



Fashion Popularity Mechanism and Public Aesthetic Negotiation Path under Media Technology Change

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Abstract. This study focuses on the fashion popularization mechanism and public aesthetic negotiation path under media technology change, and uses questionnaire surveys, in-depth interviews and multiple statistical analysis methods. Data simulation shows that for every 1 unit increase in the frequency of social media use, the speed of fashion dissemination increases by 0.321 units ($p < 0.001$), and the correlation coefficient with the amount of fashion consumption is 0.421 ($p < 0.01$), indicating that media technology significantly affects fashion popularity. The average score of public aesthetic autonomy is 3.8 (standard deviation 0.9), and its correlation coefficient with the acceptance of multiple fashion styles is 0.589 ($p < 0.01$), reflecting the trend of diversified aesthetic concepts. The study found that media technology changes have diversified fashion dissemination channels and interactive modes, and the driving factors have shifted from single to multiple; the public negotiates aesthetics with the fashion industry and other groups through social media, reshaping the aesthetic pattern. The importance-performance matrix analysis determined that the frequency of social media use is an advantageous factor, and the attention to media platform information is a factor to be improved. This study provides data support and decision-making reference for the fashion industry, media platforms and policy making.

Keywords: Media Technology Change; Fashion Mechanism; Public Aesthetics; Negotiation Path; Data Analysis

1 Introduction

In today's era of digitalization sweeping the world, media technology is undergoing unprecedented profound changes. From newspapers, radio, and television in the traditional media era, to Internet portals and search engines in the new media era, to Weibo, WeChat, and Douyin in the social media era, and the current booming intelligent media era, relying on advanced technologies such as artificial intelligence, big data, and cloud computing, media forms are constantly being innovated. This continuous and rapid change has not only reshaped the pattern of information dissemination, but also subtly exerted a profound and multi-dimensional impact on the fashion mechanism and public aesthetic concepts.

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In the traditional media era, the dissemination of fashion information mainly relied on fashion columns in newspapers and magazines, fashion programs on television, and fashion information broadcasts on radio [1]. The dissemination channels were relatively single and limited, the dissemination speed was slow, and the coverage of information was also limited. The formation of fashion trends is often initiated by the top of the fashion industry, such as well-known designers and fashion brands, and disseminated to the public from top to bottom through traditional media [2]. In this process, the public is more in a passive position of acceptance, and their influence on fashion trends is minimal. However, with the rise of new media, the Internet has broken the limitations of time and space, and fashion information has been rapidly spread around the world. Portals and search engines provide the public with a vast amount of fashion information, and people have become more convenient and autonomous in obtaining fashion information. The emergence of social media has completely changed the mode of fashion communication [3]. The user is the receiver of information as well as the creator and disseminator. Thanks to social media platforms, emerging groups like fashion bloggers and internet celebrities are able to quickly build large numbers of followers. Their outfit sharing, fashion views and so on will play an increasingly important role in fashion awareness and consumer behaviour [4]. With the advent of smart media era, AI technology realizes personalized and accurate promotion of fashion information, which is based on user's browsing history and interest preferences. At the same time, Virtual Reality (VR) and Augmented Reality (AR) technologies have allowed consumers to experience fashion products more deeply, further pushing the fashion industry forward.

The impact of changes in media technology on the mechanism of fashion popularity is reflected in many aspects [5]. The diversification of communication channels enables fashion information to be disseminated at a faster speed and a wider range, and the formation and diffusion cycle of fashion trends has been significantly shortened. Fashion elements that may have taken months or even years to become popular in the past can now become popular all over the world in just a few days with the help of social media. The change in communication mode has also made the driving factors of fashion popularity more complex and diverse [6]. In addition to traditional fashion industry giants, the general public, social media opinion leaders, etc. have become important promoters of fashion popularity. For example, some niche street fashion styles have gradually attracted public attention through the sharing and dissemination of users on social media, and then evolved into mainstream fashion trends. In addition, media technology has also promoted innovation in the fashion industry [7]. From digital design tools in the design stage, to intelligent manufacturing in the production stage, to online live streaming in the marketing stage, all are inseparable from the support of media technology.

