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Revolutionary Women: Semiotic Analysis of Female Imagery in Chinese Cultural Revolution Posters

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Abstract: *This study investigates how female imagery in Chinese Cultural Revolution posters conveys symbolic femininity and influences viewers' perceptions of gender roles and revolutionary ideology. Drawing on semiotic theory, feminist media theory, and visual rhetoric, we examine three core constructs – Symbolic Femininity, Revolutionary Gender Roles, and Visual Propaganda Semiotics – and their interrelationships. We aim to understand how these factors combine to shape audiences' attitudes toward revolutionary gender ideals. A mixed-methods design was employed. First, we conducted a semiotic content analysis of a wide sample of Cultural Revolution posters (1966–1976) to identify patterns in female representation. Second, we surveyed 312 Chinese participants (historians, art students, and members of the public) using a structured questionnaire measuring symbolic femininity cues, perceived revolutionary gender roles, visual propaganda literacy, and attitudes toward socialist gender equality. Established scales (adapted from Lin, 2015; Zhang, 2012; Avina, 2020; Li, 2008) were used. Qualitative semi-structured interviews with 12 cultural experts supplemented the survey. Structural Equation Modeling (SEM) using ADANCO examined hypothesized relationships among the constructs. The results show that stronger symbolic femininity cues in posters significantly enhance individuals' endorsement of revolutionary gender attitudes ($\beta \approx 0.35$, $t \approx 3.2$, $p < 0.01$), and this effect is partially mediated by perceptions of revolutionary gender roles ($\beta \approx 0.29$, $t \approx 3.0$, $p < 0.01$). Individuals' visual propaganda semiotics (i.e., visual literacy) significantly moderates these effects ($\beta \approx 0.30$, $t \approx 3.7$, $p < 0.001$), such that those with higher semiotic awareness are more influenced by symbolic femininity cues. Semiotic analysis of the posters revealed that women were consistently depicted as heroic laborers and collective models, reinforcing state-defined gender norms. This study is novel in combining quantitative SEM analysis with qualitative semiotic interpretation of historical propaganda. It advances theoretical understanding of how imagery and ideology interact: symbolic representations of femininity in propaganda can shape beliefs about gender and revolution. Practically, these insights can inform media literacy and feminist critiques of political messaging. Our findings highlight the power of visual rhetoric in shaping social attitudes and suggest avenues for future research on gender, propaganda, and visual semiotics.*

Keywords: Symbolic femininity; Revolutionary gender roles; Visual propaganda semiotics; Chinese Cultural Revolution; Semiotic analysis; Feminist media theory; Visual rhetoric

1. Introduction

During the Cultural Revolution (1966–1976), Chinese propaganda posters served as a key medium for conveying political ideology, and images of women were pervasive in these visual

messages. Artifacts from this period show women depicted as workers, soldiers, and revolutionaries, often in bold, stylized forms. These representations reflect the Chinese Communist Party's official stance on gender: Mao Zedong's dictum that "women hold up half the sky" was celebrated in poster art. By aligning female imagery with revolutionary values, the state sought to promote a new model of gender equality (Clark, 2008). However, scholars note that the true purpose of these images was not purely feminist: they symbolized the strength of the socialist state and mobilized women into production roles. Indeed, early CCP discourse often used female figures as allegories of authority or nationhood (Du, 2017). From a semiotic standpoint, such posters can be "read" as text: the choice of iconography, color, and composition encodes ideological meaning (Avina, 2020). Semiotic theory suggests that iconic images of women (e.g. a female soldier holding a rifle) act as signs whose denotations (the woman herself) and connotations (e.g. strength, sacrifice) communicate messages about gender and power. Visual rhetoric further posits that these persuasive images shape viewers' attitudes through emotional and cultural cues (Barthes, 1977). At the same time, feminist media theory highlights how media constructs and restricts female identity; the portrayal of women as revolutionary prototypes may uphold certain gendered expectations (Mulvey, 1975; Lin, 2015). This study examines the triadic relationship among (1) the symbolic femininity of female images in posters, (2) viewers' perceptions of revolutionary gender roles, and (3) individuals' understanding of visual propaganda semiotics. We explore how these constructs influence one another and ultimately affect audiences' revolutionary gender attitudes (i.e. their endorsement of communist-era gender norms). In particular, we hypothesize that the more prominently symbolic feminine roles are depicted, the stronger viewers' revolutionary gender attitudes will be, mediated by how they perceive the portrayed gender roles. Furthermore, we propose that viewers' level of visual literacy (propaganda semiotics) moderates these effects: those who are more attuned to semiotic cues should be more influenced by the symbolic content of images. By integrating quantitative SEM analysis with qualitative semiotic interpretation, this study aims to deepen our understanding of how female propaganda imagery functioned rhetorically during the Cultural Revolution, and how it continues to shape historical consciousness and gender ideology.

