

Communication Effects of Anti-Stereotype Advertising: Antecedents, Mechanisms, and Outcomes

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Abstract

As consumers' growing attention to diversity and equality continues to intensify, counter-stereotyping has progressively emerged as a significant practice within the marketing domain, particularly in advertising communication. Nevertheless, existing research has yet to achieve systematic integration of the dynamic mechanisms underlying counter-stereotyping and its contextual variations across different media. By synthesizing the SOR (Stimulus-Organism-Response) theory from marketing with the ADO (Antecedents-Decisions-Outcomes) analytical framework, one can systematically deconstruct the advertising communication effects of counter-stereotyping, while simultaneously elucidating the "double-edged sword" characteristics of counter-stereotyping interventions and the threshold effects of information acceptance. This research specifically investigates media-specific differences in the communication effects of counter-stereotype advertising, revealing the disparities in media suitability between traditional and new media platforms when disseminating counter-stereotypical content. Future studies should address how to leverage counter-stereotyping to ameliorate social prejudice, examine its applications within artificial intelligence and their impact on advertising communication, and foster interdisciplinary collaboration in counter-stereotyping research.

Full Text

The Communication Effects of Counter-Stereotypical Advertising: Antecedents, Mechanisms, and Outcomes

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Abstract: As consumers increasingly prioritize diversity and equality, counter-stereotypical advertising has emerged as a vital practice in marketing and advertising communication. However, existing research lacks systematic integration of the dynamic mechanisms underlying counter-stereotypes and their variations across media contexts. By integrating marketing’s SOR (Stimulus-Organism-Response) theory with the ADO (Antecedents-Decisions-Outcomes) analytical framework, this study systematically examines the communication effects of counter-stereotypical advertising, clarifying the “double-edged sword” nature of counter-stereotype interventions and identifying threshold effects in message acceptance. The research emphasizes media differences in counter-stereotypical advertising effectiveness, revealing compatibility distinctions between traditional and new media in disseminating counter-stereotypical content. Future research should explore how counter-stereotypes can mitigate social biases, assess the impact of artificial intelligence on advertising communication, and promote interdisciplinary collaboration in counter-stereotype research.

Keywords: counter-stereotype, advertising communication, media marketing, SOR theory, ADO framework

As winter fades and spring arrives, Harbin, Heilongjiang remains abuzz with activity. Since going viral last year, the term “Southern Little Potatoes” has become a unique moniker for southern tourists. This label stems from China’s long-standing regional height stereotype—northern adults are significantly taller on average than their southern counterparts, a physiological difference transformed into the group label “southerners are short.” Consequently, many netizens view “Southern Little Potatoes” as linguistic discrimination and stereotyping. Similarly, Blue Moon faced backlash last year for a laundry detergent advertisement released before Mother’s Day that read, “Mom, you use it first,” accompanied by text stating “Make laundry easier, more effortless, and more worry-free for Mom.” The ad reinforced traditional Chinese “maternal role” expectations that women should bear more housework, provoking strong consumer resistance as a stereotype of mothers and women. International advertising is not immune to such pitfalls: Apple’s promotional video shot in Thailand and posted on YouTube sparked outrage among Thai citizens. The advertisement depicted Thailand’s airports, transportation, clothing, and accommodations using outdated 1990s imagery, while its brown-tinted filter conveyed a sense of backwardness. Netizens accused the ad of distorting Thailand’s image and perpetuating stereotypes. Such examples are countless, each triggering heated debates about stereotypes whenever they occur. Indeed, stereotyping has long attracted widespread academic attention (Dong et al., 2023). Stereotypes represent a crucial factor influencing individual cognition, affecting numerous aspects of human production and life (Goclowska et al., 2013; Wang, 2021).

Stereotypes often lead to prejudice formation, ignoring individual differences and thereby hindering objective and fair evaluations of individuals or groups. If left uncorrected, they may evolve into discriminatory behavior (Howard, 2000). In response, academia has devoted considerable effort to understanding and developing measures to counteract the negative effects of stereotypes. This has given rise to the concept of counter-stereotypes, sparking another research surge (Von Hippel et al., 2001; Liu & Zuo, 2006; Pang et al., 2011; Hu et al., 2022).

Previous research indicates that stereotypes are social cognitive biases—social cognitive structures built upon fixed cognitions, beliefs, and expectations about specific groups (Fiske & Neuberg, 1990). Counter-stereotypes refer to phenomena that oppose or conflict with stereotypes (Zuo et al., 2019; Tan et al., 2024). Scholars have explored and defined counter-stereotypes from various perspectives. For instance, Liu and colleagues define counter-stereotypes as behaviors or information inconsistent with people’s expectations, demands, and generalized views regarding a social group’s behavior and personality traits (Liu & Zuo, 2006). Others view counter-stereotypes as expressions where an individual’s cognitive perspective (perceived behaviors or characteristics) about a social group conflicts with or opposes that group’s mental model (Leicht et al., 2017). Wittenbrink et al. propose that counter-stereotypes refer to characteristics exhibited by group members that are inconsistent with or opposite to stereotypes, as well as mismatched contexts (Wittenbrink et al., 2001). Based on this foundation, this paper defines counter-stereotypes in advertising communication as “advertisements presenting behaviors or information that conflict with consumers’ stereotypical cognitive frameworks formed based on social groups, aiming to challenge 固化 role expectations and group characteristics within social culture.”

