that the three fields are linked up by design [16]. A fourth turning was ushered in by the traditional design style history studies in the early 20th century, which shifted from the research of external forms to the research of internal ceremony, from narrative research to analytical research, and from the research of individual psychology to crowd psychology of the society. Historians no longer viewed psychology as a consistent, constant, permanent and fixed foundation for interpreting the behaviors of the humankind, but as an aspect of the social environment, which must be interpreted with all other aspects under the historical background [22]. Therefore, the research at the level of crowd psychology of the society is also an important aspect in the exploration of the factors of design styles.

The magazine covers in the early 20th century are selected by the research for the exploration of the cognitive pattern of design styles for three reasons. First, under the historical background of the early 20th century, the turbulent and complex political and economic situations brought rich and diversified cultural thoughts. Second, design thoughts were surging at the turning of 19th and 20th centuries when different design styles developed along a spiral in the alternation of complex and simple. Third, in the period when science and technology were still undeveloped, the magazines and periodicals were the most effective media for the communication between the authors and the readers. The magazine *THE SHORT STORY MAGAZINE* was initiated in 1910 and ceased publication in 1932, which had gone through the two decades when the Chinese mainland was war-ridden and cultural thoughts were surging. Among the magazines and periodicals published in this period, it boasted the biggest number of issues, the

largest amount of distribution and the longest operation history. The five editors-in-chief in its history were either traditional writers or reformative scholars. In the face of the impact from the Western thoughts of modern design, they not only maintained the traditional aesthetic orientation and values of China, but also showed the eagerness to reform and innovate [12]. Therefore, the cover design styles of *THE SHORT STORY MAGAZINE* showed inclusiveness and diversity blending the Eastern and Western characteristics. Yang called it the “No. 1 magazine of novels in the 1920s” [20]. Taking *THE SHORT STORY MAGAZINE*, a literary magazine of Chinese mainland in the early 20th century, as the subject of research and adopting the methods of historical interpretation and contents analysis, the research conducts a qualitative analysis on the correlation between historical background and design styles in the specific period. By applying the quantitative empirical research method, the research conducts a questionnaire survey in two stages among experts in a semi-open manner and the public to understand the cognitive pattern of the contemporary readers with the cover design styles in the historical context.

We can seek wisdom from the ancients and realize our shortcomings from the comments of others. Since design style develops with the times, which becomes complex in a wealthy era and simple in a poor era. It shows a periodic spiral development pattern [22]. Previous design styles may overlay with the current ones, or re-emerge at some point in the future. Therefore, it is of important significance for the construction of design styles at present and in the future to study the cognitive pattern of contemporary audience with the magazine design styles in a historical context. We will understand the evolution course of design style history by analyzing the correlation between historical context and design styles. We will understand the crowd psychology of the contemporary society and perceive the trend of design by studying the cognitive pattern of the contemporary audience with cover design styles of magazines in the history. Hopefully this research will be helpful to the development of an evolution history of design styles, explore the cognitive psychology of the contemporary audience with design styles and provide references for the field of design.

The paper aims to explore the following two aspects.

1. The correlation of politics and economy, crowd psychology and design styles under a specific historical context.
2. The contemporary audience’s evaluation of the cover design styles of magazines under a specific historical context and the correlation between the evaluation results and their preferences.

## 2 Literature Review

### 2.1 Design Style

As a French motto goes, “Style is the writer”, it indicates the importance of style in some certain fields. The term style originates from Latin word *Stilus*, which originally meant a writing tool of the ancient Rome and later extended to refer to handwriting, literary form and style of writing and was used in mixture with “Pattern” and