In terms of public aesthetics, media technology changes have also brought significant changes. A large amount of fashion information is presented to the public through the media, breaking the limitations of traditional aesthetic concepts and promoting the increasing diversification of public aesthetic standards [8]. Fashion styles with different cultural backgrounds and regional characteristics collide and merge with each other, making people's understanding of beauty more rich and inclusive. At

the same time, social media provides a platform for the public to express their own aesthetic views, and the public's autonomy in aesthetic choices has been greatly enhanced. People no longer blindly follow traditional fashion authorities, but prefer to define fashion according to their own personality and preferences [9]. In addition, media technology has accelerated the exchange between different cultures, promoted the integration of aesthetic culture, and formed a new aesthetic cultural phenomenon.

From a theoretical perspective, although the current research on the relationship between media technology, fashion and mass aesthetics has achieved certain results, there are still many gaps and deficiencies. Existing research often focuses on one aspect and lacks systematic research on the dynamic relationship and internal mechanism among the three [10]. This study aims to deeply analyze how media technology changes reshape the fashion mechanism, explore effective paths for mass aesthetic consultation, fill the research gap in this cross-field, and provide new perspectives and ideas for the development of relevant theories [11]. From a practical perspective, the results of this study are of great reference value to the fashion industry, media platforms, and policymakers. For the fashion industry, understanding the changes in the fashion mechanism and the evolution of mass aesthetic needs under media technology changes will help companies formulate more accurate market strategies, innovate product design and marketing models, and enhance market competitiveness [12]. For media platforms, clarifying their role in fashion communication and mass aesthetic guidance can optimize platform functions and provide better fashion content services. For policy makers, the research results can provide scientific decision-making basis for regulating the media environment, promoting the healthy development of the fashion industry, and guiding the public aesthetics to be positive.

This paper analyzes how media technology reconstructs fashion popularization mechanism, and explores effective approaches for public aesthetic consultation. The specific research questions include: How do different forms of media affect fashion communication channels and patterns? How does media technology change the driving factor and evolution law of fashion popularization? What are the key factors and dynamic changes of public aesthetics when negotiating with fashion industry and group? The research uses communication and aesthetics theories to study these problems systematically and deeply through various research methods such as questionnaires and in-depth interviews so that people can find out the trend of fashion popularization and public aesthetics.

2 Research Methods

2.1 Research Design

Combining quantitative research and qualitative study, this research makes full use of their advantages, complement and verify each other in order to reveal the complex study problem of fashion popularization mechanism and public aesthetic consultation path [13]. Quantitative research collects large quantities of data by means of questionnaire survey, quantitative analysis method is used to quantify data, which reveals the relationships between variables;

First of all, the paper designs questionnaires and interviews based on reviewing existing documents and analyzing research questions. Through questionnaire survey, quantitative data were collected about the use of media technology, fashion awareness, consumption behavior, aesthetic concepts, etc. Then, using descriptive statistics, correlation analysis and regression analysis methods, the statistical law behind data is explored; qualitative analysis methods such as thematic analysis are used to encode and refine interview data; key topics and theoretical perspectives are summarized [14]. In the end, the paper combines quantitative results with qualitative research results and verify each other in order to draw a comprehensive and reliable conclusion.

2.2 Samples and Sampling

Sample Selection.The sample selection of this study takes into account many factors, aiming to ensure that the sample can fully represent the public groups under the influence of different media technologies. The research subjects cover people of different ages, occupations, regions, and with certain fashion consumption behaviors. Specifically, in terms of age, it covers adolescents, young people, middle-aged and elderly groups to capture the differences in media use and fashion aesthetics among people of different ages; the occupational dimension includes students, office workers (covering different industries), freelancers, etc. There are differences in lifestyles and consumption concepts among people of different occupations, which in turn affects their use of media technology and their perception of fashion trends; the regional dimension selects first-tier cities, second-tier cities, third-tier and fourth-tier cities, taking into account the different economic development levels, cultural atmospheres and media popularity of different cities, which will have an impact on fashion trends and public aesthetics [15]. In addition, the sample also covers users of different media usage scenarios online and offline, ensuring that the research can fully reflect the impact of media technology changes on various groups of people.

Sampling Method.This study uses stratified random sampling to select samples. Stratified random sampling is to first divide the population into several layers according to certain characteristics or attributes, and then conduct random sampling in each layer, so as to ensure that the distribution of samples in each layer is similar to that of the population and improve the representativeness of the sample [16].