The importance of counter-stereotypes for marketing primarily manifests in their impact on consumer cognition and behavioral responses. Existing research has found that counter-stereotypes can influence consumer stereotypes (Lai et al., 2014), stereotypical emotions (Prati et al., 2015), cognitive flexibility (Leicht et al., 2017), advertising responses (Leicht et al., 2017), product evaluations (Debevec & Iyer, 1986; Noseworthy et al., 2011; Chu et al., 2018), and product choices (Ramasubramanian & Oliver, 2007; Ramasubramanian, 2015). As research has deepened, counter-stereotype practices have advanced considerably. Initially, marketers attempted to use counter-stereotypes to improve consumer acceptance of counter-stereotypical products (such as men’s cosmetics) with some success. Subsequently, counter-stereotypes have been increasingly applied in advertising and marketing, often disseminated through new media channels. Typical cases include Dove’s “Real Beauty” campaign and Unilever’s “unstereotype” initiative, both aimed at eliminating gender stereotypes in advertising and achieving remarkable results. These cases vividly demonstrate the significance of counter-stereotypes for marketing practice, particularly advertising communication.

In this new era, using stereotype-breaking to interpret brand connotations has become an important marketing tool, making research on the mechanisms

of counter-stereotypes particularly necessary. However, existing consumer behavior research lacks systematic review. Therefore, this paper evaluates existing counter-stereotype research based on real marketing contexts, comprehensively employing SOR (Stimulus-Organism-Response) theory (Mehrabian & Russell, 1974) and the ADO (Antecedents-Decisions-Outcomes) framework (Paul et al., 2021) to systematically review and comprehensively analyze the communication effects of counter-stereotypical advertising. This paper clarifies the “double-edged sword” characteristics of counter-stereotype strategies and identifies threshold effects in message acceptance. Additionally, by summarizing the characteristics of traditional and new media in advertising communication, this paper reveals media compatibility differences in counter-stereotypical advertising. Finally, integrating existing research, this paper outlines future research directions from three perspectives: threshold balancing of counter-stereotypes, interdisciplinary integration, and exploration in the artificial intelligence era.

2. Research Framework on Counter-Stereotypes

Unlike previous studies that relied on single perspectives, this paper attempts to use a more comprehensive and systematic approach, combining SOR theory to review research progress on counter-stereotypical advertising effects.

SOR theory, originating from environmental psychology, advocates explaining consumer behavior through three dimensions: Stimulus, Organism, and Response (Mehrabian & Russell, 1974), serving as an important theoretical foundation in marketing. SOR theory posits that after receiving external environmental stimuli, individuals experience a series of psychological fluctuations, subsequently producing avoidance or approach behavioral responses (Li et al., 2020). This theory’s “stimulus-psychology-behavior” causal chain can explain the generation mechanisms of antecedents, effects, and outcomes of counter-stereotypes.

Therefore, this paper uses SOR theory as a foundation to comprehensively review counter-stereotypical advertising effects and has mapped a counter-stereotype review SOR framework diagram (as shown in Figure 1 [FIGURE:1]).

Source: Compiled by the authors.

2.1.1 Advertising Spokesperson

Advertising spokespersons represent a widely applied strategy in corporate product or brand promotion (Money et al., 2006) and serve as an important vehicle for counter-stereotype strategies. Their identity characteristics and disruptive image design can directly challenge consumers’ stereotypical cognitions. This paper explores their stimulating effect on counter-stereotype formation from two aspects: spokesperson characteristics and types.

Spokesperson characteristics are crucial factors affecting advertising effectiveness (Zhang & Zhang, 2010), including gender, age, weight, and occupation.

