Perpetuating sex gaze in the digital era: A study of the female figure in AIGC images in Chinese social media

Fang Xie
School of Humanities and Law, Jiangsu Ocean University, China ✉ ⓘ

Jun Tan
School of Literature and Journalism and Communication, University of Qingdao, China ✉ ⓘ

Paloma Díaz-Soloaga
Faculty of Communication Sciences at the Complutense University of Madrid, Spain ✉ ⓘ

ᴱᴺᴳ **Abstract.** Nowadays, AIGC technology expands the channels of image generation, offering new avenues for content creation on social media platforms. This article uses the Chinese platform Weibo as a case study to analyze the gender-conscious issues reflected in AIGC images. The findings reveal that AIGC images on social media platforms such as Weibo prominently perpetuate stereotypes of women, a phenomenon that has not diminished with technological advancements, but has instead further marginalized women. The study concludes that ethical concerns around AIGC image content need to be addressed beyond AI platforms, advocating for the establishment of a governance community that incorporates diverse stakeholder interventions, thereby laying the groundwork for a more fair and equitable AI landscape.

Keywords: AIGC image, Weibo, female figure, Artificial Intelligence Ethics.

ᴱˢ Perpetuación de la mirada sexual en la era digital: Un estudio sobre la figura femenina en las imágenes AIGC en las redes sociales chinas

Resumen. Ahora, la tecnología AIGC amplía los canales de generación de imágenes y ofrece nuevas vías para la creación de contenidos en las plataformas de redes sociales. Este artículo toma como estudio de caso la plataforma china Weibo para analizar las cuestiones de género reflejadas en las imágenes AIGC. Los hallazgos muestran que las imágenes AIGC en plataformas sociales como Weibo perpetúan de manera destacada los estereotipos sobre las mujeres, un fenómeno que no ha disminuido con los avances tecnológicos, sino que más bien ha intensificado su marginación. El estudio concluye que las preocupaciones éticas en torno al contenido visual generado por AIGC deben abordarse más allá de las propias plataformas de IA, y aboga por la creación de una comunidad de gobernanza que incorpore la intervención de diversos actores, sentando así las bases para un ecosistema de IA más justo y equitativo.

Palabras clave: imagen AIGC, Weibo, figura femenina, ética de la inteligencia artificial.

1. Introduction

Artificial Intelligence Generated Content (AIGC) is a new content creation method, which uses artificial intelligence to assist or replace manual content generation (Wu et al., 2023). The development of large model algorithms has led to the use of generative AIGC in various areas, including employment, economics, and

education (Franganillo, 2023). While enabling rapid content generation, this tool also requires creators and consumers to develop new skills and ethical awareness for responsible AI use (Davenport & Mittal, 2022).

As AIGC's capacity to generate new content in creative and artistic fields increases, AI painting technology has rapidly gained popularity due to its unique creativity, becoming a major trend in the development of digital intelligence resources. AI image generators such as Midjourney, Stability AI can generate photo-realistic images from textual prompts such as a word, phrase, image, or style, empowering users to swiftly create stunning artworks (Zhang et al., 2024) and offering new possibilities for image generation and understanding. Methods of use have evolved from text to image generation to a multimodal approach that combines text and image-generated content, allowing AI users to create images with greater accuracy. With their low barriers to entry and high efficiency, AI painting tools have attracted a diverse user base across various fields (Guan & Xu, 2024). Major social media platforms, such as Facebook, YouTube, Instagram, Tik Tok, Douyin just to mention the most popular ones, with their large number of users and rapid speed of diffusion, have provided fertile ground for the dissemination of AIGC images and a new paradigm for image creation. Among these platforms, Sina Weibo, founded by Sina Corporation in 2009, is particularly favored by the Chinese public for its openness and interactivity. Weibo allows users to post short messages, upload images and videos, and comment on others' posts (Hwang & Choi, 2016). By the end of June 2024, the number of Weibo users has exceeded 583 million (National Business Daily, 2024). With its ability to empower diverse voices, Weibo has become one of the most influential social media platforms, providing original materials and empirical data for this study. However, the use of Weibo also highlights the issue of entrenched concepts, particularly regarding gender awareness. Gender, shaped by cultural dynamics, has historically positioned women in a marked status. With the rise of AIGC, the female image is being reinterpreted, challenging traditional gender marking from multiple dimensions. Based on this context, this article starts from a gender perspective to conduct an in-depth analysis of Weibo, focusing on solving the following problems: How can we critically assess AIGC images on Weibo? What strategies can be employed to avoid ethical violations in these images? What gender consciousness is expressed within these AIGC representations? These questions are crucial for understanding AIGC images in the digital era and represent pressing issues in both academic and industry research on artificial intelligence governance within current social media platforms.

2. Literature review

2.1. Gender representation on Weibo

In the era of mainstream media, representations of women were generated passively, through editorial content produced by the media themselves or by consumer brands in their advertisements (Treviños & Díaz-Soloaga, 2021). These media have been criticized both for their stereotypical representations of reality (Noelle-Neumann, 1993) and for using such content to influence audience attitudes, opinions and behaviors (Domke, Shah & Wackman, 1998).

However, the digital process has challenged traditional media's dominance in information communication. Kepios analysis shows that, until 2023 active social media user identities have passed the 5 billion mark, with the latest user figure equivalent to 62.3 percent of the world's population (Kemp, 2024). With the widespread influence of the social media interaction era, women have gradually gained a voice on digital platforms like Weibo, largely resisting the reproduction of stereotypical image paradigms in mainstream media. It can be said that the emergence of new media has provided new models of discourse production and a system of digital practice, giving women new ways to express themselves.

Weibo occupies a unique place in China's social media ecosystem, with uses and norms that diverge from Western platforms in ways linked to culture and communication (Gao et al., 2012; Zhang & Negro, 2013). On Weibo, multimodal and context rich messaging support collective discourse and meaning making (Zhang & Negro, 2013). By contrast, comparative analyses of Weibo with Twitter and Instagram's content suggest more explicit, self-focused, low context communication patterns on these Western services (Gao et al., 2012; Qin, 2020). Given Weibo's central role in China's digital culture, numerous scholars have examined its gender dynamics. Xie (2014) classified female figures on Weibo into emotional, self-display, and social-image types; Zhang (2011) highlighted women's media self-expression; Hwang (2016) analyzed gendered motivations for Weibo use; and Liu (2016) discussed feminist expression on the platform. Comparative studies with Twitter (Yuan, Wei & Lu, 2018) and quantitative analyses (Lu, 2016; Rizwan et al., 2018) further revealed Weibo's distinctive mechanisms in shaping female discourse and communication effects.

2.2. Gender Issues in the Age of Digital Intelligence

As a technology combining algorithms and deep learning, AI is not only the result of the revolution of productive forces, but also the embodiment of the revolution of production relations. The popularity of AI has sparked concerns from all sectors of society, prompting academic research in four aspects: (1) technical ethics, (2) segmentation risk, (3) political and social risk, and (4) risk governance system (Xie and Wang, 2023).