“Maniera” (the individual style of an artist). After the Renaissance in the 16th century, people began to uphold artistic style and pursue the liberation of individuality. The term “Applied Arts” emerged in the 17th century. By the 18th century, style was defined as “some constant pattern of arts”. By the mid-19th century, style, as a research methodology, had become a core concept in the foundation of art history studies. By the 20th century, scholars in the field of arts had developed a clearer picture of style. Kenwa Tamu, a Japanese scholar, argued that style is a unique form of expression of elements following different constituent grammars and a manifestation mode with characteristics of the times or a region [18]. By the 21st century, scholars have come up with new definitions of style. Chen Junzhi argued that in terms of artistic creation, different intentions of the authors will create different characteristics. Such kind of difference is classified as some feature or image based on its characteristics, which is also known as “style” [3]. Arts are a manifestation of culture, while style is the most distinctive characteristic of the culture [2]. Cultural meanings are expressed by applying cultural symbols [13]. Lin [9] pointed out that only works with distinctive styles can be competitive in the market. Nowadays the demands of customers in products have shifted from attention to pragmatic functions and appearances to a pursuit of the meanings and recognition behind the products, or the ideas and concepts, lifestyle or spiritual resonance conveyed by the works [19]. Therefore, the research of styles is an exploration of the similarity and difference of works [15].

Viewed from the vein of historical development, there is not a clear boundary between the fields of arts and design. The development trend of design history can also be perceived in the changes of artistic styles. Saguchi, a Japanese scholar (1990), stated on the close relationship between arts and design in this way, “Arts influence design, while design is an extension of arts.” John A. Walker, a design historian of the UK, also argued in *The History of Design*, “The history of design derives from the history of arts.” Many historians of Europe and America nod at such views. Arts usually take the lead in the era subject to no constraint of conditions in reality and also directly leads the development of design. This has been proven by the influence of Cubism on modern design and the influence of Pop arts on post-Modernist design [22]. Therefore, in exploring the design styles of a specific historical period, it is inevitable for us to analyze the artistic styles of the periods before and after the specific period. This is a basic principle for the discourse of the research.

## 2.2 Correlation Between Historical Background and Design Style

The formation of design styles, in the description of design history studies for a long period in the past, was mainly attributed to the achievements of some design team or some designer, while the impact of the historical background of the society had been neglected. W. Pevsner who was honored as “Father of Design History” argued that “Modernism” is an ideal ultimate perfect form in the book *Pioneers of Modern Design: From William Morris to Walter Gropius*. He praised the pioneers that met the standard of high morality, but hated other non-Modern pioneers [14]. Such discourses that neglect social background, and confine the subject of design to Modernist morality limit the scope of design styles and the research of design history.

As the environment and soil, the historical background provides design styles in the history with topics and patterns. Edward said, the contemporary design is closely related with the life of the public [11]. The historical background usually covers the crowd psychology, politics and economy of the specific era. The formation of design styles is closely related with the development of the society and times. C. K. Simonton searched for the “social variables” that influenced creativity in an 8-year research “Correlation between Creativity of Famous People and Social Factors” and verified the correlation and causal model between creativity and historical background of the society [1]. Through a systematic research of social psychology, the research proves that the historical background of the society is the initial driving force and ultimate destination for the formation of design styles. Feng Yonghua and Yang Yufu have ever sorted out a correlation chart between the initiating country of a design style and the political and economic strength of the country (see Table 1).

**Table 1.** Correlation chart between the initiating country of a design style and the historical background at that time.

Time	Initiating country (region)	Style	Political and economic strength
	Greece and Rome	Greek and Roman styles	Greece developed a mature classical style after winning the victory in the Persian wars. Rome was an empire spanning across three continents, Europe, Asia and Africa, with trade flourishing.
1495-1525	Italy	Renaissance style	Italy was an important hub of politics, religion and economy of Europe at that time.
1600-1750	France	Baroque style	Louis XIV dynasty of France was the most powerful country of Europe at that time
1715-1815	France	Rococo & Neo-classical styles	The politics and economy of France reached the global summit in the Napoleonic era
1820-1901	The UK	Victorian style	The UK developed rapidly and set the trend of the century after the Industrial Revolution
1859-1900	The UK	Art & Craft Movement	The UK continued to be honored as “the empire on which the sun never sets” in this period
1890-1910	European countries	Art Nouveau	By plundering wealth from colonies, the European powers became the strongest region in the world
1919-1933	Germany	Bauhaus (Modern style)	Prime Minister Bismarck who took office in 1895 adopted the policy of “Blood and Iron”, and turned Prussia into a strong Reich of militarism.