Among these, gender is one of the most controversial core dimensions in counter-stereotypical advertising (Wang & Guan, 2024). In the past, brands typically selected spokespersons whose gender matched the product's user base, with female endorsements for cosmetics and male endorsements for razors 被视为理所当然 (Peirce, 2001). However, research shows that when spokesperson gender deliberately mismatches a product's traditional gender association, consumers may develop positive advertising attitudes due to cognitive conflict (Xia et al., 2024), breaking stereotypical perceptions of gender-advertising compatibility. Beyond gender, spokesperson characteristics such as age, occupation, and weight can also trigger counter-stereotypes through "attribute-product" mismatches. For example, younger (vs. older) spokespersons endorsing senior brands can 重构 consumer cognition by 颠覆 "age-capability" stereotypes (Huber et al., 2013), enhancing purchase intention. Ordinary spokespersons (vs. sports stars) endorsing sports advertisements can promote positive consumer attitudes by enhancing ad information processing fluency through process simulation (Chang & Chen, 2022). Larger-bodied spokespersons (vs. smaller-bodied) endorsing high-calorie products show no significant purchase intention differences through consumer meaning transfer and cognitive matching (Westover & Randle, 2009; Huber et al., 2013). The common mechanism across these strategies lies in triggering cognitive conflict through attribute mismatch, forcing consumers to shift from intuitive to analytical processing, thereby reconstructing normative cognitive frameworks (Garst & Bodenhausen, 1997; Prati et al., 2015), which can produce positive or negative effects on advertising outcomes.

Spokesperson type significantly impacts counter-stereotypical advertising effectiveness. Traditional marketing concepts often implicitly assume that spokespersons with high social status and distance can more effectively convey credible information and drive purchases (Schimmelpfennig, 2018; Chang & Chen, 2022). This cognition tightly binds endorsement effectiveness to power distance, suggesting that celebrities and experts with greater social distance are more persuasive due to their halo effect. However, research reveals a more complex picture: for functional (search) products, studies find that consumers may prefer celebrity endorsements, aligning with traditional reliance on celebrities' "professional trust endorsement" (Han et al., 2022). Yet other research indicates that in certain contexts (such as emphasizing product practicality and real-world connections), smaller social distance between internet celebrities and ordinary consumers can effectively stimulate advertising's functional appeal, thereby activating consumers' realistic self-identity and trust, generating more positive advertising effects (Shi et al., 2021; Nie et al., 2024). This seemingly contradictory conclusion 实质上 challenges the singular stereotype that "celebrity endorsements are more authoritative and effective." It demonstrates that spokesperson persuasiveness does not absolutely depend on external authoritative 光环; low-social-distance, high-affinity spokespersons (such as internet celebrities) can also establish effective persuasion paths in specific contexts. This breaks the traditional cognitive framework that equates endorsement effectiveness entirely with spokesperson social status. Similarly, virtual spokespersons are often considered

naturally inferior to real-person endorsements in persuasiveness due to the “uncanny valley effect” and lack of “authenticity” (Song et al., 2024; Wang, 2024; Teng et al., 2025). However, research shows that meticulously designed virtual humans with “flaws” (such as freckles) can significantly narrow or even reverse the perceived authenticity and persuasiveness gap with real-person advertising endorsements, enhancing advertising evaluation (Song et al., 2024). This finding not only addresses the 固有思维 that virtual spokespersons struggle to appear as human-like figures due to the uncanny valley effect but also directly challenges the stereotype that “non-human equals lack of authenticity and persuasiveness.” Analysis of studies producing counter-stereotypical conclusions reveals common mechanisms with spokesperson characteristic effects: breaking consumers’ 固有 cognitions through conflicting characteristics and reconstructing cognitive patterns within rationalized narratives (Noseworthy et al., 2014; Prati et al., 2015).

The above research demonstrates that advertising spokesperson characteristics and types trigger cognitive conflict through attribute mismatch, significantly affecting counter-stereotypical advertising effectiveness with notable variability and context dependency. Gender mismatch design in emotional products generates positive effects by triggering moderate cognitive conflict, stimulating consumers’ novelty and acceptance willingness (Xia et al., 2024). However, when applied to functional products, it may trigger negative reactions due to credibility concerns (Wang & Dong, 2022). Virtual spokespersons compensate for authenticity perception through “flaw design,” achieving effect reversal across category endorsements and enhancing product evaluation (Song et al., 2024). Internet celebrity endorsements boost consumers’ realistic self-identity through social proximity in practicality-emphasizing scenarios, generating positive effects (Nie et al., 2024), but may suffer from insufficient professionalism and persuasiveness in high-authority-demand contexts.

2.1.2 Advertising Content

Advertising content design challenges consumers’ stereotypical cognitive frameworks through narrative style and product strategy. Traditional perspectives hold that positive emotional narrative styles can stimulate positive brand evaluations (Wang et al., 2019), while negative emotional narrative styles more easily generate negative consumer reactions (Dens & De Pelsmacker, 2010), forming a binary stereotypical cognition among consumers. However, increasing numbers of consumers are willing to pay for tea brands that highlight negative emotions in advertisements. Research shows that brands with negative emotions can gain consumer favor through emotional resonance, translating into more positive purchase intentions (Lu et al., 2022), breaking the stereotype that directly links advertising emotional polarity with outcome polarity.