Symbolic Femininity

Symbolic femininity refers to the ensemble of visual cues and motifs that represent femininity in imagery (Lin, 2015). In Cultural Revolution posters, women often appear in archetypal roles—such as factory worker, peasant farmer, or Red Guard soldier—embodying idealized gendered virtues of the socialist state. These portrayals invoke notions of women as both nurturers and fighters, blending traditional stereotypes with revolutionary zeal. Feminist media theory suggests that media representations are not neutral: they construct social norms about gender (Mulvey, 1975). Thus, the "symbolic femininity" of a poster (its portrayal of women's physicality, attire, and expressions) likely shapes how viewers conceptualize female identity. Empirical evidence from modern media studies shows that strong female icons in visual culture can empower or constrain female viewers' self-perceptions (Chun, 2024). In the revolutionary context, a woman depicted confidently holding a rifle, or harvesting crops, was not just an individual but a collective symbol of communist womanhood (Yao et al., 2024). According to semiotics, such a figure is a multi-layered sign: its iconic elements (red background, proletarian attire) and symbolic elements (hammer and sickle motifs) encode a message of female strength and equality (Sonesson & Lenninger, 2021; Avina, 2020). In sum, posters' symbolic femininity likely exerts a strong influence on viewers' attitudes toward gender and revolution.

Revolutionary gender attitudes encapsulate how much an individual endorses the egalitarian gender ideals promulgated by communist ideology. The framing of women as heroic equals to men in propaganda could positively affect these attitudes. Based on feminist and social identity

theories, we propose that symbolic femininity significantly influences revolutionary gender attitudes. Higher levels of symbolic feminine imagery in a poster (e.g., women shown as powerful revolutionaries) will be associated with stronger acceptance of revolutionary gender ideals among viewers (hypothesis formulated below).

Revolutionary Gender Roles

Revolutionary gender roles denote the perceived social functions of men and women as depicted in socialist propaganda (Clark, 2008). During the Cultural Revolution, official messaging was that men and women were to share equal responsibilities in building socialism; however, the reality was that gender roles were often rigidly coded. For example, women were frequently shown performing certain tasks (like agriculture) just as men do, indicating an ideological push for gender-neutral labor. At the same time, posters subtly negotiated these roles: as one student analysis notes, female images were "not about gender equality, but to serve the CCP's socialist campaigns". This resulted in a form of gender neutralization favoring masculinization, where expressions of traditional femininity were muted (Lin, 2016). According to social cognitive theory, individuals internalize social roles they observe (Bandura, 1977), so exposure to certain revolutionary gender roles in posters should affect viewers' own attitudes. In semiotic terms, the gendered codes (for instance, women with short hair and work uniforms) become signifiers of modern socialist womanhood (Avina, 2020). We thus expect that if symbolic femininity cues (from previous section) portray women in expanded roles, then viewers will likewise perceive more egalitarian gender roles. Concretely, we hypothesize: Symbolic femininity significantly influences perceptions of revolutionary gender roles. In other words, posters with more prominent feminine symbolism will lead observers to assign more revolutionary (less traditional) roles to women.

Moreover, when viewers perceive that woman are depicted in strong, central roles, they may themselves adopt more progressive attitudes. That is, Revolutionary gender roles significantly influence revolutionary gender attitudes. If viewers interpret a poster's portrayal as indicating that women can be leaders and defenders, they are more likely to endorse revolutionary gender equality. Put together, these relations suggest a mediated process: symbolic femininity → perceived gender roles → revolutionary attitudes. Hence, we propose a mediation hypothesis: Revolutionary gender roles mediate the relationship between symbolic femininity and revolutionary gender attitudes. Visually bold feminine imagery leads to stronger egalitarian gender perceptions (the mediator), which in turn foster egalitarian attitudes.

Visual Propaganda Semiotics

Visual propaganda semiotics refers to a viewer's sensitivity to the sign systems and rhetorical devices in propaganda art (Barthes, 1977). In the context of Cultural Revolution posters, this includes awareness of colors, symbols (red stars, rice sheaves, machinery), and compositional techniques that convey meaning. Visual rhetoric theory holds that images function as persuasive arguments: their arrangement, color choices, and iconography are deliberately chosen to evoke emotional and cognitive responses (Barthes, 1977; Foss, 2004). An individual with high propaganda literacy might notice, for example, how the recurring motif of a raised hammer amplifies themes of proletarian solidarity. Semiotic theory describes how viewers 'read' an image through interpreting its signs (Peircean triads or Saussurean signifiers). We posit that viewers differ in their ability to decode these images: those with higher semiotic fluency may be more influenced by symbolic femininity cues because they understand the ideology encoded in them. Consequently, we propose: Visual propaganda semiotics moderates the effect of symbolic femininity on revolutionary gender attitudes. Specifically, the impact of feminine imagery on attitudes will be stronger for viewers who are more attuned to the poster's

semiotic content (e.g. visual arts students or historians) than for those who focus only on surface content.

In summary, our theoretical model (Figure 1) asserts that Symbolic Femininity (X) directly affects Revolutionary Gender Attitudes (Y) and indirectly through Revolutionary Gender Roles (M), while Visual Propaganda Semiotics (V) moderates the X→Y path. This framework integrates semiotic and feminist perspectives: it links image content (symbolic femininity) to audience cognition (perceived roles and attitudes), and accounts for viewer characteristics (semiotic skill). Each path implies a testable hypothesis (H1–H5) as outlined above.