(Source of data: Feng Yonghua, Yang Yufu (2006). Research on Factors for Formation of Design Styles. Journal of Design)

The data indicates that a strong culture of arts and design is usually initiated by a country or region with powerful politics and economy. Under the action of Butterfly Effect, it will affect and lead the global cultural trend. The formation of a design style cannot be achieved by one or two designers or design teams. The spirit of the times is transformed into a design style with distinctive characteristics of the times with the work of the designers. Therefore, in analyzing the design style of a specific period, it is inevitable for us to explore the historical background of the specific period, thereby exploring the fundamental cause of its formation.

G. Plekhanov, a Russian aesthetician, ever remarked on the relationship between design styles and social psychology, “The economic and political relations of the society play a decisive role in arts, while the latter reflects the former via the link of social psychology.” “Without deeply studying and understanding social psychology, it is impossible to understand the literary thought history or art history of a country or interpret the historical materialism of its ideology system” [8]. The economic and political relations of the social influence the design styles via the medium of “social psychology”. G. Barraclough, a British historian, argued that the focus of historical studies shifted from individual psychology to social psychology. Historians no longer viewed psychology as a consistent, constant, permanent and fixed foundation for interpreting the behaviors of the humankind, but as an aspect of the social environment, which must be interpreted with all other aspects under the historical background [17]. Funai Nobukatsu of Japan, reputed as a “God of Operation Guidance”, explained the social effect aroused by crowd psychology like this. The information generated by a monkey is first passed to the entire team. When the number of recipients reaches a certain level, the information will be expanded and reach another team far away. Under an unconscious state, a crowd can be aroused a sympathy with a “specific magnetic field” [21]. At the end of 19th century, Gustave Le Bon, a social psychologist of France, described the psychology changes after a crowd effect was achieved by individual psychology, “Their feelings and thoughts are all steered to the same direction as their conscious individuality vanishes, forming a collective mentality. When the conscious personality vanishes and the unconscious personality becomes dominant, their feelings and thoughts will be steered to the same direction under the actions of hinting and mutual influence [6]”. Therefore, to explore the formation of design styles under a specific historical background, other than analyzing the political and economic relations of the society, we cannot neglect the analysis of crowd psychology of the society.

### 2.3 Communication Model of Design Styles

The aforesaid indicates that the formation of design styles cannot be separated from the political and economic conditions and crowd psychology of the whole society. However, the formation does not mean Communication, what is the path of communication? Under the specific historical background, what factors are required to achieve an effective communication? According to the school of process in the communication theory, now the factors for a successful communication are divided into three levels, which are technology level, semantic level and effect level [4, 5, 7]. The technology level means that the author achieves an external manifestation of the design works with the use of technology. The semantic level means that the author expresses the meanings

of the works through the external level. The effect level means that the information of form and meaning is received by the readers and turned into their reflection, which effectively affects their anticipated behaviors. Scholars like Lin Rongtai has developed a new research framework by combining the theoretical frameworks of communication and semantic cognition of mental model, thereby exploring the related aspects of the communication of artistic styles [10] (See Fig. 1).