Advertising product strategy constitutes an important component of advertising content. Particularly in product packaging color application, there exists space to challenge stereotypes. Traditional marketing practices often assign specific gender or social role associations to colors (e.g., pink for women, blue for

men) (He et al., 2011), which can 固化 into color stereotypes targeting gender groups. However, counter-stereotypical marketing attempts to break free from these color label constraints. Research shows that in products targeting male consumers, strategic use of colors traditionally 被视为 “feminine” (such as pink or purple), when aligned with brand tone or conveying specific emotions (such as sophistication or individuality), can similarly achieve positive advertising evaluations (Del Giudice, 2017; Chang & Chen, 2022), directly challenging the stereotypical cognition that “specific colors can only be used for specific gender group products” and 解构 the inherent binding between color and gender roles.

In summary, counter-stereotypical design at the content level—such as negative narratives and color innovation strategies—can produce positive effects when anchored to target groups’ emotional needs or brand tone. However, 脱离 specific contexts may trigger negative reactions. This reflects that when consumers encounter advertising content inconsistent with traditional thinking, they undergo a process of “stereotype deconstruction—new cognitive schema construction,” simultaneously triggering emotional responses, breaking 固有 thinking, and reconstructing advertising content value.

2.1.3 Advertising Form

With the rapid development of mobile internet, scholars increasingly focus on interactive advertising forms (Wu, 2007; Li & Yao, 2022). Traditional perspectives suggest advertising should emphasize “emotional interaction” to 拉近 psychological distance with consumers, thereby generating positive advertising effects (Wu, 2007). However, ample evidence indicates this depends on specific contexts. For instance, strong emotional interaction without adequately mobilizing consumers’ own emotional foundations can 反而 reduce consumer evaluations (Han et al., 2024). This conclusion reveals that over-reliance on emotional interaction strategies in contexts without 充分 activated consumer emotional foundations may trigger cognitive defense, thereby weakening advertising effectiveness. It exposes the boundary conditions of emotional appeals in counter-stereotypical advertising communication, breaking consumers’ stereotype of the “universal effectiveness of advertising emotional interaction strategies.”

Virtual Reality (VR) advertising represents an advertising form that applies VR technology in marketing activities, using VR technology as an advertising medium for communication (Duan, 2018). Traditional perspectives suggest VR advertising’s experiential value derives from visual stimulation (Brenngman et al., 2022), forming a stereotypical expectation that “technological media only serves single senses,” believing that 近距离 senses like smell and taste cannot be transmitted through VR. However, through multisensory design combining smell and sound, VR technology has been proven capable of simulating human multi-channel perception capabilities, significantly enhancing consumer identification with technological authenticity and thereby improving advertising effectiveness evaluation (Coelho et al., 2019; Brenngman et al., 2022). This discovery challenges social groups’ stereotypical cognition of “VR technology’s experiential

limitations,” indicating that in new technological contexts, consumer advertising experiences have achieved breakthroughs from static to dynamic and then to multi-sensory channels, providing empirical support for counter-stereotypical advertising applications in new technology fields.

Advertising context research is often inseparable from consumer cultural backgrounds and advertising communication media. In collectivist cultural markets, counter-stereotypical advertising often emphasizes group harmony and intergenerational inclusion (Han & Shavitt, 1994), while in individualist cultural contexts, it often advocates independence and competition (Zhang & Nelson, 2016). However, existing research lacks systematic review of how media contexts analyze counter-stereotypical advertising communication effects. Therefore, this paper will subsequently focus on summarizing and discussing counter-stereotype research in traditional and new media contexts to summarize media differences and compatibility issues in counter-stereotypical advertising communication.

2.2.1 Cognitive Processing Path

The Stereotype Content Model (SCM) posits that when rapidly evaluating specific social groups, humans universally rely on warmth and competence as fundamental cognitive simplification tools (Fiske et al., 2018). While this automated cognitive strategy of simplifying group information classification can improve decision-making efficiency, it tends to 固化 and spread stereotypes. The core strategy of counter-stereotypical advertising lies in presenting information that conflicts with consumers’ stereotypical cognitive frameworks about specific social groups, forcing consumers to shift from stereotype-reliant intuitive processing to deeper analytical processing that requires cognitive resource investment (Zuo et al., 2019; Wang & Dong, 2022). For example, when advertising spokespersons’ gender, age, or occupational characteristics significantly deviate from traditional cultural positioning (stereotypes) of that group, consumers must expend more cognitive resources to resolve this social cognition-level information conflict (Prati et al., 2015).

This cognitive effort manifests not only in information processing but also in individuals’ active revision of their own stereotypes about specific social groups. Research shows counter-stereotypical information may be temporarily accepted as group exceptions through “special case strategies” (Santos et al., 2024) or reconstructed as new schemas through cognitive control strategies (Cui et al., 2019) to maintain original group stereotypes. For instance, consumers might categorize male cosmetics users as “professional actors” to preserve original gender cognition, while repeated exposure to counter-stereotypical advertising gradually leads to acceptance of gender role diversity within that social group (Gill & Lei, 2018).