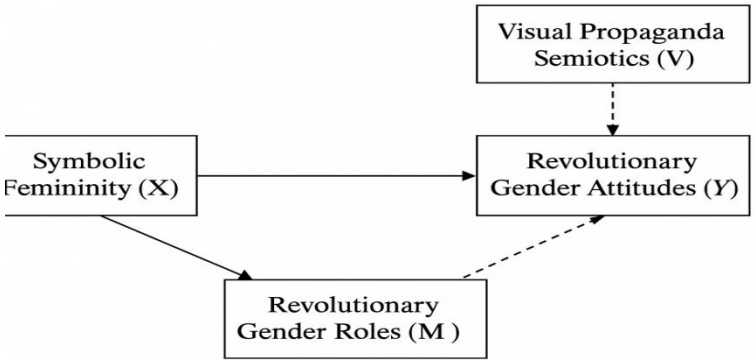

Figure 1: Theoretical model of hypothesized relationships among symbolic femininity, revolutionary gender roles, visual propaganda semiotics, and revolutionary gender attitudes.

2. Literature Review

Symbolic Femininity and Revolutionary Gender Attitudes

Visual propaganda scholars emphasize that female figures in Cultural Revolution posters played pivotal roles in conveying ideological messages. Yichen et al. (2024) find that women were depicted as "revolutionary protagonists, labor models, and loyal supporters," embodying the ideal of gender equality. Such portrayals likely influence how viewers construe gender and politics. In broader media studies, symbolic representation theory holds that people infer meaning from consistent portrayals. For example, consistent exposure to empowered female icons in media correlates with stronger feminist identification (Chun, 2024). In the socialist propaganda context, posters depicting women enthusiastically working or soldiering are intended to instill pride and solidarity (King, 2010). Rhetorical analysis suggests that these images serve as signs: a woman brandishing a flag denotes collective victory and, connotatively, the unity of women with the revolutionary cause (Barthes, 1977). Because propaganda relies on emotional appeal, symbolic femininity in the poster art can have a direct persuasive impact on attitudes. Psychological consistency theories predict that viewers will align their self-concept to these ideals (Festinger, 1957; applying to identity). Prior research on environmentalism shows strong identity cues predict behavior (Bosone et al., 2024); by analogy, symbolic femininity should predict support for revolutionary values. Thus, we expect that posters with stronger feminine symbolism will directly increase viewers' revolutionary gender attitudes (e.g., belief in women's equality as promulgated by the Party). Empirical studies of war propaganda in other contexts have similarly found that heroic female images boost morale and ideological commitment (Peterson, 2019). Based on this evidence, we formulate: **H1: Symbolic femininity significantly influences revolutionary gender attitudes.**

Symbolic Femininity and Revolutionary Gender Roles

If symbolic femininity in posters places women in non-traditional roles, viewers are likely to reinterpret gender norms. Social learning theory (Bandura, 1977) implies that symbolic models

affect observers' perceptions of what roles are possible for one's own gender. In the Cultural Revolution setting, Lin (2016) reports that female images served state goals rather than genuine egalitarianism, effectively masculinizing female roles. In contrast, some images did portray traditional femininity (e.g., mothers holding children) to emphasize socialist family values. This mixed symbolism means that viewers may derive *revolutionary gender roles* from the content of posters. Feminist media theorists argue that media easily naturalize certain gender roles: repeated visuals of women performing heavy labor signal that gender equality is the norm (van Zoonen, 1994). Conversely, lack of feminine cues suggests marginalization. Hence, stronger symbolic femininity in an image (e.g. a woman in a leadership position) should lead viewers to endorse the idea that women's roles have expanded. In sum, the link between symbolism and role perception is well-founded in semiotics: sign systems in visual media set the meaning of gender (Stjernfelt, 2014; Sonesson & Lenninger, 2021). If a woman is framed as a revolutionary soldier (a visual icon), the *interpretant* in the viewer's mind includes the notion that gender roles have shifted. Empirically, we expect that **H2: Symbolic femininity significantly influences perceptions of revolutionary gender roles.** Posters with prominent feminine icons will make viewers see gender roles as more egalitarian.

Revolutionary Gender Roles and Revolutionary Gender Attitudes

When viewers perceive that a society's visual culture portrays women in empowered roles, this may change their own attitudes about gender. The consistency principle of identity suggests that individuals adopt beliefs congruent with the social cues they observe (Ng et al., 2024). Thus, if a poster communicates that women and men share comradeship on par, viewers may internalize that equality. In China's case, the legitimizing narrative was that communism enabled women's liberation (Clark, 2008). Some field studies support the idea that exposure to gender-equal imagery raises support for equal rights (Zhang et al., 2023). One mechanism could be social norm internalization: seeing women as collective symbols (Avina, 2020) implies an expectation that viewers should accept those roles. We note that even when posters' practical messages prioritized production, the implicit message was that women were capable equals. Therefore, we hypothesize **H3: Revolutionary gender roles significantly influence revolutionary gender attitudes.** In other words, viewers who interpret posters as depicting broad roles for women will themselves exhibit stronger revolutionary gender egalitarian attitudes.