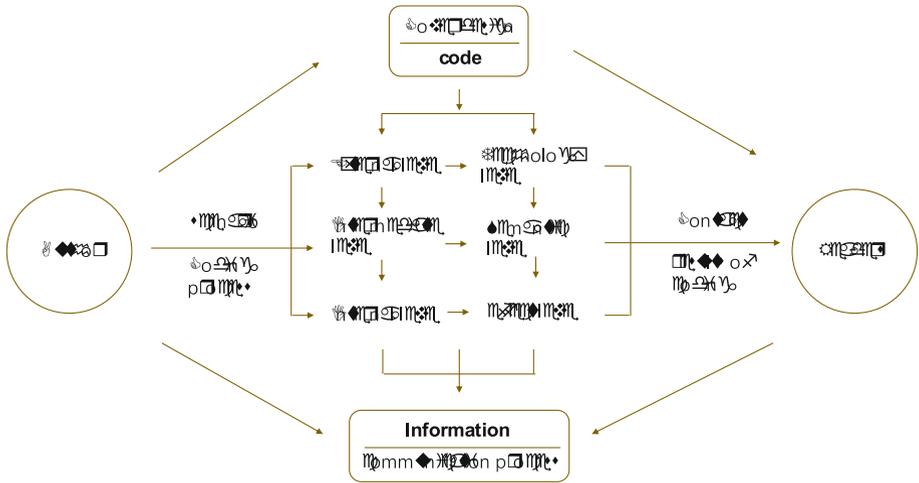


Fig. 1. Creation and communication model of design styles (source of data: Lin Rongtai, Lin Boxian, 2009)

Jakobson [7] has ever proposed six elements for communication model, which are the sender, the recipient, scenario, information, contact and code, which respectively correspond to different functions of communication. In the current research, the cover design styles of the magazine *THE SHORT STORY MAGAZINE* are taken as an example. The sender refers to the cover designer; the recipient refers to the target readers; the scenario refers to the turbulent political and economic environment of the Chinese mainland and the cultural background of surging thoughts in early 20th century; information refers to the information formed at technology and semantic levels; contact refers to the magazine *THE SHORT STORY MAGAZINE* itself; code refers to the sympathy code system formed from the understanding shared by the author and readers. In this way, effective communication and cognition are achieved. Therefore, the communication model of design styles provides corresponding theoretical foundations for the research.

### 3 Methodology

The research attempts to verify the research hypothesis by employing qualitative research methods of historical interpretation and contents analysis and quantitative empirical research methods in the form of a questionnaire survey. First of all, the research collected the covers of 178 issues of the magazine *THE SHORT STORY MAGAZINE* for around 20 years from 1910 to 1932. According to the 4 basic component elements of layout design in the Graphic Design, which are graphic symbol, font design, color rendering and form of composition. Based on these four elements, the author selected 33 typical covers from the 178 issues of magazines and conducted a questionnaire survey among the experts in the first stage.

#### 3.1 The First Stage: Questionnaire Design by Experts

The author invited three experts of design and three experts of arts for a semi-open questionnaire survey. They were asked to classify the cover design styles of 33 issues of magazines and describe each style with five adjectives. In the end, the design styles were classified into six categories, which were Eastern, Western, diversified, gorgeous, minimalist and decorative, and 30 adjectives were proposed to correspond with these styles. The experts were then asked to vote on the works of each style. The cover with the highest voting was selected as the subject of research of a style.

According to the style evaluation matrix of Lin Rongtai, 9 from the 30 adjectives were picked as style attributes corresponding to the technology, semantic and effect levels in the communication model in Fig. 1, which also corresponded to the beauty of form, image and idea and interpreted the process from the coding in artistic creation to the decoding of the readers (see Table 2).

**Table 2.** Evaluation matrix of cover design styles

Artistic Creation				
Designer (Coding)				
	Designer	Design Process	Presentation of Implication	
Technology level	Elaborate (Eastern)	Clear and intelligible (concrete)	Decorative patterns (graphic)	Beauty of form
Semantic level	Strong contrast (conflict)	Traditional interpretation (conventional)	Reformative (modern)	Beauty of image
Effect level	Refined (elegant)	Conservative (regular)	Artistic values (thoughts)	Beauty of idea
	Aesthetic experience	Meaning experience	Emotional experience	
Readers (decoding)				
Style interpretation				

### 3.2 The Second Stage: Question Survey Among the Public

In the expert questionnaire survey in the first stage, the expert panel came up with six styles and nine adjectives from the evaluation matrix. In the second stage of the research, a questionnaire survey was conducted among the public. The nine adjectives and their antonyms were taken as 18 style attributes, which were Eastern vs Western, conventional vs avant-garde, elegant vs vulgar, conflicting vs harmonious, regular vs chaotic, graphic vs stereoscopic, concrete vs abstract, contemporary vs historical, artistic vs worldly. These style attributes were taken as evaluation criteria and labeled as f1 to f9. 108 respondents from different backgrounds were invited to score the works of the six styles based on the 18 style attributes adopting a five-point scale. Taking Eastern vs Western as an example, 1 point represents the strongest Eastern attribute, and 5 points represent the strongest Western attribute. Finally taking preference as the overall evaluation indicator, the respondents were asked to pick a favorite style from the six cover design styles.