In this process, individuals’ cognitive control strategies and implicit personality theories play crucial roles, particularly reflected in processing stereotypical information. Under high perceptual load situations (such as information-

overloaded short-video advertisements), individuals tend to rely on automated processing, and counter-stereotypical information challenging social cognition may be quickly filtered or ignored. Under low perceptual load (such as immersive VR advertising), consumers are more likely to engage in detailed processing of such information (Gasper & Clore, 2002). Individuals holding incremental theories are more willing to accept counter-stereotypical information because they believe group members' traits are malleable (Dweck & Leggett, 1988), while entity theory holders may resist information challenging their 固有 social cognition due to cognitive rigidity (Blackwell et al., 2007).

Furthermore, social learning mechanisms play an important role in connecting individuals and society. Counter-stereotypical role models presented in advertising (such as female scientists or men taking childcare responsibilities) provide individuals with behavioral templates that challenge traditional group role expectations, promoting cognitive reconstruction about specific social groups (Ramasubramanian & Oliver, 2007). Traditional media strengthens counter-stereotypical information credibility through authoritative endorsement (Chen, 1998), while new media achieves cognitive penetration through algorithmic recommendations and User Generated Content (UGC) (Wang et al., 2024).

2.2.2 Emotional Arousal Path

The emotional arousal path focuses on how counter-stereotypical advertising influences consumer responses through emotional activation and identity management. This path's complexity manifests not only in the diversity of emotional reactions but also in how it reflects the role of social group norms and identity boundaries in consumer psychology.

When counter-stereotypical information challenges or threatens core norms or role expectations closely associated with specific social groups that individuals identify with, it may trigger strong defensive emotional reactions (Rudman & Fairchild, 2004). This emotional rejection is rooted in Social Identity Theory, stemming from psychological needs to maintain group boundaries (Tajfel & Turner, 1979). For example, male audiences exposed to advertisements strongly 颠覆 traditional "male breadwinner" gender roles (such as depicting "househusband" images) may experience anxiety and disgust due to perceived threats to their gender group's traditional roles and status, potentially leading to boycotts of the advertisement and brand (Liu & Zuo, 2006; Åkestam et al., 2021).

Similarly, obese group members may internalize society's prevalent negative stereotypes about body types after repeated exposure to "healthy weight" campaigns, leading to decreased self-esteem and increased depression risk (Richeson & Pollydore, 2002). This demonstrates that social prejudice can activate negative emotional responses toward specific groups through counter-stereotypical interventions.

However, counter-stereotypical information does not necessarily trigger negative emotions. Moderate cognitive conflict can activate positive emotions, thereby

stimulating exploratory motivation (Prati et al., 2015). For example, virtual spokesperson gender-reversal designs create contrast through 反差感, generating brief emotional impact while establishing emotional connections through narrative resonance (Zhu et al., 2022). Experiments show counter-stereotypical advertising can prompt consumers to actively analyze difference nature through “cognitive-emotional” chain reactions, thereby evoking curiosity and acceptance willingness (Zhu et al., 2015). This emotion-driven exploratory behavior is particularly significant in internet celebrity livestreaming. When hosts alleviate cognitive conflict through 话术 optimization (such as avoiding excessive self-praise), consumer trust and participation willingness significantly improve (Liu & Zhang, 2024), demonstrating the positive role of emotional paths in reconciling social cognitive conflicts.

Thus, emotional states play dual roles in the emotional path. Positive emotions (such as pleasure and curiosity) can enhance cognitive flexibility and promote deep processing of counter-stereotypical information. Research shows positive emotions improve individuals’ acceptance of new information by activating the prefrontal cortex (Ashby & Isen, 1999). Dolinski and Nir (2009) further found that in positive emotional states, people are more inclined to deeply consider counter-stereotypical information, and this deep processing helps break traditional stereotypical frameworks. Conversely, negative emotions (such as anxiety and anger) may exacerbate cognitive closure, leading to information rejection (Jin & Hu, 2015). McCormick (2016) notes that men may experience anxiety when exposed to advertisements 颠覆 gender roles, threatening their gender identity and causing them to avoid related products.

2.2.3 Dual Path Interaction

Cognitive and emotional paths do not operate in isolation but shape final effects through dynamic interaction. The intensity of cognitive conflict directly affects emotional reaction polarity. For example, moderate inconsistency (such as products with innovative appearance but continued functionality) can balance novelty and acceptance, maximizing positive effects (Noseworthy et al., 2014). Extreme conflict (such as advertisements completely 颠覆 gender symbols) may trigger emotional rejection due to cognitive overload (Damer et al., 2019). This interactive effect is moderated by cultural background, product type, and individual differences. In collectivist cultures, gradual strategies (such as emphasizing intergenerational inclusion) more easily achieve cognitive-emotional synergy (Han & Shavitt, 1994). Innovative products require reduced conflict intensity to avoid cognitive load (Wang et al., 2024).