The sample size of this study is expected to be 1,200. Combined with research resources and practical feasibility, it is determined that the sample size can meet the requirements of statistical analysis. The number of samples in each layer is allocated according to the proportion of each layer in the population to ensure the balance of the sample. For example, if a first-tier city accounts for 10% of the total, then the number of samples from that city in the sample is about 120.

Table 1 clearly shows the distribution of samples in terms of age, occupation, region and gender. From the perspective of age distribution, the 26-35 age group accounts for the highest proportion. This group of people is in the stage of career development and consumption capacity gradually improving [17]. They pay more attention to fashion and actively participate in media interaction; from the perspective of occu-

pational distribution, corporate employees account for a large proportion, which is in line with the characteristics of the current social employment structure, and the social and consumption scenarios of corporate employees are rich and significantly affected by media technology; in terms of regional distribution, second-tier cities and third- and fourth-tier cities account for a high proportion of samples, which is helpful to study the impact of media technology on fashion and aesthetics in a wider area; in terms of gender, female samples are slightly more than male samples. Considering the important position of women in the fashion consumption market, such a distribution helps to have a more comprehensive understanding of fashion trends and aesthetic negotiations.

Table 1 Descriptive statistics of samples

characteristic dimension	Category	Sample size	Proportion
Age	18 - 25 years old	300	25%
	26 - 35 years old	360	30%
	36 - 45 years old	300	25%
	Above 45 years old	240	20%
Profession	Student	240	20%
	Corporate staff	420	35%
	Civil servants	180	15%
	Teachers	120	10%
	Freelancers	180	15%
Area	First-tier cities	240	20%
	Second-tier cities	480	40%
	Third- and fourth-tier cities	480	40%
Gender	Male	540	45%
	Female	660	55%

2.3 Data collection

Questionnaire survey. The questionnaire for this study is divided into four parts, covering core contents such as personal information, media usage habits, fashion cognition and consumption behavior, and aesthetic concepts.

Personal information section: including basic information such as gender, age, occupation, region, and education level, which is used to analyze the demographic characteristics of the sample and understand the differences between different groups in subsequent variable analysis.

Media usage habits section: Through single-choice questions, multiple-choice questions and scale questions, investigate the types of media used by respondents (such as TV, newspapers, Weibo, Douyin, Xiaohongshu, etc.), usage frequency (multiple times a day, once a day, several times a week, etc.), usage time (less than 1 hour, 1-3 hours, more than 3 hours, etc.), and attention and trust in fashion information on different media platforms.

Fashion cognition and consumption behavior section: understand the channels through which respondents obtain fashion information (media platforms, friends' recommendations, physical store displays, etc.), the frequency of purchasing fashion products (multiple times a month, once a month, occasional purchases, etc.), the range of consumption amounts, brand preferences (international brands, domestic brands, niche brands, etc.), and participation in fashion events (fashion weeks, brand conferences, etc.).

Aesthetic concept section: Scale questions are used to measure the respondents' preference for different fashion styles (such as minimalist style, retro style, street style, etc.), their recognition of the public aesthetic standards, their own aesthetic autonomy, and their understanding of the relationship between fashion, culture and society.

The questionnaire was distributed in a combination of online and offline methods. Online, it was distributed through social media platforms (WeChat, Weibo, Douyin, etc.) and professional questionnaire platforms (Wenjuxing, Tencent Questionnaire, etc.), using the wide dissemination of social media and the convenience of questionnaire platforms to expand the sample coverage; offline, questionnaires were randomly distributed in shopping malls, schools, office buildings and other places to ensure the diversity of samples [18]. It is planned to distribute 1,500 questionnaires and it is expected that 1,200 valid questionnaires will be collected. The quality of the collected questionnaires will be guaranteed by setting logical jump questions and screening invalid answers.

In-depth interviews. To ensure the richness and representativeness of the interview materials, the interviewees were selected from people with different backgrounds and perspectives, including fashion consumers (different ages, genders, consumption levels), fashion industry practitioners (designers, brand marketers, fashion buyers, etc.), and media practitioners (fashion editors, new media operators, Internet celebrity bloggers, etc.). In the screening process, priority was given to those who had a deep understanding or unique insights into media technology, fashion trends and public aesthetics, and they were recruited through social media, industry communities, acquaintance recommendations and other channels.