The questionnaire was finished online by providing a QR code for the respondents to scan and answer. The website of the questionnaire is:

[https://docs.google.com/forms/d/1JYe4IH-v-6xL3s3D15G4TTY7oECPPfMdq7jzrsxN8E/edit?usp=forms\\_home&ths=true](https://docs.google.com/forms/d/1JYe4IH-v-6xL3s3D15G4TTY7oECPPfMdq7jzrsxN8E/edit?usp=forms_home&ths=true)

### 3.3 Respondents

108 valid questionnaires were obtained, including 39 males (36.1%) and 69 females (63.9%). Their ages: 30 respondents ages below 19 (27.8%), 49 ages between 20 and 29 (45.4%), 7 ages between 30 and 39 (6.4%), 12 ages between 40 and 49 (11.1%), 10 ages above 50 (9.3%). Their professional backgrounds: 97 are related with arts or design (89.8%), 11 with other backgrounds (10.2%). Their education background: 81 bachelors (75%), 10 masters (9.3%) and 17 doctors (15.7%).

## 4 Results and Discussion

### 4.1 Reliability and Validity Analysis

The validity analysis reveals that the KMO coefficient is .691, with a certain value, Sig value is .000, a distinctive strength, the eigenvalue is 12.407, which can interpret 22.976% of the variances of default usage. The factor loading of each question ranges from .344 to .632 and the communality ranges from .119 to .396. The questionnaire presents a good construction validity. The reliability analysis of the questionnaire is made to evaluate the internal consistency of each perspective of the questionnaire and the reduction of Cronbach $\alpha$  coefficient in each dimension after a single question is deleted, which is used as a reference standard for the selection of questions and evaluating the reliability of the questionnaire. The analysis of the questionnaire reveals: the Cronbach $\alpha$  coefficient is .892. The total correlation between each perspective of styles and characteristics and the correction of a single question ranges from .173 to .977. The Cronbach $\alpha$  coefficient after the deletion of a single question ranges from .849

to .905. This indicates that some questions are problematic, but the majority of questions are highly consistent internally, so the setting of most questions is reasonable.

### 4.2 Analysis of Styles

A matrix was established with the original data. The mean score of the six cover designs in 18 attributes was worked out. Through MDS analysis, our purpose was to analyze their distribution by employing the perceptual map and study the cognitive space of six covers with different styles and 18 attributes. The results of MDS analysis reveal that the stress coefficient is .12259, which indicates that the stress coefficient and adaptability are good. The determination coefficient RSQ value is .95035, near 1.0. Therefore, in deploying the original attribute data, it shows a rather high conformity, indicating that two dimensions are suitable for depicting the spatial relation between the six works and 18 attributes.

The two-dimension spatial axial diagram of the six covers is shown as Fig. 2. The included angle of the axial diagram of each attribute was analyzed with multiple regression to obtain the cognitive spatial map of 18 attributes. It reveals: (1) P3, P4, and P6 rest on the third quadrant forming a cluster and showing similarity. (2) P1, P2 and P5 respectively rest on the first, second and fourth quadrant, whose style is distinctively different from that of other works. After drawing a spatial map of attributes, the degree of style attributes of each cover was further explored. The distance between the projection point from each cover to the attribute vector and the original point was worked out. The OD distance in the MSD map was the distance from the cover to the level of attributes. The formula for working out OD distance was shown in Fig. 3. The value of  $b_2/b_1$  was the slope of the vector. The vector projection of D on the original point showed the strength of characteristic, with the vector contributing to the attributes of the works.