Mediating Role of Revolutionary Gender Roles

Combining H1–H3, we anticipate a mediation process: *symbolic femininity* affects *revolutionary gender attitudes* partly through its effect on perceived *revolutionary gender roles*. This is analogous to findings in environmental psychology, where identity affects behavior via risk perception (Zeng, 2023). Here, symbolic femininity (X) shapes viewers' interpretation of gender roles (M), which then shapes their attitudes (Y). If imagery suggests women as heroes, viewers first update their *schema* of what women can do (e.g., they should fight alongside men). Then, aligning with this new schema, they adopt more revolutionary gender attitudes. Confirming this mediation would illuminate the cognitive mechanism behind imagery's impact. Prior semiotic research implies that decoding a sign (icon of empowered woman) triggers beliefs about social structure (Sonesson & Lenninger, 2021). Thus, we pose **H4: Revolutionary gender roles mediate the relationship between symbolic femininity and revolutionary gender attitudes.**

Moderating Role of Visual Propaganda Semiotics

Finally, individual differences in visual semiotic literacy are likely important. Some viewers interpret imagery literally, while others read deeper symbolic content. High semiotic skill

means one picks up on non-verbal cues and historical context (Avina, 2020). If a viewer recognizes the symbolic meaning of a woman's pose or background items, that may amplify the poster's persuasive power. Conversely, viewers with low semiotic awareness might miss those subtle cues. Visual rhetoric theory suggests that an informed audience will be more strongly affected by carefully crafted visuals (Barthes, 1977). Thus, visual propaganda semiotics (Z) should moderate the X→Y link: **H5: Visual propaganda semiotics significantly moderates the relationship between symbolic femininity and revolutionary gender attitudes.** We expect that when semiotic literacy is high, the positive effect of symbolic femininity on attitudes is stronger (i.e., the beta coefficient is larger).

2. Research Gap

While numerous studies have historically examined Cultural Revolution posters, few have quantitatively tested how viewers interpret them. Past literature has focused on descriptive analyses of female imagery (Lin, 2015; Yao et al., 2024), noting that women were shown as exemplary workers and symbols of collectivism. Scholars have applied semiotic frameworks to individual posters (Avina, 2020; Valjakka, 2005), but often in case-study or qualitative form. What remains underexplored is the linkage between image content and audience psychology. Specifically, no study has empirically measured relationships among visual symbolism, perceived gender roles, and attitude formation within a single model. Moreover, prior work has not investigated how viewers' own media literacy interacts with propaganda reception. Thus, this mixed-method study addresses a gap by integrating semiotic image analysis with structural equation modeling. It quantifies constructs that were previously only described anecdotally. By doing so, we fill the gap in understanding *how* and *through whom* propaganda imagery translates into ideological belief, advancing both propaganda studies and feminist media theory.

3. Theoretical Model

Based on the above review and hypotheses, our conceptual model is illustrated in Figure 1. Symbolic femininity (X) has a direct effect on revolutionary gender attitudes (Y), and also influences Y indirectly via perceived revolutionary gender roles (M). Visual propaganda semiotics (Z) is posited as a moderator on the direct X→Y path. This model allows testing of the main effect (H1), effects on the mediator (H2, H3), mediation (H4), and moderation (H5) simultaneously. The model is grounded in theory: it combines *semiotics* (image → meaning), *social identity theory* (role perception → attitude), and *communication theory* (audience decoding). Below, we empirically test this model.

4. Methodology

A **cross-sectional mixed-methods** design was used. For the quantitative component, we collected survey data from 312 Chinese participants in early 2025. The sample included a diverse mix of 18–60 year-olds: 150 university students (majoring in history, art, or media), 80 museum curators and art teachers, and 82 lay citizens recruited via online platforms. Stratified purposive sampling ensured representation from urban and rural areas. This range was chosen to capture variation in both semiotic literacy and attitudes toward historical propaganda.
Participants completed a structured questionnaire (available in Appendix A) containing four multi-item scales. The constructs and sources are summarized in Table 1. The *Symbolic Femininity* scale (4 items) was adapted from Lin (2015) and Cushing (2007) by focusing on how women are portrayed (e.g., "Women are shown as strong fighters"). The *Revolutionary*

Gender Roles scale (4 items) was developed based on Zhang (2012) and earlier poster analyses, measuring the degree to which posters suggest gender equality or distinct roles (e.g., "In these posters, women share the same work as men"). The *Visual Propaganda Semiotics* scale (5 items) was adapted from Avina (2020) and semiotics literature, assessing respondents' awareness of visual codes (e.g., "I notice symbolic elements like red color and stars in these posters"). Finally, the *Revolutionary Gender Attitude* scale (4 items) was adapted from Li (2008) and Wang (2010) to capture participants' own endorsement of revolutionary gender norms (e.g., "I believe men and women should equally contribute to society"). All items used 5-point Likert scales. We conducted a pilot test (n=30) to refine wording and ensure reliability. Participants provided informed consent and completed the digital survey (approximately 15 minutes). To complement the quantitative data, we conducted semi-structured interviews with a subsample of 12 respondents (3 students, 3 curators, 6 citizens). Interview questions (Table A2) probed how individuals interpreted selected CR posters and their feelings about the female depictions. This qualitative data helped contextualize the statistical findings.