Media contexts can further amplify the interaction complexity of dual paths. Traditional media triggers shallow cognitive reconstruction through symbolic narratives (He & Zhu, 2014), but its one-way communication limits emotional resonance. New media achieves deep cognitive-emotional integration through algorithmic adaptation (such as emotional content push) and multi-sensory experiences (such as VR advertising’s sense of presence) (Gan et al., 2023). How-

ever, excessive reliance on algorithms may lead to “information cocoons,” 反而固化 stereotypes (Wang et al., 2021). Therefore, studying media differences in counter-stereotypical advertising communication becomes particularly important.

2.3.1 Positive Outcomes

Counter-stereotypes’ positive outcomes concentrate on enhancing consumer cognitive flexibility, reducing prejudiced attitudes, increasing purchase intention, and promoting risk-taking decisions. Counter-stereotypes significantly impact cognitive domains, with improved cognitive flexibility being a core effect (Zeng et al., 2022). Research shows counter-stereotypes can prompt consumers to abandon rigid and structured thinking patterns, thereby promoting cognitive flexibility (Leicht et al., 2017). This flexibility helps people process information more openly and adaptively when facing stereotype-inconsistent information. For example, counter-stereotypical information can stimulate individuals to re-evaluate gender roles, thereby reducing gender stereotypes’ cognitive impact (Leicht et al., 2017). Additionally, counter-stereotypes can affect working memory capacity because processing counter-stereotypical information requires more cognitive resources, potentially influencing consumer performance on specific tasks (Finnegan et al., 2015). These findings underscore counter-stereotypes’ importance in breaking traditional cognitive frameworks and promoting cognitive diversity.

At the attitudinal level, counter-stereotypes profoundly influence consumer attitude change. Research demonstrates that counter-stereotypes can effectively reduce individual stereotypical cognition and even decrease prejudice and discrimination (Lai et al., 2014). This attitude change extends beyond the individual level to influence entire groups’ perceptions of specific products or services. Studies show that raising awareness of stereotypes through education and propaganda can help reduce social prejudice (Crisp & Hewstone, 2007). Furthermore, counter-stereotypes can enhance purchase intention by stimulating consumer interest and curiosity in products (Ramasubramanian, 2011). These results indicate counter-stereotypes play an important role in shaping consumer attitudes and promoting positive behavioral intentions.

At the behavioral level, counter-stereotypes influence consumer behavior patterns and increase risk-taking decisions. Research shows counter-stereotypes can prompt people to re-evaluate and adjust their behaviors when facing stereotype-inconsistent information (Ramasubramanian, 2015). This re-evaluation may lead to more open and inclusive behaviors, thereby reducing discrimination based on stereotypes. For example, counter-stereotypical role displays in advertising can change consumer perceptions of products and brands, thereby influencing purchasing behavior (Duker & Tucker Jr, 1977). Additionally, counter-stereotypes can increase customer-product interaction because counter-stereotypical information can stimulate curiosity and exploratory desire, thereby increasing interaction and engagement with products (Leicht

et al., 2017). These findings emphasize counter-stereotypes' importance in promoting positive behavioral increases and enhancing consumer engagement.

2.3.2 Negative Outcomes

While counter-stereotype interventions aim to reduce prejudice by challenging 固有 cognitions, their effects are not entirely positive. Recent research indicates counter-stereotype strategies may trigger cognitive conflict, emotional rejection, and even socio-cultural backlash (Richeson & Pollydore, 2002; Rudman & Fairchild, 2004; Damer et al., 2019).

Counter-stereotype strategies can cause cognitive conflict and emotional anxiety. When counter-stereotypical information conflicts too strongly with consumers' original cognitive frameworks, it may trigger cognitive dissonance, leading to psychological discomfort and even behavioral avoidance (Song & Liu, 2014; Pounders, 2018). For example, when men encounter advertisements 颠覆 gender roles (such as male cosmetics endorsements), they may experience anxiety due to threats to their gender identity (McCormick, 2016; Wang & Dong, 2022). Additionally, counter-stereotype interventions may inadvertently intensify group difference perception and stigma internalization. Research shows that obese groups may internalize social prejudice after repeated exposure to “healthy weight” campaigns, leading to decreased self-esteem and increased depression risk (Pearl, 2020). Mental health stigma research also finds that even when interventions attempt to eliminate prejudice against anxiety and depression, implicit cognition tests show negative associations remain difficult to eliminate and may even strengthen through repeated exposure to negative vocabulary (Cui et al., 2019).