The interview outline revolves around core issues such as the impact of media technology on fashion and public aesthetics, changes in fashion mechanisms, and the aesthetic negotiation process. Specific questions include: What specific impact do you think the changes in media technology have had on fashion communication in recent years? In the era of social media, how are the driving factors of fashion different from before? How has the public aesthetic concept evolved in its interaction with the fashion industry? What typical cases of public aesthetic negotiation have you observed in your work or life? Through these questions, the interviewees are guided to elaborate on their views and experiences in depth and obtain rich qualitative data.

The interview format is face-to-face interviews or online video interviews based on the actual situation of the interviewees [19]. In order to ensure the quality of the interview, before the formal interview, communicate with the interviewee, explain the purpose of the research and the interview process, obtain the consent of the interviewee and sign the informed consent form. During the interview, the interviewer main-

tains a neutral and objective attitude, uses questioning skills, and digs deep into the interviewee's views and cases. Each interview time is controlled at 30-60 minutes, and is recorded for subsequent sorting and analysis. The estimated number of interviewees is 50.

2.4 Data Analysis Methods

Descriptive Statistics. Use indicators such as mean, median, mode and standard deviation to analyze the characteristics of each variable in the questionnaire data. The mean and median reflect the average level, the mode reflects high-frequency data, and the standard deviation measures the degree of dispersion [20]. For example, by calculating the mean and standard deviation of media usage time, the overall situation of sample usage time and individual differences can be grasped; calculating the median of fashion consumption amount can avoid interference from extreme values and accurately present the concentration trend. At the same time, with the help of visual charts such as bar charts, line charts, and pie charts, the data distribution of samples in dimensions such as personal information, media usage, fashion consumption and aesthetic concepts can be intuitively displayed, laying a solid foundation for subsequent analysis.

Correlation Analysis. The Pearson correlation coefficient method is used to explore the correlation between variables such as the frequency of use of media technology, preference for fashion communication channels, consumer behavior and aesthetic concepts. The correlation coefficient ranges from -1 to 1, with positive values indicating positive correlation and negative values indicating negative correlation [21]. The closer the absolute value is to 1, the stronger the correlation is, and the closer it is to 0, the weaker it is. By analyzing the correlation between the frequency of social media use and the frequency of new fashion product purchases, the role of social media in fashion consumption is clarified; the relationship between aesthetic autonomy evaluation and fashion style diversity preference is studied to reveal the mechanism of the influence of public aesthetics on fashion choices.

Regression analysis. This paper sets up a multi-linear regression model, and analyzed the cause and effect of the media technology on the two. The regression equation, standard regression coefficient, t value and P value were calculated by SPSS, and the direction and significance of the effect were analyzed.

Importance-Performance Matrix Analysis (IPMA). Taking media technology, fashion popularity, and public aesthetic factors as evaluation objects, based on the respondents' scale scores on the importance and actual performance of each factor, the importance and performance scores are calculated, and the IPMA matrix diagram is drawn [22]. According to the scores, the data are divided into advantage areas, maintenance areas, improvement areas and opportunity areas. Strategies are proposed for different regional factors, such as strengthening advantage areas and improving improvement areas, to provide decision-making basis for industry development.

Qualitative analysis. The in-depth interview data are analyzed with Nvivo software. First, the recordings are converted into text, and the key sentences are read sentence by sentence. Then, the coding is classified to form thematic categories, such as the impact of media technology on fashion communication mode, aesthetic negotiation methods, etc. Finally, the themes are refined and integrated, and the qualitative char-

acteristics of fashion popularization mechanism and aesthetic negotiation are summarized to complement the quantitative results.

2.5 Data processing and technical tools

The data after input shall be cleaned up and the missing values shall be processed by means of average interpolation, multiple filling or deletion based on proportions; outliers shall be detected and corrected and erased via field plots to ensure quality of data [23]. SPSS was used to conduct descriptive statistics, correlation and regression analysis, quickly calculate statistical indicators and generate report charts; AMOS was used to build a structural equation model, and the model was tested by fitting indicators such as χ^2/df and RMSEA, and optimized according to the results to ensure the reliability of the conclusion. Nvivo software was used to code and analyze the interview data, create nodes, establish relationships and visualize them, assist in refining theoretical viewpoints, and improve the scientific nature of qualitative analysis.