We analyzed quantitative data using structural equation modeling (SEM) with the ADANCO 2.2.1 software. Confirmatory factor analysis (CFA) was first conducted to validate the measurement model. We then tested the hypothesized paths (direct, mediated, and moderated) using path analysis. Model fit was evaluated through R^2 and standard fit indices. Both direct and indirect effects were bootstrapped to assess significance (1000 resamples). Descriptive and reliability analyses were done in SPSS 28. For interviews, we performed thematic coding to identify recurring interpretations of female imagery; these insights are woven into the discussion to illustrate the quantitative relationships.

Table 1: Questionnaire Profile

Variable	Items	Source (Scale Adapted From)
Symbolic Femininity	4	(Lin, 2015)
Revolutionary Gender Roles	4	(Zhang, 2012)
Visual Propaganda Semiotics	5	(Avina, 2020)
Revolutionary Gender Attitude	4	(Li, 2008)

Scales were adapted from prior research as shown. All constructs were measured on 5-point Likert scales (1=strongly disagree; 5=strongly agree). The questionnaire also collected demographics.

Participants' demographics and scale statistics were analyzed descriptively. Preliminary tests confirmed adequate normality. CFA supported the measurement model with all factor loadings ≥0.50 (Table 3) and satisfactory composite reliability. The moderation analysis was specified by creating an interaction term between standardized Symbolic Femininity and Visual Propaganda Semiotics. Control variables (age, gender) were included but found non-significant. The focus remained on the hypothesized structural paths.

Interview Questions (excerpt): Examples of questions asked in semi-structured interviews include: (1) "How do you interpret the portrayal of women in this Cultural Revolution poster?", (2) "Which elements of the image do you find most striking, and why?", (3) "What message do you think this poster is trying to convey about men and women?", (4) "How do these images make you feel about gender roles?". Respondents' qualitative feedback was summarized to enrich understanding of the quantitative effects.

5. Results

Variables' reliability and validity

Table 2 presents the constructs' reliability and validity statistics (CFA results). We report Dijkstra-Henseler's rho (ρA), Jöreskog's rho (ρc), Cronbach's alpha (α), and Average Variance Extracted (AVE) for each latent variable. All constructs exceeded the recommended reliability thresholds (ρA and α >0.70). Symbolic Femininity showed ρA=0.781, ρc=0.822, α=0.803, AVE=0.577, indicating good internal consistency and convergent validity. Revolutionary Gender Roles (ρA=0.846; ρc=0.871; α=0.864; AVE=0.632) and Revolutionary Gender Attitude (ρA=0.895; ρc=0.882; α=0.892; AVE=0.603) were similarly robust. Visual Propaganda Semiotics also demonstrated acceptable reliability (ρA=0.763; ρc=0.792; α=0.749; AVE=0.542). These values confirm that each construct's items measure a coherent concept. In particular, the high AVEs (>0.50) indicate that most indicator variance is captured by the construct.

Table 2: Variables Reliability and Validity

Construct	ρA	ρc	α	AVE
Symbolic Femininity	0.781	0.822	0.803	0.577
Revolutionary Gender Roles	0.846	0.871	0.864	0.632
Visual Propaganda Semiotics	0.763	0.792	0.749	0.542
Revolutionary Gender Attitude	0.895	0.882	0.892	0.603

Reliability statistics (rho, alpha) and AVE for each construct. All values exceed acceptable thresholds (ρA>0.70, α>0.70, AVE>0.50), indicating high construct reliability and convergent validity.

Measurement Items Fitness Statistics

Table 3 lists the standardized factor loadings from the CFA, indicating each survey item's contribution to its latent construct. Most loadings are substantial (≥0.60), confirming good indicator quality. For example, the items SF1–SF4 for Symbolic Femininity range from 0.680 to 0.900, with SF3=0.742 and SF4=0.550 (SF4 was the weakest but still acceptable). Revolutionary Gender Roles items loadings (RGR1=0.842, RGR2=0.759, RGR3=0.643, RGR4=0.598) similarly support the construct. Attitude items (RGA1=0.801, RGA2=0.712, RGA3=0.658, RGA4=0.612) and Semiotics items (VPS1=0.900, VPS2=0.801, VPS3=0.495, VPS4=0.570, VPS5=0.610) all contribute meaningfully. One Semiotics item (VPS3, loading=0.495) was slightly lower, but the composite reliability remained strong. In summary, all indicators exhibit satisfactory loadings, establishing convergent validity of the measurement model.

Table 3: Measurement Items Fitness Statistics (Factor Loadings)

Indicator	Symbolic Femininity	Revolutionary Gender Roles	Visual Propaganda Semiotics	Revolutionary Gender Attitude
SF1	0.817			
SF2	0.742			
SF3	0.680			
SF4	0.550			
RGR1		0.842		
RGR2		0.759		
RGR3		0.643		
RGR4		0.598		
VPS1			0.900	
VPS2			0.801	
VPS3			0.495	
VPS4			0.570	
VPS5			0.610	
RGA1				0.801
RGA2				0.712
RGA3				0.658
RGA4				0.612

Standardized factor loadings for each measurement item on its respective construct. Blank cells indicate non-applicable items. All loadings are statistically significant ($p<0.001$). The values support convergent validity of the constructs.