Overly aggressive counter-stereotype strategies may trigger defensive reactions and emotional rejection from conservative groups. For example, advertisements 颠覆 traditional gender narratives (such as “female breadwinner, male homemaker”) may provoke resistance from audiences with traditional gender attitudes, 反而 strengthening their original stereotypes (Liu & Zuo, 2006; Åkestam et al., 2021). Even when explicitly implementing counter-stereotype policies, implicit biases may persist through micro-interactions (Duker & Tucker Jr, 1977). This rejection essentially represents an immune response of social cognitive structures to counter-stereotypical information, with consistent underlying logic across domains: when stereotype-breaking behaviors challenge group cognitive frameworks, social systems may maintain the status quo through resource deprivation and attribution bias (Plaks et al., 2001). For example, in workplaces, employees with non-traditional gender images may encounter the “glass cliff” phenomenon—being assigned high-risk positions without support, ultimately reinforcing negative stereotypes through failure (Pan et al., 2023). Educational research also finds that teachers' implicit biases toward counter-stereotypical students (such as women exceptionally skilled in STEM) may cause evaluation bias, limiting their development opportunities (Jussim, 1991).

Counter-stereotype interventions also face limitations of “special case strategies” and risks of triggering socio-cultural backlash. Counter-stereotypical information is often 被视为 “exceptions” rather than universal phenomena, thus failing to shake overall cognitive structures. For instance, consumers may view male cosmetics use as “professional necessity” (such as for actors) rather than challenging the “cosmetics = female” stereotype. This “special case strategy” 反而 maintains original biases. Research finds that moderate inconsistency designs (such as appearance innovation with functional continuity) can stimulate interest, but completely 颠覆 products are easily rejected due to cognitive overload (Noseworthy et al., 2014). Furthermore, cross-cultural research shows counter-stereotype strategies must adapt to social norms. In collectivist cultures, advertisements emphasizing individual breakthroughs of traditional roles may fail due to violating group consensus and even trigger moral condemnation (Han & Shavitt, 1994). For example, Asian markets show significantly lower acceptance of “househusband” images than Western markets, and forced promotion may exacerbate cultural conflict, demonstrating the boundary conditions of cultural background in counter-stereotype interventions (Dweck & Leggett, 1988).

2.4.1 Threshold Effects of Counter-Stereotypes

Similar to stereotypes containing positive components, existing research proves counter-stereotypes also contain negative components, with intervention effects showing significant “double-edged sword” characteristics. The two effects do not exist in isolation; their interaction reveals counter-stereotype strategy complexity: moderate intervention can stimulate change, while excessive intervention triggers backlash. However, existing research mostly focuses on single effects, lacking systematic explanation of the dynamic “intervention intensity-effect” relationship (Wen et al., 2020). Future research should focus on the information acceptance threshold effects exhibited by counter-stereotype intervention intensity and effectiveness, exploring the “optimal stimulation interval” where appropriate external stimuli cause consumer cognition reversal, balancing information novelty with audience cognitive/emotional acceptance capacity to maximize positive effects (such as attitude change) while minimizing negative risks (such as cognitive overload). For example, product designs with innovative appearance but functional continuity (moderate inconsistency) yield highest purchase intention, while completely 颠覆 designs experience sharply decreased acceptance (Noseworthy et al., 2014). Notably, acceptance thresholds are influenced by multiple factors including cultural background, product type, and individual differences, requiring dynamic adaptation to specific contexts (Wen et al., 2025). For instance, in collectivist cultures, acceptance thresholds are lower (such as Asian markets being more sensitive to gender role changes) (Matthes et al., 2016; Roth-Cohen et al., 2023), requiring gradual strategies. Innovative products have lower acceptance thresholds than non-innovative products due to higher information complexity (Kim & Nam, 2004). Consumers with high cognitive flexibility or growth mindsets have higher acceptance thresholds and can accept more intense conflicting information (Dweck & Leggett, 1988). Future

research can further explore the nonlinear relationship and boundary conditions of counter-stereotype “intensity-effect.”

2.4.2 Backlash Effects of Counter-Stereotypes

Counter-stereotype intervention effects are constrained not only by information acceptance threshold effects but also by potential backlash effects that highlight strategy implementation complexity. When intervention intensity exceeds audience cognitive or emotional acceptance thresholds, counter-stereotypical information may trigger psychological defense mechanisms, causing consumer attitude reversal, intensified socio-cultural conflict, and even strengthened original stereotypes.

Extreme conflict designs in counter-stereotypes (such as advertisements completely 颠覆 gender symbols) may exceed consumers’ cognitive processing capacity boundaries. According to the Need for Cognitive Closure theory, when information complexity exceeds individual cognitive resources, individuals tend to adopt simplification strategies to reduce uncertainty (Liu et al., 2007). This cognitive overload not only reduces advertising effectiveness but may also intensify consumer rejection of counter-stereotypical information (Cui et al., 2019). Additionally, if counter-stereotypes directly challenge core social identities (such as gender roles or cultural values), they may trigger defensive reactions (Liu & Zuo, 2006; Åkestam et al., 2021). Social Identity Theory indicates that when group boundaries are threatened, individuals maintain identity stability by strengthening in-group preferences or denigrating out-groups (Turner et al., 1979), which requires particular attention in cross-cultural research (Zhang & Nelson, 2016).