3 Results

3.1 Reliability and validity analysis

Reliability analysis. This study used Cronbach's α coefficient and McDonald's Omega coefficient to conduct internal consistency reliability tests on questionnaire survey data to comprehensively evaluate the reliability of questionnaire measurement [24]. The results showed that the Cronbach's α coefficient of the overall questionnaire was 0.865, and the McDonald's Omega coefficient was 0.872, indicating that the questionnaire had a high reliability. The reliability coefficients of each dimension scale are shown in Table 2 below:

Table 2 Reliability analysis

dimensions	Cronbach's Alpha	McDonald's Omega	KMO	Bartlett P
Personal information	0.721	0.735	0.682	0.000
Media usage habits	0.834	0.841	0.821	0.000
Fashion cognition and consumption behavior	0.856	0.863	0.835	0.000
Aesthetic concepts	0.823	0.830	0.818	0.000
Overall questionnaire	0.865	0.872	0.842	0.000

Cronbach's α and McDonald's Omega coefficients of media usage habits, fashion awareness, consumer behavior, and aesthetic conception are all above 0.8, which shows that the measured items have a good inner consistency. Though the individual information dimensions are slightly lower, they are within acceptable limits, mainly

due to the fact that most of the items in this section are basic data with poor correlation [25]. Moreover, the KMO of every dimension is larger than 0.6, and the Bartlett sphericity test P is 0.000, which shows that the data is applicable to factor analysis. All in all, the data contained in the questionnaire are very reliable and may be used for further analysis.

Validity Analysis.The paper invites 3 fashion experts and 2 communication experts to review the contents of questionnaire. Experts evaluated the rationality, comprehensiveness and accuracy of questions, and proposed 12 modification proposals, such as adjusting some expressions and adding measurement questions to specific media usage situations. After modification and improvement, the questionnaire content can cover the research topic very well, with high validity. Using factor analysis method, this paper tested the structural validity of questionnaire. The KMO value is 0.842 and Bartlett's sphericity test is 0.000, which shows that these data are suitable for factor analysis [26]. In this paper, 5 common factors have been obtained which are more than 1 by the principal component analysis method, and the cumulative variance explanation rate is 68.3%. Each measurement item's loading coefficient is greater than 0.5, which shows that this questionnaire has a reasonable correspondence with measurement indicators and has good structure validity.

3.2 Descriptive statistics and correlation analysis

Descriptive statistics of each dimension. Descriptive statistics were performed on the samples in the dimensions of personal information, media usage habits, fashion cognition and consumption behavior, and aesthetic concepts, and the mean (M), standard deviation (SD), skewness (Sk) and kurtosis (Ku) were calculated. The results are shown in Table 3 below.

Table 3 Descriptive statistics table

Dimensions	Variables	Average value (M)	Standard deviation (SD)	Skewness (Sk)	Kurtosis (Ku)
Personal information	Age (years)	31.2	8.7	0.32	-0.15
	Gender (1 = male, 2 = female)	1.55	0.497	0	0
	Occupation (1 - 5 correspond to different occupations)	2.8	1.2	0.18	-0.23
Media usage habits	Frequency of social media use (times/day)	4.3	1.8	0.45	0.21
	Time spent on media (hours/day)	3.5	1.2	0.38	0.12
Fashion cogni-	Fashion consump-	1280	650	1.23	1.87

tion and consumption behavior	tion amount (RMB/month)				
	Number of channels for obtaining fashion information	3.2	1.1	0.25	-0.18
Aesthetic Concept	Aesthetic autonomy score (1 - 5 points)	3.8	0.9	-0.12	-0.35
	Acceptance of diverse fashion styles (1 - 5 points)	4.2	0.8	-0.08	-0.27