Algorithms, as the core part of AI systems, the technical ethics arising from them become the focus of AI governance concerns. The technical discrimination of algorithmic recommendation needs to be addressed from the perspective of improving the fairness and impartiality of algorithmic recommendation and the process of constructing digital portraits and labeling of users should not carry data bias (Kuang & Wang, 2023). However, this systematic algorithmic bias is not only present in the data processing process, but should also permeate, for example, algorithm development and human-computer interaction (Suresh & Guttag, 2021). Recent studies have shown that algorithms are able to accelerate the power gap (Quadflieg, et al., 2022), and

the inequality of gender relations arises from the oppression of the power system, and thus changes in the power gap can directly lead to an increase in gender bias. This also induces the idea that the increasing use of algorithms and AI products may threaten the progress of global equality and human rights (Bartoletti, 2020), and that research on gender issues in AI is imminent.

2.3. Use of AIGC images in social media

Social media platforms have become an important source of information for the public thanks to the rapidity of their dissemination. The dissemination of audiovisual content and particularly images has occupied a dominant position in today's society and has been shown to have a great capacity to attract audiences' attention (Miller, 1975). At the same time, images, with the help of new visual narratives, replace the traditional textual narrative use and gradually show subjectivity in the digital space of social media.

The traditional image research is to construct semantic system for images from the perspective of rhetoric and semiotics and build a theoretical paradigm (Liu, 2022).The emergence of AIGC provides more possibilities for image creation by using generative artificial intelligence technology to recognize the intention and generate appropriate content to with respond to the instructions issued by a human being, and incorporate the set visual elements into the generative process (Liu, et, al., 2024), which is a visually referenced-based image generation technique. However, as AIGC images are widely used in social media, the inherent bias against women has not been mitigated with the updated technology and has the potential to exacerbate or shape gender oppression as social media platforms accelerate image exposure (Grau & Zotos, 2018).

2.4. Semiotic analysis and the concept of Cultural Markedness

The concept of *Markedness* is first proposed by Nikolai Trubetzkoy. In 1994, Rod Ellis points out that markedness is a linguistic feature that specializes language in relation to other features (Rod, 1994; Zhao, 2008). Chinese semiologist Zhao Yiheng introduces this concept into the field of cultural studies, proposing the idea of *Cultural Markedness*. He argues that cultural opposites, the positive item and the alien, are asymmetric. In every culture, a mainstream or center exists, creating a dynamic relationship between the positive and alien items. Generally, the positive item represents the exemplary standard. Regarding gender, Zhao illustrates that modern social civilization transforms women into marked signs, categorizing them as alien items while positioning men as socially centered positive items (Zhao, 2012). Consequently, what is expected by community norms is perceived as alien, and vice versa (Peng, 2015). In male-dominated value systems, women are excluded from the recognition framework as alien items. Encoding this ideology within the AIGC system reinforces male dominance while marking women as alien. This ongoing exclusion of the positive from the alien intensifies female markedness.

The intervention of semiotic analysis method can effectively help the research to find the expression mechanism of female meaning in AI images, which has an important guiding role in exploring the path of AIGC image meaning dissemination in Weibo. Thus, this study viewing images as visual sign combinations. This study uses the markedness of cultural signs to examine depictions of women in AIGC images on Weibo.

3. Research design

3.1. Data collection and sample selection

In terms of time, 2023.1.1-2024.8.1, is selected for this study. Since 2023, the rapid development of AIGC contributes to the explosive iteration of AI painting technology, significantly broadening the boundaries and possibilities of image creation. In this period, the application of AIGC printing moved through a transitional phase from early exploration to growing maturity, covering the technology's development trajectory and offering a representative snapshot.

An advanced search of tweets from the specified time frame utilizes keywords such as "AIGC", "生成式人工智能"(Generative AI), "Stable Diffusion", "Midjourney" and "文心一格"（wén xīn yī gé)[1]. These terms were each paired with "female" [女] to form five distinct keyword sets. Each set was entered into Weibo's search interface, yielding 950 posts. To ensure the authenticity and independence of the sample, invalid and duplicate posts were removed during preprocessing. Invalid posts were defined as those without images or those explicitly indicating that the images were not AI generated. After organizing the posts that include images, a total of 513 valid posts were obtained.

A convolutional neural network (CNN) was applied for feature extraction and duplicate removal, yielding 1,204 images containing female figures. To ensure validity, images were verified using the AI detector Hive Moderation (Poredi et al., 2024), which reports 0% false positives, 3.17% false negatives, and 98.03% accuracy (Ha & Passananti, 2024). Therefore, this study used Hive Moderation for AI generated image detection and set the AI generation confidence threshold at 90%, which reduces the risk of misclassifying human created works as AI generated while retaining the most representative AIGC image samples. In addition, to test robustness, a sensitivity analysis was conducted by adjusting the detection threshold to 85% and 95% for comparison, and the results show that the thematic distribution and temporal characteristics of the sample remain consistent across thresholds. After testing, a total of 823 relevant and valid images, along with 734 distinct female figures, were obtained.

---

[1]   文心一格 is an AI art service product of Baidu, released in 2022.08. It is built on a large language model called ERNIE, which has been in development since 2019.

3.2. Image Coding and Reliability Detection

To achieve the research objectives, both the images and the content of the posts are analyzed. The study follows an ex post facto research methodology, quantitatively analyzing the images of women in each instance (N=734). In setting the encoding dimensions, the study references Kress and Van Leeuwen's (2020) three types of signified systems for visual syntactic analysis, along with Liu's (2022) framework for visual linguistic analysis. This study analyzes in four dimensions. For specific variables, the study draws on Makhortykh's (2021) research on racial and gender bias in AI and Gorski's (2023) work on gender bias in AI images, while also referencing the media research model developed by Spanish scholar Sainz de Baranda (2013). Ultimately, this study identifies 19 variables totaling 63 coding categories (Table 1).