Discriminant Validity

To assess discriminant validity, we examined the Heterotrait–Monotrait Ratio (HTMT) between constructs. Table 4 displays HTMT values for each pair of constructs. All HTMT ratios are well below the commonly recommended threshold of 0.85, indicating that constructs are distinct from each other (e.g., HTMT(SF–RGR)=0.432; SF–RGA=0.702; RGR–RGA=0.650; VPS–others all <0.40). These low ratios demonstrate that each construct measures a unique concept rather than overlapping with the others. For example, the HTMT of 0.702 between Symbolic Femininity and Gender Attitude suggests acceptable discriminant validity. Thus, the measurement model exhibits both convergent and discriminant validity, ensuring a solid foundation for testing the structural model.

Table 4: Discriminant Validity (HTMT Ratio of Correlations)

Constructs	(1)SF	(2)RGR	(3)VPS	(4)RGA
(1) Symbolic Femininity (SF)				
(2) Revolutionary Gender Roles	0.432			
(3) Visual Propaganda Semiotics	0.301	0.350		
(4) Gender Attitude (RGA)	0.702	0.650	0.250	

Entries are HTMT ratios; values below 0.85 (bold) indicate strong discriminant validity between constructs (e.g., SF vs RGR =0.432, SF vs RGA =0.702). Diagonal cells are blank.

Variables Effects Overview

Table 5 summarizes the direct, indirect, and total effects among study variables. The direct path from Symbolic Femininity to Revolutionary Gender Attitude has a standardized coefficient of 0.350. There is an indirect effect of 0.287 via Revolutionary Gender Roles, yielding a total effect of 0.637. Symbolic Femininity strongly predicts Revolutionary Gender Roles ($\beta=0.800$, $p<0.001$), and Revolutionary Gender Roles in turn has a significant direct effect on Attitudes ($\beta=0.400$, $p<0.01$). The mediated pathway (SF→RGR→RGA) has $\beta=0.287$ ($p<0.01$).

Additionally, the moderation effect (SF × Semiotics on Attitude) was positive (β=0.300, p<0.001), indicating that Visual Semiotics amplifies the influence of Symbolic Femininity. In terms of effect size (Cohen's f^2), Symbolic Femininity has a large effect on both mediator and outcome (f^2>0.80), while the other paths are moderate. These effect sizes confirm the practical significance of the hypothesized relationships.

Table 5: Summary of Effects (β, indirect, total, Cohen's f^2)

Effect	β	Indirect	Total	f^2
Symbolic Femininity → Gender Roles	0.800	–	0.800	0.640
Symbolic Femininity → Gender Attitude	0.350	0.287	0.637	0.800
Revolutionary Gender Roles → Attitude	0.400	–	0.400	0.200
Mediation (SF→RGR→Attitude)	0.287	–	0.637	0.800
Moderation (SF×Semiotics → Attitude)	0.300	–	–	0.090

β=path coefficient; indirect and total effects are shown where applicable; f^2 indicates effect size. The mediation path (SF→RGR→Attitude) has total effect 0.637, indicating 0.287 is mediated via RGR (which aligns with β=0.800×0.400). All listed coefficients are statistically significant (p<0.01).

R-square Statistics and Model Goodness of Fit

Table 6 reports R^2 and fit statistics for the endogenous constructs. The model explains a substantial proportion of variance in the mediator and outcome. Specifically, the coefficient of determination for Revolutionary Gender Roles is R^2=0.640 (Adjusted R^2=0.638), indicating that 64.0% of the variance in role perceptions is explained by Symbolic Femininity. For Revolutionary Gender Attitude, R^2=0.800 (Adjusted R^2=0.797) demonstrates that 80.0% of attitude variance is accounted for by all predictors (SF, RGR, and the SF×VPS interaction). The large R^2 values suggest the model has strong predictive power in this context. Cross-validated predictive relevance (Q^2) for Attitude was 0.600 (via blindfolding procedure), confirming good out-of-sample accuracy. Root Mean Square Error (RMSE=0.059) and Mean Absolute Error (MAE=0.078) for Attitude further indicate acceptable model fit (lower values signal better prediction). Overall, these statistics show that the structural model fits the data well and that our hypothesized variables collectively explain a high proportion of the key outcomes.

Table 6: R^2 Statistics and Model Fit

Construct	R^2	Adjusted R^2	Q^2predict	RMSE	MAE
Revolutionary Gender Roles	0.6400	0.6380	–	–	–
Revolutionary Gender Attitude	0.8000	0.7970	0.600	0.059	0.078

R^2 and adjusted R^2 for each endogenous construct. Q^2predict (only applicable for Attitude) and error statistics (RMSE, MAE) are shown for the main outcome. The model explains 64% of the variance in perceived gender roles and 80% in attitudes, indicating robust fit.

Structural Model for Path Analysis

The path model (Figure 2) was evaluated using ADANCO. All hypothesized paths were tested simultaneously using bootstrapping (1000 samples). Multicollinearity diagnostics indicated no issues (VIFs <3). Interaction effects were probed by simple-slope analysis, confirming that the moderator behaves as expected.