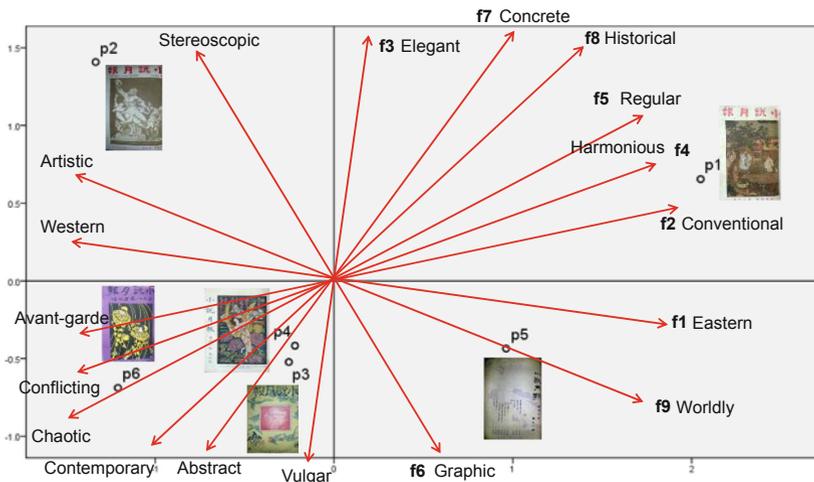
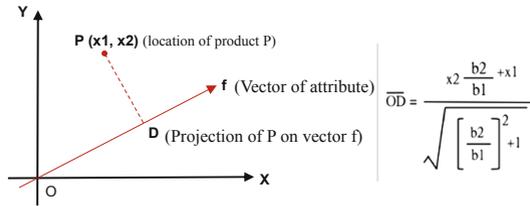


Fig. 2. MDS spatial distribution map of six cover designs and 18 style attributes



**Fig. 3.** Cognitive space distribution of the 9 dances and eight fundamental relations

Table 3 shows the OD distance values of six cover designs in the vectors of 18 attributes. Taking P1 as an example, its distance from Eastern and Western attributes (f1) is the largest, presenting a strong Eastern style, while the distance of P2 is the largest in the opposite direction in the same attributes, showing a strong Western style.

**Table 3.** Distance between projection point from five landscape paintings to style attribute vectors and the original point.

							
		P1 Chinese style	P2 Western style	P3 diversified style	P4 gorgeous style	P5 minimalist style	P6 decorative style
Eastern-Western	F1	1.96	-1.49	-0.19	-0.17	1.01	-1.12
Conventional-avant-garde	F2	2.14	-1.01	-0.36	-0.30	0.85	-1.32
Elegant-vulgar	F3	0.95	1.20	-0.55	-0.44	-0.29	-0.86
Conflicting-harmonious	F4	2.15	-0.76	-0.42	-0.35	0.75	-1.37
Regular-chaotic	F5	2.12	-0.53	-0.47	-0.39	0.65	-1.39
Graphic-stereoscopic	F6	0.48	-1.89	0.32	0.25	0.86	-0.02
Concrete-abstract	F7	1.73	0.37	-0.57	-0.47	0.21	-1.26
Contemporary-historical	F8	1.94	0.00	-0.54	-0.45	0.40	-1.35
Artistic-worldly	F9	1.65	-1.77	-0.03	-0.04	1.06	-0.86

The exploratory factor analysis (EFA) was applied to detect the relations of potential variables in the nine pairs of style attributes. The characteristic value extracted from three factors is bigger or equal to 1, the total variance explained is 57.83. As shown in Table 4, three clusters are formed. One is f7, f8, f2 corresponding to works P1 and P6; one is f6, f9, f1, corresponding to works P2 and P5; one is f4, f5 and f3, corresponding to works P3 and P4. The styles of the three clusters are internally correlated. Based on the scores of style attributes listed in Table 3, we can further learn about the specific style attribute of each cover (see Table 4).