Table 1. AI Image Coding Categories

Dimension	Variable	Coding categories
Basic Information	Theme	A=Star; B=Advertisement; C=Text Story; D=Event; E=Other
	Image type	A=Cartoon; B= Imitation of a real person; C= Real character makeover
	Publishing time	A=2023.01-2023.05; B=2023.06-2023.10. C=2023.11-2024.03；D=2024.04-2024.08
Appearance information	Position of the woman in the image	A=Whole in the center; B=Whole not in the center
	Background of the image	A=Fictional scenery; B=Physical scenery
	Character proportions	A=full body; B=half body
	Age	A=Baby; B=Juvenile C=Youth; D= Middle and old age
	Ethnicity	A=Oriental face; B=Western face; C=Other
	Skin color	A=Light complexion; B=Dark complexion, C=Other
	Hair length	A=Long hair; B=Short hair; C=Other
	Eye size	A=large eyes; B=small eyes; C=Other
	Mouth size	A=Small mouth; B=Moderate mouth; C=Large mouth; D=Other
	Body size	A=Tall; B=Medium; C=Petite
Clothing representation	Clothing Skin Exposure	A=Large area of skin exposure; B=Moderate area of skin exposure; C=No skin exposure at all
	Clothing Models	A=Dress; B=Pants; C=Other
	Clothing color	A=Warm color; B=Cool color
	Clothing style	A=Classical style; B=Modern style; C=Surreal style
Image Narrative	Clothing Style Presentation	A=very feminine; B=more feminine; C=neutral
	Female Role	A=Warrior (warrior/chivalrous/superman, etc.); B=Beauty; C=Professional woman/student; D=Divine; E=Princess; F=Fashion model; G=Other

In designing the coding scheme, this study takes cultural markedness as its core framework, treating each variable as a "marked" or "unmarked" element within a cultural sign system. In appearance, traits such as Juvenile, Youth, Light skin color, Long hair, Large eyes, and Small mouth are marked signifiers shaped by male-oriented aesthetics. In clothing, exposure and femininity function as marked categories, while neutral or covered styles remain unmarked. In image narratives, roles like Beauty, Model, and Princess are marked within traditional aesthetic frames, contrasting with unmarked roles such as Professional woman or Warrior. Taken together, these variables operationalize the relation between marked and unmarked and show how AIGC visual intensify the visibility and symbolic salience of female bodies and faces through the male gaze (Mulvey, 2013) and culturally biased aesthetics.

To ensure the scientific rigor and validity of the coded content, two coders are selected to independently code the 823 images. The validity and consistency of the image content in coding are tested, yielding a Cohen's Kappa value of 0.94. The results are summarized, and the obtained data are imported into the statistical program SPSS v26.0 for descriptive analysis based on the observed results.

4. Results

In image analysis on Weibo, algorithms are the key components of AIGC. Processed by an intelligent language programmer, the AIGC system records and incorporates data originating from attitudes that carry stereotypes, which are then reproduced in the process of image generation.

4.1. The effect of basic information about images on female subjectivity

The examination of female subjectivity signs serves as the starting point of this study. As shown in Table 2, descriptive statistics reveal that text story themes account for the largest share (56%), followed by other themes (29%), indicating that female figures are mainly presented as visual extensions of textual narratives. Most AIGC female images were published in early 2023 (85%), aligning with the boom of text-image technology, but postings sharply declined after 2024 due to Weibo's enhanced AI content regulation and users' shift toward multimodal tools like Sora. A chi-square test confirmed a significant association between Period and Theme (χ^2=27.48, df=12, p<.001, Cramér's V=.105), demonstrating a temporal structural shift in AIGC female image themes.

Table 2. The Data of Basic Information

Variable	Coding categories				
	Star	Advertisement	Text Story	Event	Others
	(n=49)	(n=17)	(n=413)	(n=36)	(n=219)
Theme	6%	2.32%	56%	4.9%	29%
	Cartoon		Imitation of a real		Real character makeover
Image type	(n=342)		person (n=343)		(n=49)
	46%		46%		6%
Publishing time	2023.01-2023.05	2023.06-2023.10	2023.11-2024.03		2024.04-2024.08
	(n=301)	(n=329)	(n=79)		(n=25)
	41%	44%	10%		3.41%
Position of the woman in the image	whole in the center		whole not in the center		
	(n=675)		(n=59)		
	91%		8%		
Background of the image	Fictional scenery		Physical scenery		
	(n=540)		(n=194)		
	73%		26%		
Character proportions	Full body (n=155)		Half body (n=579)		
	21%		79%		

Additionally, statistical data on image types indicates that AIGC technology is widely applied across various female image genres, notably on cartoon (46%) and realistic imitation (46%). Regarding the positioning of women in these images, 91% are centrally located, underscoring a strong emphasis on female figures as central characters within AIGC images, thus highlighting a robust focus on female subjectivity.

As subjects of study, women embody a rejection of marking in favour of non-marking. This rejection is reiterated in the creation of scenes, where images depict a notably higher proportion of fictional scenarios (73%). The background virtualisation can significantly reduce visual distractions, enabling the viewer to focus more on the person in the image. In addition, medium-shot portraits make up 79%, while long-shot images account for 21% of the sample. These data suggest that the face is prioritized over the body as a focal point in female images, with the upper half emphasising physical features more than the lower half. The representation of the face and torso (cleavage and breast) again emphasises one of the differentiating aspects with respect to the male sex, thus underlining the uniqueness of the female body.

Based on the histogram (Graph 1), tit can be seen that the theme of the image changes over time. During the selected period, images created from story texts experienced a rise and subsequent disappearance, reflecting changes in public interest in AIGC's text-to-image technology. This technology is now widely used for commercial content, from visualising text stories to producing content about events, advertisements, etc… The image of women has been commodified in this way by commercial brands since the 1960s (Díaz-Soloaga & Cáceres Zapatero, 2008)

Graph 1. Percentage of different themes in each time period
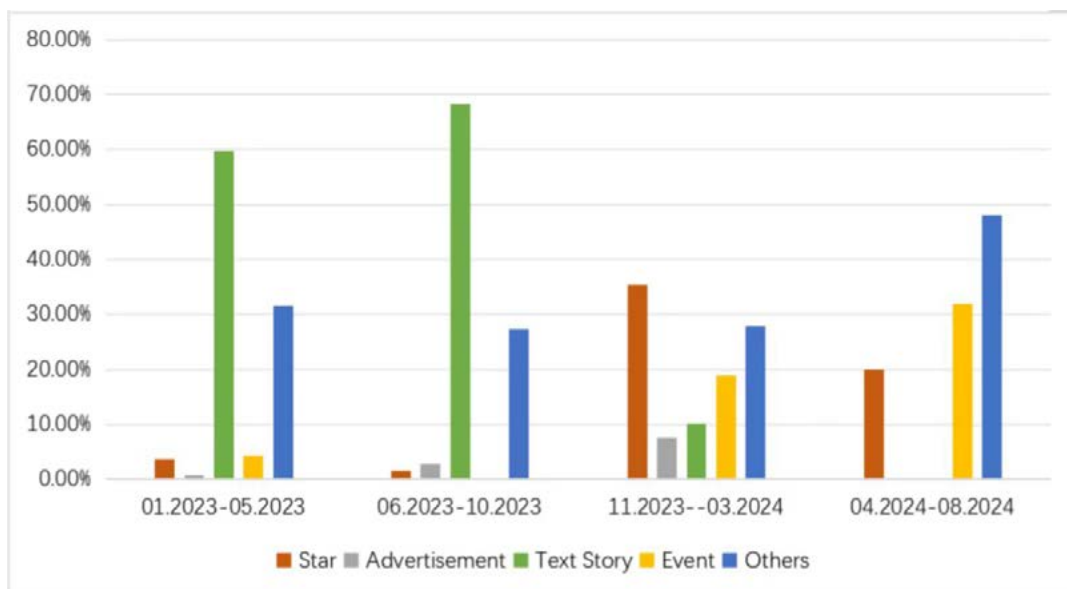
4.2. The influence of appearance on female figure

In contemporary society, appearance strongly influences everyday life, with the body conveying identity and social recognition (Shilling, 2012), and previous studies show that figures are primarily represented through physical attributes such as height, weight, and facial features (Yang et al., 2017).