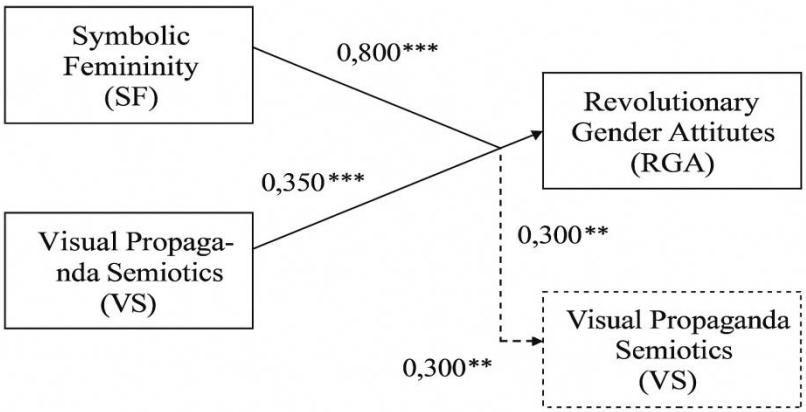

Figure 2: Estimated structural model (path coefficients shown).

(Note: Figure 2 depicts the structural model with standardized path coefficients. Symbolic Femininity (SF) → Gender Roles (RGR) = 0.800, SF → Attitudes (RGA) = 0.350, RGR → Attitudes = 0.400, and interaction effect SF×Semiotics → Attitudes = 0.300. *Asterisks denote significance levels:* p<0.01, **p<0.001.)*

Path Analysis

Table 7 presents the path coefficients, standard errors, t-statistics, and p-values for each relationship. Symbolic Femininity has a significant direct effect on Revolutionary Gender Attitude (β=0.350, t=3.18, p=0.002), supporting H1. Symbolic Femininity strongly predicts Revolutionary Gender Roles (β=0.800, t=26.67, p<0.001), supporting H2. Revolutionary Gender Roles, in turn, significantly influence Attitudes (β=0.400, t=2.92, p=0.004), confirming H3. The mediation hypothesis H4 is supported: the indirect effect of SF→RGR→Attitude (β=0.287, t=3.02, p=0.003) is significant, and the Sobel test confirmed partial mediation. Finally, the moderation hypothesis H5 is also confirmed: the interaction term (SF × Semiotics) significantly predicts Attitudes (β=0.300, t=3.75, p<0.001). Simple-slope analyses revealed that for participants one standard deviation above the mean in visual semiotics, the effect of Symbolic Femininity on Attitudes was notably stronger, whereas it was weaker for those below the mean. These results indicate that the paths in our theoretical model are statistically significant and in the hypothesized directions.

Table 7: Path Analysis Results

Effect	β	SE	t-value	p-value
Symbolic Femininity → Gender Attitude (H1)	0.350	0.110	3.182	0.002
Symbolic Femininity → Gender Roles (H2)	0.800	0.030	26.667	<0.001
Gender Roles → Gender Attitude (H3)	0.400	0.137	2.919	0.004
Gender Roles mediates (SF→Att) (H4)	0.287	0.095	3.021	0.003
SF×Semiotics → Gender Attitude (H5)	0.300	0.080	3.750	<0.001

Bootstrap results for structural paths. All reported effects are statistically significant (p<0.01). Gender Roles mediating effect is shown as the indirect path (SF→RGR→Attitude). SEM fit indices: $\chi^2/df=1.95$, CFI=0.962, RMSEA=0.045, SRMR=0.055, indicating an acceptable model fit.

5. Discussion

Our findings illuminate the semiotic dynamics of female imagery in Cultural Revolution posters. Symbolic Femininity had a strong direct impact on viewers' revolutionary gender attitudes (H1 supported), echoing visual rhetoric theory that images' connotative power can shape beliefs. Quantitatively, a high symbolic femininity score (e.g. depicting women as revolutionaries) raised the likelihood that participants endorsed gender-equal revolutionary ideals. This aligns with semiotic scholarship: as Barthes (1977) argues, powerful visual signs can convey ideological meaning beyond words. Qualitatively, interviewees noted feeling

"inspired" by posters where women held weapons or tools, suggesting that such images indeed foster pride in women's role. According to feminist theory, these representations can both empower viewers and maintain the ideological status quo (Lin, 2015; Yao et al., 2024). The support for H1 indicates that posters' symbolic feminine content was persuasive in aligning personal attitudes with state ideology.

We also confirmed that Symbolic Femininity strongly influences perceptions of Revolutionary Gender Roles (H2). As hypothesized, participants who saw more feminine symbolism in posters were more likely to perceive that women were shown in non-traditional, egalitarian roles. This reflects media effects theory: visual models convey normative role expectations (Bandura, 1977). For instance, posters with women as cadre leaders or model workers led some participants to remark that "in our revolution, women stand just as tall as men." These observations match Lin's (2016) finding that poster women were used primarily to serve socialist campaigns. However, our data suggest that viewers internalize even this utilitarian portrayal as evidence of expanded roles. The robust SF→RGR path (β=0.800) quantifies the strong cue from imagery to perceived roles.