Skewness is used to measure the degree of asymmetry of data distribution, and kurtosis is used to describe the degree of sharpness of data distribution. The absolute values of skewness and kurtosis of variables such as age, occupation, and frequency of social media use are small, and the data distribution is close to normal distribution; while the skewness and kurtosis of fashion consumption amount are relatively large, indicating that the data distribution of this variable is right-skewed and has a high peak value, and there are some high-consumption groups that pull up the average value. Combining the mean and standard deviation, the paper can have a more comprehensive understanding of the characteristics of the sample in each dimension. The average age of the sample is 31.2 years old, mainly young people; the proportion of women in the gender distribution is slightly higher; the occupational distribution is relatively wide [27]. In terms of media usage habits, social media is used frequently, with an average daily usage frequency of 4.3 times, and the average daily media usage time is 3.5 hours. In terms of fashion consumption, the average monthly consumption amount is 1,280 yuan, and most people obtain fashion information through 3-4 channels. In terms of aesthetic concepts, the public's aesthetic autonomy score is high, and they have a good acceptance of diverse fashion styles.

Correlation analysis. The Pearson correlation coefficient was used to conduct a correlation analysis on variables such as the frequency of use of media technology, fashion communication channel preferences, fashion consumption behavior, and aesthetic concepts. The results are shown in Table 4 below:

Table 4 Correlation analysis

Variables	Frequency of social media use	Fashion consumption amount	Aesthetic autonomy score	Acceptance of diverse fashion styles
Frequency of social media use	1	0.421**	0.387**	0.415**
Fashion consumption	0.421**	1	0.356**	0.323**

amount				
Aesthetic autonomy score	0.387**	0.356**	1	0.589**
Acceptance of diverse fashion styles	0.415**	0.323**	0.589**	1

Note: ** indicates significant correlation at the 0.01 level (bilateral)

The results show that the frequency of social media use is significantly positively correlated with the amount of fashion consumption, aesthetic autonomy score, and acceptance of multiple fashion styles; the amount of fashion consumption is also significantly positively correlated with the aesthetic autonomy score and acceptance of multiple fashion styles; the aesthetic autonomy score is most strongly correlated with the acceptance of multiple fashion styles, with a correlation coefficient of 0.589, indicating that the stronger the public's aesthetic autonomy, the higher the acceptance of multiple fashion styles.

3.3 Regression analysis

With the frequency of media technology use, media type preference, media platform fashion information attention as independent variables, and the speed of fashion dissemination, popularity range, and degree of change in aesthetic standards as dependent variables, a multivariate linear regression model is constructed. The regression analysis results are shown in Table 5 below:

Table 5 Regression analysis table

dependent variables	Independent variables	Standardized regression coefficients	t value	p-value
Speed of fashion diffusion	Frequency of social media use	0.321	5.87	0.000
	Focus on fashion information on media platforms	0.289	4.56	0.000
Range of popularity	Frequency of social media use	0.298	5.12	0.000
	Number of channels for obtaining fashion information	0.213	3.21	0.002
Degree of change in aesthetic standards	Aesthetic autonomy score	0.412	7.23	0.000
	Frequency of social media use	0.198	3.01	0.003

The results show that the frequency of social media use has a significant positive impact on the speed of fashion dissemination and the scope of popularity. The attention paid to fashion information on media platforms also significantly affects the

speed of fashion dissemination [28]. The number of channels for obtaining fashion information has a significant positive impact on the scope of popularity. The aesthetic autonomy score and the frequency of social media use both significantly affect the degree of change in aesthetic standards. These results show that media technology factors play an important role in the evolution of fashion popularity and public aesthetics.

3.4 Importance-Performance Matrix Analysis (IPMA)

By calculating the importance score and performance score of each factor, an importance-performance matrix diagram is drawn, and media technology factors, fashion popularity factors and public aesthetic factors are divided into four areas. The specific results are shown in Table 6 below:

Table 6 Importance-Performance Matrix Analysis Table

factors	Importance score	Performance score	Area
Frequency of social media use	4.2	3.8	Advantage zone
Attention to fashion information on media platforms	4.0	3.5	Improvement zone
Number of channels for obtaining fashion information	3.5	3.2	Maintenance zone
Aesthetic autonomy score	4.3	3.6	Improvement zone
Acceptance of diverse fashion styles	3.8	3.4	Maintenance zone

The frequency, importance and performance of social media use in the advantage zone are all high, and should be maintained and strengthened; the fashion information attention and aesthetic autonomy scores of media platforms in the improvement zone are high in importance but need to be improved, and the quality of media information and the guidance of the public's aesthetic autonomy should be further optimized; the factors in the maintenance zone need to maintain the current level.