Statistical data (Table 3) show that female images are mainly Youth (49%) and Juvenile (40%), with East Asian faces (50%) reflecting a dominant ethnic aesthetic. A cross-analysis of Ethnicity × Skin color in SPSS v26.0 (χ^2 = 45.32, df = 4, p < .001, Cramér's V = .17) reveals significant differences: 67% of East Asian faces are light-skinned, compared with 48% of Western faces, indicating structural bias in AIGC generation that favors an East Asian fair-skinned ideal.

Additionally, the images' facial features are predominantly characterised by long hair (78%), large eyes (78%) and small mouths (51%), reflecting the aesthetic characteristics of East Asian women. Thus, the female figures presented in AIGC images tend to be one-dimensional. Beauty, as a visual sign, has long been an aspiration for womenand has been shaped by the market economy, societies of different civilisations and popular culture. Sadly, this phenomenon has often led to the objectification, alienation, and instrumentalisation of women (Yin, 2008). Consequently, AIGC images often depict feminine visual signs through an aesthetic lens that could be considered as distorted. In a consumer society, women's appearance has increasingly becomes a commodity, fostering a culture that prioritizes attractiveness (Han, 2019).

Women are aware of the significant impact that their appearance and beauty have on personal and family relationships, as well as on their social environment and in the professional dimension. Furthermore, high-tech innovations, predominantly driven by male creators, contribute to a widespread anxiety surround women's appearance.

Table 3. The Data of Appearance Information

Dimension	Variable	Coding categories			
	Age	Baby (n=31) 4.22%	Juvenile (n=296) 40%	Youth (n=361) 49%	Middle and old age (n=46) 6%
	Ethnicity	Oriental face (n=367) 50%	Western face (n=157) 21%	Other (n=210) 28%	
Appearance information	Skin color	light complexion (n=444) 60%	dark complexion (n=247) 33%	Other (n=43) 5.9%	
	Hair length	long hair (n=525) 71%	short hair (n=96) 15%	Other (n=113) 13%	
	Eye size	large eyes (n=575) 78%	small eyes (n=61) 8%	Other (n=98) 13%	
	Mouth size	Small mouth (n=375) 51%	Moderate mouth (n=241) 32%	Largemouth (n=36) 4.9%	Other (n=82) 11%
	Body size	Tall (n= 22) 3.0%	Medium (n=434) 59%	Petite (n=278) 37%	

Graph 2. The trends of differences between the maximum and minimum percentages
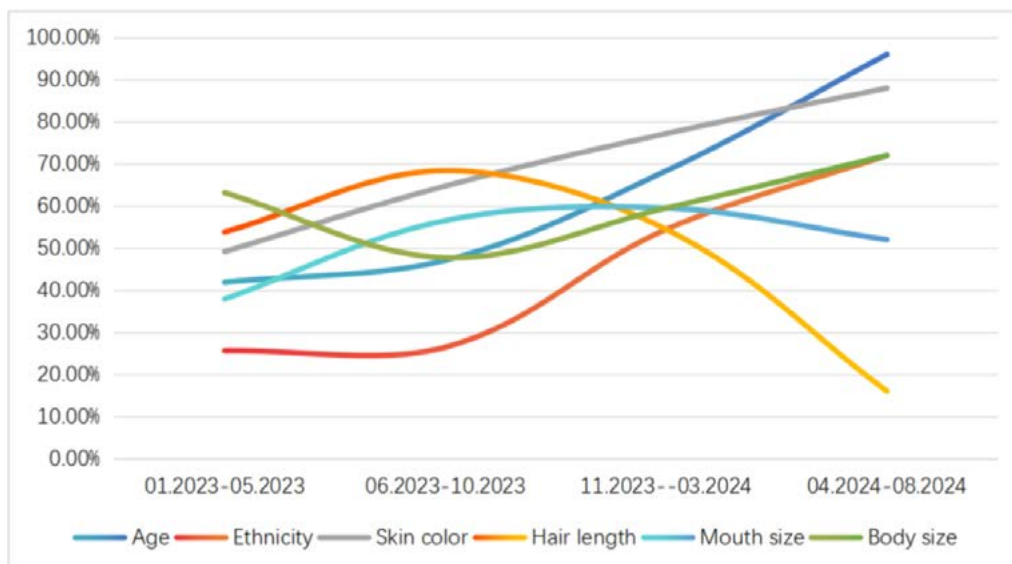
The analysis of appearance characteristics across posting times reveals a developmental pattern. According to Graph 2, the differences between the maximum and minimum percentages for age, ethnicity, skin colour and body size suggest an upward trend, indicating that these characteristics are becoming increasingly homogeneous over time. Notably, the first two stages still show a small number of images of young and middle-aged women. By the fourth stage, almost all of the images are of young women. Additionally, appearance features that do not align with traditional aesthetics, such as other skin color, large mouth and tall stature, account for 0% of the generated images in the fourth stage. However, not all appearance features are evolving uniformly; for instance, traits like hair length and eye size exhibit a decreasing difference between maximum and minimum percentages. Overall, there remains a trend toward the monotony and solidification of female appearance. In the fourth stage, most features—except for hair length—show a difference greater than 50%. This indicates that, with the advancement of text-image technology, representations of women's appearances increasingly conform to stereotypical ideals, emphasizing a narrow aesthetic that prizes fair skin and petite physiques. Consequently, these physical traits are reinforced as alien items within the cultural discourse.

According to the characterization data in Table 4, AIGC female images exhibit clear aesthetic and cultural biases across ethnic groups. Body size patterns reveal that petite figures are far more common among Eastern women (32.15%), whereas Western female figures predominantly appear as medium or tall. A cross-tab analysis ($\chi^2 = 35.12$, df = 4, p < .001, Cramér's V = .17) confirms that ethnicity significantly influences body size representation, indicating algorithmic bias in body generation. These aesthetic patterns do not reflect real-world diversity but rather the reproduction of dominant visual codes learned during data training.

Consequently, AIGC generation reinforces stereotypical ideal, associating East Asian women with light skin and petite forms, and Western women with taller, stronger bodies—revealing how female bodies are culturally encoded and visually disciplined within global digital aesthetics.