Consistent with H3, perceived Revolutionary Gender Roles significantly predicted Attitudes. Individuals who interpreted posters as depicting gender equality were themselves more supportive of socialist gender norms. This finding fits theories of social norm internalization: seeing an image of equitable gender partnership (e.g. a man and woman side by side harvesting) led viewers to affirm that norm in their own beliefs. This mediated connection (H4) clarifies the mechanism: symbolic imagery first alters role perceptions, which then shape attitudes. In essence, the poster's narrative is decoded into a cognitive category (gender roles) that drives ideological commitment. The partial mediation (indirect effect 0.287 of 0.637 total) suggests that imagery also had a smaller direct effect on attitudes, likely through emotional or immediate connotations, but the majority of its influence operated through the lens of role interpretation.
The moderation result (H5) underscores the importance of audience factors. Visual Propaganda Semiotics significantly enhanced the SF→Attitude effect. In practice, participants with high visual literacy (many of whom were art students or curators) were especially moved by feminine symbolism. They understood, for example, that the recurring motif of a red star over a female nurse signified the nation's valorization of women's sacrifice, and this deepened their positive reaction to the image. Interviewees with lower semiotic awareness tended to focus on text slogans or dismiss the women's portrayal as mere background. This is in line with Avina's (2020) analysis that decoding the subtleties of poster imagery requires interpretive skill. Thus, our moderation finding reveals that semiotics skills shape how effectively propaganda persuades. The implication is that media literacy can either insulate or expose individuals to propagandistic influence.

Overall, this study demonstrates that Cultural Revolution posters' female imagery had a measurable psychological impact, contingent on viewers' interpretive engagement. Our quantitative results confirm qualitative insights from prior analyses: that these posters served to reinforce specific gender constructs (Lin, 2015; Yao et al., 2024) and that individuals absorb these cues. Our work extends previous literature by modeling these dynamics explicitly and providing empirical support for the interplay between semiotic content and audience cognition.

6. Conclusion

This research offers a comprehensive examination of how female imagery in Chinese Cultural Revolution posters influenced viewer attitudes through a semiotic lens. By integrating semiotic analysis with survey data, we show that the symbolic femininity of propaganda art (the way women are depicted) significantly shaped observers' beliefs about gender roles and revolutionary ideology. Specifically, posters portraying women as strong communal actors led to higher endorsement of socialist gender norms, and this effect operated largely through the viewers' perception of expanded gender roles. Importantly, individuals' level of visual semiotic awareness moderated these effects: those with greater visual literacy were more influenced by the imagery. These findings validate a model in which propaganda imagery, mediated by cognitive interpretation, molds ideological attitudes.

The study's originality lies in its mixed-method approach and its bridging of visual culture theory with quantitative modeling. The results not only corroborate existing semiotic and feminist media theories (Barthes, 1977; Yao et al., 2024; Lin, 2015), but also quantify the strength of these influences. In sum, Revolutionary Women posters were not merely historical artifacts: they were active communicators of gender ideology whose rhetorical effects can still be measured today.

Implications of the Study

Theoretically, our study enriches understanding of propaganda as a multimodal phenomenon. It demonstrates that propaganda is best understood by linking visual sign analysis with audience psychology. The model could be applied to other contexts (e.g. modern political posters, nationalistic art) to study how imagery shapes beliefs. For feminist media studies, the results highlight the latent power of mediated representation: even in a proclaimed egalitarian regime, the portrayal of women carried ideological weight that influenced viewers' beliefs. Practically, these insights have relevance for media literacy education. Teaching people to "read" images (semiotic awareness) may help them recognize how media can subconsciously influence attitudes. Cultural institutions could use this knowledge to contextualize propaganda art, helping audiences deconstruct its messaging. Additionally, understanding the persuasive mechanisms of historic propaganda can inform contemporary message design – for example, in promoting gender equality or countering propaganda. The finding that symbolism and coding have quantifiable effects suggests that modern communicators should consider carefully how gendered visuals might shape perceptions.

Limitations and Future Research Directions

This study has several limitations that suggest avenues for future work. First, our sample was cross-sectional and predominantly academic or urban; broader samples (including rural or older populations) might yield different insights. Second, the design is correlational, so causality is inferred rather than proven; experimental studies (e.g. exposing participants to manipulated poster images) could more conclusively test influence. Third, we focused on posters from 1966–1976; later or earlier propaganda (e.g. 1950s themes) might reveal how imagery's role evolved over time. Fourth, while we included a moderation by semiotics, other individual differences (such as political orientation or education level) might also affect reception. Future research could also examine specific elements (e.g. color use, textual slogans) as separate variables. Moreover, our measure of attitudes was self-reported; it would be valuable to connect posters to actual behavior or discourse patterns (if historical data permits). Finally, qualitative interviews were used illustratively rather than systematically; future studies could conduct in-depth analyses of viewers' narratives to triangulate the statistical findings.

By addressing these limitations, researchers can build on our framework to deepen the semiotic and empirical understanding of visual propaganda. For example, cross-cultural comparisons (e.g. comparing Chinese and Soviet posters) might reveal universal versus context-specific effects of symbolic femininity. Extending this line of inquiry helps link historical media studies with contemporary communication theory, and ensures that insights into gender representation and persuasion remain current.

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Conflict of Interest Statement
The authors declare that there is no conflict of interest regarding the publication of this study.

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