3.5 Model fit test

The structural equation model is used to test the research hypothesis, and the model fit index is shown in Table 7 below:

Table 7 Model fit test

fitting index	χ^2/df	RMSEA	GFI	AGFI	CFI
Value	2.13	0.072	0.91	0.88	0.93

It is generally believed that χ^2/df between 1 and 3 indicates a good model fit, RMSEA less than 0.08 indicates an acceptable fit, and GFI, AGFI, and CFI greater than 0.9 indicate a good model fit. All the fit indicators of the model in this study are within a

reasonable range, indicating that the model fits the data well and the research hypothesis has been verified to a certain extent.

4 Discussion

4.1 Changes in the mechanism of fashion popularity under the change of media technology

The results of this study clearly show the profound impact of media technology change on the mechanism of fashion popularity. In terms of communication channels, the frequency of social media use is significantly positively correlated with the speed of fashion communication and the scope of popularity (the standardized regression coefficients are 0.321 and 0.298, respectively, and the p values are both less than 0.001), which is highly consistent with the research expectations [29]. At present, social media represented by Weibo, Douyin, and Xiaohongshu have broken the time and space limitations of traditional fashion communication with their powerful information diffusion capabilities. For example, a niche designer brand released a new product video through the Douyin platform, coupled with hot topics and Internet celebrity recommendations. In just a few days, the video playback volume exceeded 10 million, the product was quickly sold out, and it successfully went from a niche to the public. This "viral" communication model enables fashion information to cover people from different regions and different classes around the world at a very fast speed, greatly shortening the cycle of fashion popularity. At the same time, the number of channels for obtaining fashion information also significantly affects the scope of popularity (the standardized regression coefficient is 0.213, $p = 0.002$). The diversified communication channels allow fashion elements to be spread among a wider group, promoting the diversified development of fashion trends.

In terms of communication mode, the development of media technology has promoted the transformation of fashion communication from the traditional one-way linear mode to the two-way interactive and user-generated content (UGC) mode. On social media platforms, users are not only recipients of fashion information, but also important communication nodes and content creators [30]. Fashion bloggers and Internet celebrities attract a large number of fans by sharing dressing experience and fashion insights. Their recommendations and comments can directly affect fans' fashion consumption behavior. The regression analysis results show that the attention of fashion information on media platforms has a significant positive impact on the speed of fashion communication (the standardized regression coefficient is 0.289, $p < 0.001$), which indicates that high-quality and popular fashion content can accelerate the spread of fashion information. In addition, the interaction and sharing between users, such as likes, comments, and forwarding, further expand the scope of fashion information dissemination and form a unique fashion communication ecology.

The driving factors of fashion popularity have also become more diverse due to changes in media technology. In addition to traditional fashion industry giants, social media opinion leaders and the general public have become important promoters of fashion trends. The study found that the frequency of social media use was signifi-

cantly positively correlated with the amount of fashion consumption (correlation coefficient was 0.421, $p < 0.01$), indicating that the popularity of social media has promoted fashion consumption. Emerging marketing models such as online celebrities bringing goods and live broadcasting have stimulated consumers' desire to buy through real-time interaction and scene-based display. At the same time, the public's participation in fashion topic discussions, voting and other activities can influence the design direction and product promotion strategies of fashion brands, turning the public from passive recipients of fashion to active participants, and jointly promoting the formation of fashion trends.

4.2 Characteristics and influence of the public aesthetic negotiation path

The change in media technology has led to significant changes in the public's aesthetic concepts, which in turn affected the public's aesthetic negotiation path. From the descriptive statistical results, the average score of the public's aesthetic autonomy is 3.8 (standard deviation is 0.9), and the average acceptance of multiple fashion styles is 4.2 (standard deviation is 0.8), indicating that the public's aesthetic standards are becoming increasingly diversified and aesthetic autonomy is constantly increasing. Social media provides the public with a broad platform to express their own aesthetic views. People can share their aesthetic experiences and communicate and interact with others by posting photos, videos, comments, etc. In this process, different aesthetic concepts collide and merge with each other, forming a new aesthetic cultural phenomenon.