Table 4. The Data of Appearance Information by Different Ethnicities

Ethnicity	Oriental face	Western face	other
	Light complexion	Light complexion	Light complexion
	67.30%	47.77%	58.10%
	Dark complexion	Dark complexion	Dark complexion
Skin color	27.25%	51.59%	31.43%
	Other	Other	Other
	5.45%	0.64%	10.48%
Body size	Medium 67.3%	Medium 77.7%	Medium 30.95%
	Petite 32.15%	Petite 16.56%	Petite 63.81%
	Tall 0.54%	Tall 5.73%	Tall 5.24%

Appearance functions as a form of power that simultaneously reinforces gender inequality (West & Zimmerman, 1987). Our analysis shows that AIGC-generated female images remain one-dimensional, reflecting East Asian ideals of feminine beauty and increasing homogenization while reproducing racial and gender stereotypes. Although AIGC offers new expressive possibilities, it often reinforces dominant aesthetics, highlighting the need for representations that authentically reflect women's diverse identities and contemporary social realities.

4.3. The impact of fashion on women's roles

The sign of clothing, as an extension of the body, is a tool for women to express their identity and a symbol of their place in society. Of the clothing depictions of the female figure on Weibo (Table 5), contrary to the typical stereotype of Western advertising that shows an image of the female body as half-naked or scantily clad (Díaz-Soloaga & Quintas, 2012), more than half of the AICG images do not expose skin at all (57%). In terms of clothing styles, dresses and others predominate (86%), with trousers appearing less frequently. The color tone of the garments was largely uniform, with slightly cooler than warmer colors.

It should be noted that AI's choice of clothing is inspired by traditional Asian clothing and as a result this main trend is evident in a large part of the images. This aesthetic is perceived as a positive element since there is no extreme sexualization of women, by highlighting the face versus the body differentiation through clothing that does not particularly point to the separation of the masculine and the feminine. Building on this, further analysis of female roles and clothing styles in the images reveals a significant correlation between the two. Specifically, Professional woman or student and Warrior tend to align with Modern style, while Beauty, Princess, and Divine cluster in Classical style and Surreal style. This difference indicates that AIGC models still follow a traditional gender logic of role to clothing style matching, reinforcing established identity imaginaries through visual signifiers.

Table 5. The Data of Clothing Representation

Dimension	Variable	Coding categories		
Clothing representation	Clothing Skin Exposure	Large area of skin exposure (n=92) 12%	Moderate area of skin exposure (n=219) 29%	No skin exposure at all (n=423) 57%
	Clothing Models	Dress (n=343) 46%	Pants (n=104) 14%	Other (n=287) 39%
	Clothing color	warm color (n=36) 45%		cool color (n=398) 54%
	Clothing Style	Classical style (n=243) 33%	Modern style (n=326) 44%	Surreal style (n=165) 22%
	Clothing Style Presentation	very feminine (n=375) 51%	more feminine (n=161) 21%	neutral (n=198) 26%
	Female Role	Warrior (n=237) 32% Beauty (n=69) Professional woman/student (n=213) 29% Divine (n=68) Princess (n=24) Fashion model (n=34) Other (n=84) 11%		

Table 6. The Data of Female Role Representation

Female Role	Warrior	Beauty	Professional woman/student	Divine	Princess	Fashion model	Other
Clothing Skin Exposure	Large area 8.26%	Large area 24.64%	Large area 12.21%	Large area 13.24%	Large area 12.50%	Large area 8.82%	Large area 16.67%
	Moderate area 28.10%	Moderate area 37.68%	Moderate area 33.80%	Moderate area 35.29%	Moderate area 16.67%	Moderate area 26.47%	Moderate area 19.05%
	No skin exposure at all 63.64%	No skin exposure at all 37.68%	No skin exposure at all 54.00%	No skin exposure at all 51.47%	No skin exposure at all 70.83%	No skin exposure at all 64.71%	No skin exposure at all 64.29%
Clothing Style Presentation	very feminine 61.57%	very feminine 89.86%	very feminine 65.73%	very feminine 58.82%	very feminine 95.83%	very feminine 52.94%	very feminine 57.14%
	more feminine 20.25%	more feminine 5.80%	more feminine 19.72%	more feminine 29.41%	more feminine 4.17%	more feminine 44.12%	more feminine 35.71%
	neutral 18.18%	neutral 4.35%	neutral 14.55%	neutral 11.76%	neutral 0.00%	neutral 2.94%	neutral 7.14%

As for clothing styles, there is also little difference overall, with a higher percentage of modern clothing (44%) and very feminine styles (51%), showing that AICG is still more frequently applied to the generation of typical modern female images.

Overall, representations of clothing in AIGC images reflect a more varied and diverse tendency compared to the representation of basic appearance and characteristics. This diversity arises because, in modern society, clothing and adornments are often emphasized as identifiers of femininity. However, the strong presence of feminine clothing in AIGC images is still influenced by masculine discourse, which perpetuates biases in the distribution of information, resources, and opportunities (Zhang & Song, 2022).

According to the descriptive statistics of the clothing depictions of the different female characters (Table 6), all elements except *Beauty* do not expose skin at all at a percentage greater than 50%. This indicates that despite the diversity of female roles in AIGC images, they largely conform to traditional aesthetic preferences of Asian culture.

Furthermore, in regard to clothing styles, all characters predominantly exhibit very feminine styles, particularly in the *Beauty* and *Princess* categories. Particularly striking is the *Warrior* role, which is expected to convey a more robust and resilient image (closer to male roles), and yet adheres to a feminine clothing style, by an overwhelming 61.57%. This highlights that regardless of the roles portrayed in AIGC images on Weibo, the female figures consistently reflect a perspective consistent with traditional Chinese culture regarding clothing, reinforcing the notion that women's clothing serves as a key element of signifying female identity.

5. A Reinterpretation of AIGC Images of female figure in Weibo

Based on the above results, AIGC technology enables female figures to present a new paradigm on Weibo, distinct from traditional representations. This high-tech approach can both reproduce and innovate the established signs that society has assigned to women.

5.1. The figure of the "other"

"One is not born a woman, but rather becomes one" (Beauvoir, 2009:283). -There is no doubt that throughout history and cultures, many women have been considered inferior to men. After analyzing the images on Weibo, it is evident that most of the women depicted look like teenagers, which contributes to reinforcing the aesthetic ideal proposed by society and perpetuates the negative differences that exist between the two sexes.

Coinciding with the aesthetics of some teenagers considered beautiful, the images created with AI present pale skin and a slender physique, and in this way they become visual signs that idealize the image of women.

The body, as a crucial medium for human perception, carries a multidimensional structure of meaning. It not only has a physical meaning, but is also intertwined with the political, cultural and economic contexts of society, embodying important spiritual and symbolic meanings (Wang, 2021). This complex understanding of the body, which affects the entire reality of the person, as well as the assimilation of one's own identity, is also fueled by the representations created through the AIGC.

The social network Weibo, so popular in China, is in some way acting as a mediator between its audiences. Most likely, without being aware of it, they contribute to homogenizing female representations, excluding others that may better represent social reality.