**Table 4.** Factors analysis of 18 style attributes

Style Attributes		Factor Loading			Typical Works			
		Factor 1	Factor 2	Factor 3	Works 1		Works 2	
Concrete-Abstract	F7	.950	-.089	.297		Concrete		Abstract
Contemporary-Historical	F8	-.947	-.093	-.306		Historical		Contemporary
Conventional-Avant-garde	F2	.693	.549	.463		Conventional		Avant-garde
Graphic-Stereoscopic	F6	-.300	.932	.008		Graphic		Stereoscopic
Artistic-Worldly	F9	-.358	-.922	-.080		Worldly		Artistic
Eastern-Western	F1	.364	.745	.547		Eastern		Western
Conflicting-Harmonious	F4	-.209	-.155	-.965		Conflicting		Harmonious
Regular-Chaotic	F5	.383	.127	.914		Chaotic		Regular
Elegant-Vulgar	F3	.420	-.593	.668		Vulgar		Elegant
Characteristic Value		5.21	2.69	1.00				
Explained Variance %		57.83	29.87	11.15				
Cumulative Explained Variance %		57.83	87.71	98.85				

### 4.3 General Evaluation of the Works

The respondents were asked to select a favorite one from the six covers. The result is shown in Table 5, which indicates  $P4 > P1 > P2 > P6 > P5 > P3$ . Based on Table 4, it indicates that the audience favor harmonious, regular and elegant attributes, followed by the concrete, historical and conventional attributes and the stereoscopic, artistic and Western attributes ranked third. The abstract, contemporary and avant-garde attributes ranked fourth. The audience did not accept graphic, worldly and Eastern attributes quite well and disliked the conflicting, chaotic and vulgar attributes.

**Table 5.** Percentage ranking of favorite works

Rank	1	2	3	4	5	6
No	P4>	P1>	P2>	P6>	P5>	P3
Product						
Number of respondents (%)	32 (29.6%)	21 (19.4%)	20 (18.5%)	14 (13%)	12 (11.1%)	9 (8.4%)

## 5 Conclusions and Suggestions

Taking the cover designs of the magazine *THE SHORT STORY MAGAZINE* in the Chinese mainland in the early 20th century from 1910 to 1932 as the subject of research, the research explores the cognitive pattern of the contemporary audience with the cover design styles of magazines under a historical context. The author picked the covers of 33 issues from the covers of 178 issues published in 20 years based on four basic elements of graphic design. The styles were evaluated by experts. 108 respondents were invited to perceive and evaluate the 18 style attributes to explore the cover design styles of magazines under the context of a specific period and the correlation between the evaluation results and preferences. The results of the research are stated as follows.

- a. The covers of 178 issues of the magazine *THE SHORT STORY MAGAZINE* from 1910 to 1932 show inclusive and diversified design styles, which not only include traditional themes of paintings by Chinese scholars and modern ornamentation of the West, but also include the thoughts of patriotism and Western Romanticism. Under the historical background, Chinese mainland received an impact from Western modern design trend. A unique design style was developed gradually in its social environment in the traditional aesthetic tendency of China and the wish to reform and innovate;

- b. After a multiple regression analysis was made on the aforesaid pattern, it reveals that the 18 attributes corresponding to the six styles show certain clustering effect. The conventional, harmonious, regular, historical, concrete and elegant attributes are classified as one category; the stereoscopic, artistic and Western attributes are classified as one category; the avant-garde, conflicting, chaotic, contemporary, abstract and vulgar attributes are classified as one category; the Eastern, worldly and graphic attributes are classified as one category;
- c. Through further evaluation with factors analysis, the 18 attributes can cover the six styles, which indicates that the 18 attributes are valid in the evaluation of the six cover design styles;
- d. According to the favorite works selected by the audience, it reveals that the audience favor the harmonious, regular and elegant attributes best, followed by concrete, historical and conventional attributes. The stereoscopic, artistic, Western, abstract, contemporary and avant-garde attributes cannot arouse many cognitive emotions. And the audience dislike the graphic, worldly, Eastern, conflicting, chaotic and vulgar attributes;
- e. The ranking of average score of preferences reveals that the contemporary audience favor the design works with distinctive characteristics of the times best.