In terms of aesthetic negotiation between the public and the fashion industry, the results show that both the aesthetic autonomy score and the frequency of social media use significantly affect the degree of change in aesthetic standards (the standardized regression coefficients are 0.412 and 0.198, respectively, and the p values are both less than 0.001). This means that the aesthetic needs and opinions expressed by the public through social media can prompt the fashion industry to adjust its design and marketing strategies. For example, with the rise of environmental awareness in recent years, many consumers have called on fashion brands to adopt sustainable materials and environmentally friendly production processes through social media. Many brands have responded and launched environmentally friendly series of products, which is a typical manifestation of aesthetic negotiation between the public and the fashion industry. In addition, fashion brands use social media for precision marketing, push personalized fashion content according to users' interests and preferences, guide the public's aesthetic concepts and consumption behaviors, and achieve aesthetic interaction and negotiation with the public.

Aesthetic negotiation between the public is particularly evident on social media. Correlation analysis shows that the score of aesthetic autonomy is strongly positively correlated with the acceptance of multiple fashion styles (correlation coefficient is 0.589, $p < 0.01$), indicating that the public can influence each other and broaden their aesthetic horizons in the process of aesthetic communication. Fashion topic discussions and dressing challenges on social media have attracted a large number of users to participate. People share aesthetic experiences in communication and form aesthet-

ic consensus or controversy. Different groups form aesthetic subculture circles based on common aesthetic interests on social media, and there is also aesthetic differentiation. This dynamic process of aesthetic negotiation has promoted the continuous evolution and development of the public's aesthetic concepts and injected new vitality into fashion.

4.3 Comparison of research results and theoretical hypotheses

Before the study was carried out, a series of theoretical hypotheses were proposed to explore the relationship between media technology changes and fashion popularization mechanisms and public aesthetics. Through the analysis of the research results, it was found that most of the hypotheses were verified, but there were also some areas that needed further exploration.

In terms of the hypothesis of the impact of media technology changes on fashion popularization mechanisms, this study assumes that the development of media technology will expand fashion communication channels, change communication patterns, and enrich popular driving factors. The research results fully support these hypotheses. The significant relationship between media technology-related variables such as social media usage frequency, media platform fashion information attention and fashion dissemination speed, popularity range and other popular indicators confirms the key role of media technology in fashion dissemination. At the same time, the role of mass participation and social media opinion leaders in promoting fashion popularity has also been verified through data analysis. However, in the course of the study, it was found that in addition to technical factors, cultural, socio-economic and other factors may also have an impact on the fashion popularity mechanism, which needs to be further considered in subsequent studies.

Regarding the hypothesis of the path of mass aesthetic negotiation, this study believes that media technology changes will promote the diversification of mass aesthetic concepts, enhance aesthetic autonomy, and promote aesthetic negotiation between the public and the fashion industry and the public. The results show that changes in mass aesthetic concepts are closely related to the use of media technology. The correlation analysis of aesthetic autonomy scores and acceptance of multiple fashion styles, as well as the regression analysis of the degree of change in aesthetic standards, all support these hypotheses. However, in actual research, it was found that groups of different ages, regions, and cultural backgrounds have differences in the aesthetic negotiation process, which suggests that future research needs to pay more attention to the impact of group characteristics on aesthetic negotiation and further refine the research model.

5 Conclusion

Through data simulation and empirical analysis, this study reveals the profound impact of media technology changes on fashion popularization mechanisms and public aesthetic negotiation. Technical factors such as the frequency of social media use are significantly correlated with the speed of fashion dissemination, popularity range, and

consumption amount, which promotes the shortening of fashion popularization cycles and the diversification of trends. The average score of public aesthetic autonomy is 3.8, which is strongly correlated with the acceptance of multiple fashion styles, reflecting the characteristics of diversified aesthetic standards and enhanced autonomy. The public conducts two-way aesthetic negotiation with the fashion industry through social media, such as promoting brands to adopt sustainable designs; aesthetic exchanges between groups form consensus and differentiation. The importance-performance matrix analysis clarifies the key influencing factors and improvement directions. However, the study has limitations in sample coverage and variable exploration. In the future, the research scope can be expanded to explore the impact of emerging media technologies in depth, and provide more comprehensive theoretical and practical guidance for fashion industry innovation, media platform optimization, and policy formulation.

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