The research work carried out over a period of more than a year reveals a great similarity in the generation of female appearances, despite the fact that they were made from different accounts and used different programs. Without a doubt, the social imaginary shared by its creators is quite similar, as on the other hand, happens in each culture.

For example, in the images of ancient women (see Figure 1 and Figure 2), the intuitive visual impression of the female figure preserves the aesthetic characteristics of traditional Chinese women, such as thinness, stoic attitude, light eyes, white skin, etc. In clothing, they also use relatively soft colors to emphasize the sweetness of the feminine character.

Figure 1. 2023.09.12

Figure 2. 2023.08.23

Women are the Other shaped by the male aesthetic and haven´t disappeared over time. This also suggests that the portrayal of women in AIGC images doesn´t change with a change in context. While modern images may present characters with updated clothing and hairstyles, they fail to reflect any real shift in women's aesthetic autonomy as influenced by economic and cultural advancements (see Figure 3, Figure 4

and Figure 5). This suggests that the underlying gender dynamics persist, maintaining traditional views rather than fostering genuine representation or empowerment for women.

Figure 3. 2024.4.14

Figure 4. 2023.09.12

Figure 5. 2023.08.23

In the process of AIGC image generation, the algorithmic model can simulate the real appearance of women, yet it remains constrained by prevailing male aesthetics. From 2023 to 2024, as AIGC technology has undergone numerous iterations, the imitation of real individuals has become increasingly precise. However, the portrayal of women continues to reflect the status of the Other. In creating female figures, the algorithm is influenced by male expectations, positioning the generated images in a state of being seen rather than truly represented. This reinforces traditional stereotypes and limits the potential for more authentic and diverse depictions of women's identities.

5.2. The Commodification of Female Representations

Female images on Weibo reinforce objectification, as their visibility transforms them from physical representations into symbols imbued with commercial value. In line with Baudrillard (2004), consumer behavior attaches meaning not just to goods but to the cultural symbols they carry. The platform's interactivity amplifies this process, repeatedly constructing women as commodities and highlighting the interplay between representation, consumer culture, and the commodification of female identity.

In all these images, caricature occupies an important place: comics change the actual proportion of women in an exaggerated manner to complete the consumption of women's bodies in modern commercial society. In the process of image generation, women are regarded as commodities with ornamental meaning, inheriting and deepening the traditional male judgment of women's physical beauty in figure shaping, presenting the male imagination of women's image in a cartoonish manner, and showing the unique charm of women in a surreal manner to satisfy the desires of most men (see Figure 6, Figure 7 and Figure 8).
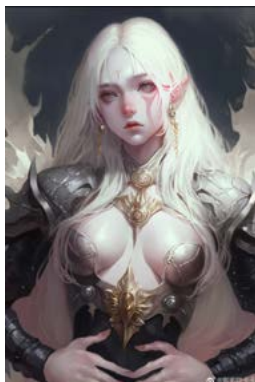

Figure 6. 2023.01.13

Figure 7. 2023.08.08

Figure 8. 2023.10.23

However, this phenomenon is caused by occupational segregation between men and women. The Global Gender Gap Report highlights this disparity, noting that women account for only 32% of professionals in the field of artificial intelligence (World Economic Forum, 2021), underscoring how male-dominated technological environments shape representations primarily for male consumers.

The impact of AIGC is evident in the phenomenon of celebrity makeovers, as stars undergo visual transformations to enhance their attractiveness. This technology allows a star's figure to be instantly enriched through cues, creating a novel way for these professionals to generate business. In addition, this resource helps to avoid visual fatigue from repetitive makeup styles and makes the perception of actresses fresh (see Figure 9 and Figure 10). In addition, the rapid generation of images that are diverse from each other satisfies the emotional demands of various audiences for their idols, which facilitates a more constant consumption of this new "cultural product" on platforms such as Weibo.

Figure 9. 2024.3.23

Figure 10. 2023.10 .12

While the previous discussion reflects an indirect portrayal of female productivity, AIGC-generated advertising images present a more explicit representation. When gender culture and aesthetic values become intertwined with commercial interests, the viewer-viewed relationship often underscores a male-centered perspective that marginalizes women. Although these female figures in advertisements may not accurately represent real women, they embody societal fantasies and fulfill consumer desires for reflected identities. In this study, AIGC technology's application in promoting clothing, cosmetics, and phones enables generated female images to resonate more closely with the public's consumer aspirations (see Figure 11 and Figure 12). This female figure generated through AIGC technology not only reflects the prejudices of contemporary consumer culture, but also reveals the complex interaction between gender identity and market demand.

Figure 11. 2024.3.26

Figure 12. 2023.7.20

5.3. The alienated image of independence

Weibo offers women a way to participate in society and express their opinions, facilitating interaction with the outside world and contributing to the formation of individual identity. A large part of the images on Weibo represents an ideal of woman at a time when feminism is growing, and women are eager to get rid of the stereotypical image and build an independent image.

It has been observed that a significant number of the characters in these images interpret masculine roles (defiant look, defiant attitude and postures, war environment, military clothing or male tuxedo), thus transforming traditional feminine aesthetics (see Figure 12). The women in these images, inspired by the world of Japanese manga comics, maintain feminine faces and attributes (long hair, a feline look, a slender waist, etc.) (see Figure 13).

Figure 13. 2023.5.23

Figure 14. 2023.09.27

Furthermore, the frequent appearance of armor in the images, as a sign, has the signified of protection, strength and resistance, traditionally associates with masculinity. However, women who wear armor, it can be recoded. The armor, which originally symbolizes masculine power, instead reinforces the constraints of women's bodies, becomes a tool to accentuate curves and confine women under male aesthetics (see Figure 14 and Figure 15). Thus, while armor initially represents masculinity, its recoding through algorithmic processes transforms it into a means of erasing the female figure, metaphorically imprisoning women within the confines of objectification once again.
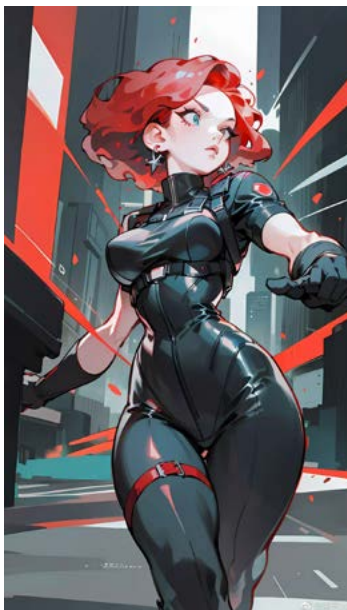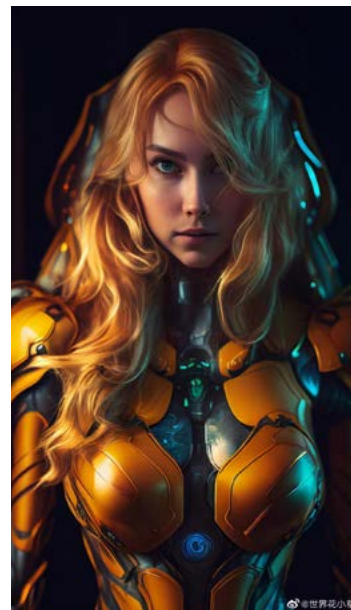

Figure 14. 2023.06.28

Figure 15. 2023.02.21

Of course, there is also a category of female figures who have distinctly masculine features in their appearance, wielding swords and displaying strength, subverting the established characteristics of traditional genders, and portraying the figure of a female warrior. Nevertheless, after the character settings are processed by AIGC, the femininity seems to be deleted and transformed into imitation of male imagery (see Figure 17 and Figure 18).