Since design styles are “periodic” [22], they always develop with the society and times according to a certain law and show some relevant cyclic changes. Therefore, by studying the cognitive patterns of the contemporary audience with the cover design styles under the historical context, we can reflect on the design styles at present and infer the future design styles. It can help the establishment of an evolution history of cover design styles of magazines, and provide references for the field of design at present and in the future.

The research only conducts an exploratory research on the contemporary audience’s cognition of the cover design styles of the magazine *THE SHORT STORY MAGAZINE* from 1910 to 1932. The differences of the audience’s overall cognition with the six design styles and the reasons for the difference of cognition of respondents from different backgrounds with the cover design styles of the *THE SHORT STORY MAGAZINE*, etc. need to be further studied.

## References

1. Amabile, T.M.: *Creative Social Psychology*. Shanghai Academy of Social Sciences Press, Shanghai (1987)
2. Chen, C.H., Cheng, Y.P.: A study on side and arm chairs of ming dynasty using the theory of style. *J. Des.* **10**(4), 87–105 (2005)
3. Chen, C.C.: Exploring style cognition and identification of Chinese and western design-using chair designs as example. *J. Des.* **6**(2), 79–99 (2001)
4. Craig, R.T.: Communication theory as a field. *Commun. Theory* **9**(2), 119–161 (1999)
5. Fiske, J.: *Introduction to Communication Studies*. Routledge, London (2010)
6. Zhang, G.Z., Zhou, B.: *Psychological History*. Yang Chih Culture, Taipei (2001)
7. Jakobson, R.: *Language in Literature*. The Belknap Press of Harvard University Press, Cambridge (1987)

8. Zhang, L.G.: *Modern Design Sociology*, p. 85. Hunan Science and Technology Press, Changsha (2005)
9. Lin, R.T.: From service innovation to qualia product design. *J. Des. Sci.* **14**(S), 13–31 (2011)
10. Lin, R., Lin, P.-H., Shiao, W.-S., Lin, S.-H.: Cultural aspect of interaction design beyond human-computer interaction. In: Aykin, N. (ed.) *IDGD 2009. LNCS*, vol. 5623, pp. 49–58. Springer, Heidelberg (2009). [https://doi.org/10.1007/978-3-642-02767-3\\_6](https://doi.org/10.1007/978-3-642-02767-3_6)
11. Edward, L.S.: *A History of Industrial Design*, p. 117. Phaidon Press Limited, Oxford (1983)
12. Peng, L.: A combination of Chinese and western style: binding and design of “fiction monthly” in 1910–1920. *Art Obs.* (08), 101–107 (2009)
13. Hung, P.H., Lin, P.H.: The style of Taiwan cultural and creative products. *J. Arts* (101), 79–105 (2017)
14. Nikolaus, P.: *Pioneers of Modern Design*, p. 84. Museum of Modern Art, New York (1949)
15. Ross, S.D.: *A Theory of Art*, pp. 41–45. State University of New York, New York (1982)
16. Nanaro, S.: *Introduction to Design*, p. 36. Yifengtang Publisher, Taipei (1990)
17. Sparke, P.: *An Introduction to Design & Culture in the 20th Century*, p. 74. Unwin Hyman Ltd., London (1986)
18. Kagiwata, W.C.: Edited and translated by Editorial Department: *Design History*. Yi feng tang Publisher, Taipei (1991)
19. Yen, H.Y., Lin, P.S., Lin, R.T.: Qualia characteristics of cultural and creative products. *J. Kansei* **2**(1), 34–61 (2014)
20. Yang, Y.: *A Illustrated Book of Chinese New Literature (I)*, p. 140. People’s Publishing House (1998)
21. Funai, Y.K.: *The Hundredth Monkey*, pp. 94–95. Taipei, Hong’s Foundation (1997)
22. Feng, Y.H., Yang, Y.F.: The research of forming factors of the design styles. *J. Des.* **11**(3), 99–115 (2006)