In such images, it is difficult to clearly observe the facial features of women, who are often presented in a defocused or occluded manner, avoiding as much as possible the visual portrayal of women's appearance. This deliberate removal makes women completely forgotten and lost. Although the *prompt* of women is given in the image creation, the AIGC technology doesn't create an independent and powerful image of women, but rather a crude imitation of the image and temperament of men, judging from the result of the image shaping.

Figure 17. 2024.1.22

Figure 18. 2023.11.06

The creative of non-traditional female figure by AIGC, is achieved through the means of imitating masculinity and weakening femininity. In essence, this markedness remains unable to escape the male influence on the alien of women. Throughout the entire AIGC cultural-industrial chain, women's right to self-expression in the face of a powerful male discourse has fallen into passivity, and they have even become complicit in the male discourse. The fact that the independent female figure that arises in this context is constructed under an unequal view of power, which ultimately results in an alienated figure of independence.

Conclusion

Technological advancements have made AIGC an essential tool for visual content creation on social media, shifting female image representation from human-created to algorithm-driven. Based on qualitative and quantitative analysis of AIGC-generated female images on Weibo, this study identifies key patterns of representation while emphasizing that such technological progress is accompanied by notable ethical challenges.

Furthermore, this research revealed that AIGC, as the most popular emerging technology today, provides convenience to the public, but also suffers from the problem of inauthenticity of content. The images of female figures generated through this technology do not reflect the current social perception of women, as they are influenced by trends, but they also avoid the complexity and hard part of reality (being professionals and mothers, the presence of sexist attitudes and policies in many life environments, the difficulties of career, to name a few examples).At the same time, the representations created by AI still rely on the male gaze towards the female body due to the prevalence of digital art designers being mostly men.

Driven by the communication power and influence of Weibo, a social media platform, this cognitive paradigm will continue to deepen with online communication. At the same time, the complexity of AIGC in contemporary media ecology promotes a deeper understanding of the relationship between new technologies and culture. Although AIGC is currently being continuously measured and governed by academia and industry, and public policies for gender equality are being developed, existing gender issues are still perpetuated in the evolution of the female population in Weibo AIGC images from generation to image.

Of course, this study still has certain limitations. The research sample comes from Weibo, a platform focused on the Chinese cultural context, which makes it specific, so the findings may not fully apply to other social media or to international contexts. In addition, AIGC generated content may display different gender symbolic biases across cultures. Nevertheless, these limitations also remind the public that future governance of AIGC content urgently needs more systematic and ethically informed approaches.To reverse this trend and avoid the reproduction and reinforcement of female stereotypes, it would be advisable to adopt strategies that contribute to achieving the necessary equality and difference between the two sexes. This means adopting a transversal methodology, not only in theory but also in practice, through concrete and proactive actions that are regulated at all levels: from AIGC production to the regulation of social platforms and social promotion. This requires interventions at all stages of AIGC image generation system development, from conceptualization to publication, to ensure that smart technologies achieve gender equality and address ethical challenges.

Bibliography

Bartoletti, I. (2020). *An artificial revolution: On power, politics and AI*. Black Spot Books.

Baudrillard, J (2004). *The Consumer Society: Myths and Structures*, Sage.

Beauvoir, S. de. (2009). *The second sex* (C. Borde & S. Malovany-Chevallier, Trans.). Vintage Books.

Davenport, T. H., & Mittal, N. (2022, November 14). How generative AI is changing creative work. Harvard Business Review. https://hbr.org/2022/11/how-generative-ai-is-changing-creative-work

de Baranda Andújar, C. S., Nieto, M. D. P. D., & Magro, Á. B. (2013). *Mujeres y deporte en los medios de comunicación. Estudio de la prensa deportiva española (1979-2010)* [Doctoral dissertation, Universidad Carlos III de Madrid].

Díaz-Soloaga, P., & Cáceres Zapatero, M. D. (2008). La representación del cuerpo de la mujer en la publicidad de revistas femeninas. *Estudios sobre el mensaje periodístico, 14,* 309-327. https://revistas.ucm.es/index.php/ESMP/article/view/esmp0808110309a

Díaz-Soloaga, P. & Quintás, N. (2012) International clothing, accessories, and dress codes: Women's wardrobe from Spain, Portugal, and China. In A. Hetsroni (Ed.), *Advertising and reality: A global study of representation and content* (pp. 245–264). Bloomsbury/Continuum.

Domke, D., Shah, D. V., & Wackman, D. B. (1998). Media priming effects: Accessibility, association, and activation. *International Journal of Public Opinion Research*, *10(1)*, 51-74. https://doi.org/10.1093/ijpor/10.1.51

Franganillo, J. (2023). La inteligencia artificial generativa y su impacto en la creación de contenidos mediáticos. *methaodos.revista de ciencias sociales*, *11(2),* m231102a10. https://doi.org/10.17502/mrcs.v11i2.710

Gao, Q., Abel, F., Houben, G. J., & Yu, Y. (2012). A comparative study of users' microblogging behavior on Sina Weibo and Twitter. In *UMAP 2012* (pp. 88–101). Springer. https://doi.org/10.1007/978-3-642-31454-4_8

Gorska, A. M., & Jemielniak, D. (2023). The invisible women: Uncovering gender bias in AI-generated images of professionals. *Feminist Media Studies, 23*(8), 4370–4375. https://doi.org/10.1080/14680777.2023.2263659

Grau, S. L., & Zotos, Y. C. (2018). Gender stereotypes in advertising: A review of current research. In S. L. Grau, Y. C. Zotos, & C. R. Taylor (Eds.), *Current research on gender issues in advertising* (pp. 3–12). Routledge. https://doi.org/10.4324/9781351213745-1

Guan, X.R. & Xu, J.F. (2024). "AI绘画：报业新媒体美术设计的智能化探索新路径", *Media, 8*, 77-80.

Ha A. Y. J., & Passananti, J. (2024, September 10). "Clear winner": Study shows Hive's AI generated image detection API is best in class. *Hive AI*. https://thehive.ai/blog/clear-winner-study-shows-hives-ai-generated-image-detection-api-is-best-in-class

Han, J. J. (2019). 身体、消费与美——狂欢视域下的"颜值崇尚"探析, *Audiovisual*, *09,* 19-20.

Hwang, H. S., & Choi, E. K. (2016). Exploring gender differences in motivations for using Sina Weibo. *KSII Transactions on Internet and Information Systems, 10*(3), 1429–1441. https://doi.org/10.3837/tiis.2016.03.029

Kemp, S. (2024, January 31). Digital 2024: 5 billion social media users. *We Are Social*.https://wearesocial.com/us/blog/2024/01/digital-2024-5-billion-social-media-users/

Kress, G., & Van Leeuwen, T. (2021). *Reading images: The grammar of visual design*. Routledge. https://doi.org/10.4324/9781003099857

Kuang, W. B. & Wang, T. J. (2023). 社交媒体算法推荐传播逻辑与平台社会责任, *Journal of Shanghai Jiao Tong University,* 31 (05): 1-12.

Liu, A. A., Su, Y. T., & Wang, L. J. (2024). AIGC视觉内容生成与溯源研究进展. *Journal of Image and Graphics, 29*(6), 1535–1554. https://doi.org/10.11834/jig.240003

Liu, M. (2016). *The development of Chinese feminism on Weibo* (Master's thesis, University of Washington Tacoma). https://digitalcommons.tacoma.uw.edu/gh_theses/31

Liu, T. (2022). 视觉框架分析:图像研究的框架视角及其理论范式, *Journalism Bimonthly, 03*, 1-21.

Lu, Y. (2016). Social Media Technology and female emancipation in China: Case study in sina-weibo. *Social Media Technology and Female Emancipation in China: Case Study in Sina-Weibo*.

Makhortykh, M., Urman, A., & Ulloa, R. (2021). Detecting race and gender bias in visual representation of AI on web search engines. In *International Workshop on Algorithmic Bias in Search and Recommendation* (pp. 36–50). Springer. https://doi.org/10.1007/978-3-030-78818-6_5

Miller, S. H. (1975). The content of news photos: Women's and men's roles. *Journalism Quarterly, 52*(1), 70–75. https://doi.org/10.1177/107769907505200110

Mulvey, L. (2013). Visual pleasure and narrative cinema. In *The Sexual Subject* (pp. 22-34). Routledge.

National Business Daily. (2024). Weibo released its financial report for the second quarter of 2024: Monthly active users are 583 million, and hot IP, KOL star and effect advertising account for more than half of the advertising revenue. https://baijiahao.baidu.com/s?id=1808081994395025972&wfr=spider&for=pc

Noelle-Neumann, E. (1993). *The spiral of silence: Public opinion-our social skin*. University of Chicago Press.

Peng, J. (2015). 对话主文本体:皮尔斯和洛特曼符号学视域中的文化标出性理论, *Sign and Media,* 02, 202-212.

Poredi, N., Nagothu, D., & Chen, Y. (2024). Authenticating ai-generated social media images using frequency domain analysis. In *2024 IEEE 21st Consumer Communications & Networking Conference,* 534-539.

Qin, H. (2020). Contrastive study on user satisfaction of Weibo and Instagram common users. In *HCII 2020, LNCS 12193* (pp. 409–423).

Quadflieg, S., Neuburg, K., & Nestler, S. (2022). *(Dis) Obedience in Digital Societies: Perspectives on the Power of Algorithms and Data*. Transcript Verlag.

Rizwan, M., Wan, W., Cervantes, O., & Gwiazdzinski, L. (2018). Using location-based social media data to observe check-in behavior and gender difference: Bringing weibo data into play. *ISPRS International Journal of Geo-Information*, 7(5), 196.

Ellis, R. (1994). *The study of second language acquisition*. Oxford University Press.

Shilling, C. (2012). *The body and social theory* (3rd ed.). Sage. https://doi.org/10.4135/9781473914810 SAGE Sk

Suresh, H., & Guttag, J. (2021). A framework for understanding sources of harm throughout the machine learning life cycle. In *Proceedings of the 2021 ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '21)* (pp. 1–9). ACM. https://doi.org/10.1145/3491102.3501881 Journal Publisher | Academax

Treviños-Rodríguez, D., & Díaz-Soloaga, P. (2021). La imagen femenina en tiempos del #metoo: Publicidad de moda, perfume y cosmética. *El Profesional de la Información, 30*(2). https://doi.org/10.3145/epi.2021.mar.05 methaodos.org

Wang, Y. X. (2021). 时空的记忆: 苏区报刊宣传画中的女性图像叙事研究. *Editorial Friend, 01*, 93–101.

West, C., & Zimmerman, D. H. (1987). Doing gender. *Gender & Society, 1*(2), 125–151. https://doi.org/10.1177/0891243287001002002 SAGE Journals

World Economic Forum. (2021). *Global Gender Gap Report 2021*. World Economic Forum. https://www.weforum.org/publications/global-gender-gap-report-2021/ World Economic Forum

Wu, J., Gan, W., Chen, Z., Wan, S., & Lin, H. (2023). AI-generated content (AIGC): A survey. *arXiv*. https://doi.org/10.48550/arXiv.2304.06632 DataReportal – Global Digital Insights

Xie, M., & Wang, S. L. (2023). ChatGPT出圈后人工智能生成内容的风险类型及其治理. *Press Circle, 08*, 51–60.

Xie, M. X. (2014). 微博时代女性公民形象构建. *Contemporary Literary Criticism, 06*, 135–138.

Yang, Y. Z., Fang, X. M., & Zheng, X. D. (2017). 劳动力市场中容貌歧视的学历纠正效应研究. *South China Journal of Economics, 03*, 71–98.

Yin, D. P. (2008). 美女崇尚现象的文化反思. *Jianghan Tribune, 07*, 121–125.

Yuan, Y., Wei, G., & Lu, Y. (2018). Evaluating gender representativeness of location-based social media: A case study of Weibo. *Annals of GIS, 24*(3), 163–176. https://doi.org/10.1080/19475683.2018.1471518 Taylor & Francis Online

Zhang, C. Y., & Yu, H. L. (2011). 微博空间中的女性表达: 契机、问题与展望. *Press Circles, 05*, 106–110.

Zhang, X., & Song, Y. X. (2022). 人工智能时代算法性别歧视的类型界分与公平治理. *Journal of Chinese Women's Studies, 03*, 5–19.

Zhang, X., Zhu, S., Zhao, Y. C., Jia, M., & Zhu, Q. (2024). Engaging with AI painting: Exploring motivations and challenges in laypeople's creative information practices. *Information Research, 29*(2), 680–700. https://doi.org/10.47989/ir292856

Zhang, Z., & Negro, G. (2013). Weibo in China: Understanding its development through communication analysis and cultural studies. *Communication, Politics & Culture, 46*, 199–216.

Zhao, Y. H. (2008). 文化符号学中的"标出性", *Theoretical Studies in Literature and Art*, 03, 2-12.

Zhao, Y. H. (2012). 符号学:原理与推演, Nanjing University Press.