3. Media Contexts for Counter-Stereotypical Advertising Communication

This paper adopts a nested SOR-ADO dual-theoretical framework to systematically analyze the complete path of counter-stereotypical advertising communication. Section 2, based on SOR theory (Stimulus-Organism-Response), focuses on the “stimulus-psychology-behavior” mechanism at the consumer group level, revealing micro-level psychological processing mechanisms of counter-stereotypes. Section 3 introduces the ADO (Antecedents-Decisions-Outcomes) framework as an extension and expansion of SOR theory at the communication ecology level.

Counter-stereotype communication effects depend on media representation and channel selection (Galdi et al., 2023). However, existing research lacks systematic review of media contexts’ role in counter-stereotypical advertising communication. This paper uses the ADO framework to explore how traditional and new media differentially affect counter-stereotypes’ “antecedents-mechanism-outcomes” chain (as shown in Figure 2

), analyzing similarities and differences in strategy design, effect boundaries, and cultural compatibility. The two frameworks form a hierarchical progres-

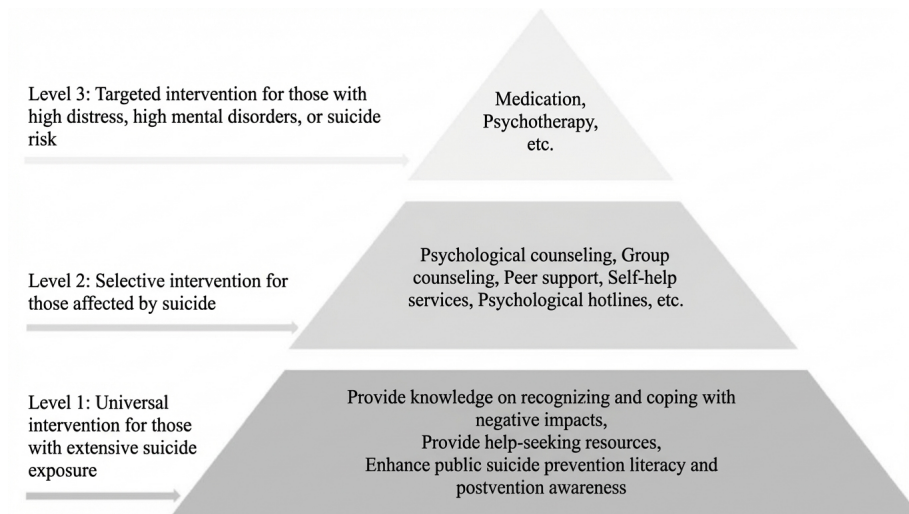


Figure 1: Figure 2

sion from “group psychology to communication ecology”: SOR explains how counter-stereotypical information is processed by consumers, while ADO addresses under what media ecology it is accepted or rejected. This integrated model compensates for single-perspective limitations, providing theoretical support for cross-media integrated marketing of counter-stereotypes.

The ADO framework includes Antecedents, Decisions, and Outcomes (Paul et al., 2021). Antecedents summarize causes of phenomena or behaviors, Decisions parse the mechanisms through which phenomena or behaviors manifest, and Outcomes indicate further evaluations after phenomena or behaviors occur (Wang et al., 2023).

Figure 2 Counter-Stereotype ADO Framework in Media Marketing Advertising Communication

3.1 Counter-Stereotype Research in Traditional Media Marketing

Research shows traditional media (such as television, radio, newspapers, books) advertising information is often constrained by stereotypes. The label of “high authority, low innovation” limits their status and competitiveness in the public mind (Bai, 2013). Cognitive psychology suggests human information processing takes two forms: intuitive and analytic (Epstein et al., 1992). Traditional media aligns with stereotypical information in individuals’ minds, often triggering intuitive information processing that automatically and inevitably activates associated stereotypes (Ito & Urland, 2003), leading to reduced attention to product information (Rakić & Chambers, 2012). Additionally, psychology and

consumer behavior research shows counter-stereotypical information can prompt individuals to shift from automated, intuitive information processing modes to more systematic and refined cognitive processing methods (Prati et al., 2015). This shift in cognitive processing helps strengthen deep processing of counter-stereotypical information, thereby effectively inhibiting automatic stereotype activation (Bartholow et al., 2006). Therefore, for traditional media marketing, adopting counter-stereotypical advertising methods is crucial for changing these established perceptions and attracting target audiences.

Traditional media's counter-stereotypical marketing practices support these views. For example, television advertisements challenge gender role stereotypes by presenting occupational images of female scientists or male nursing workers, attempting to use elite class demonstration effects (Chen, 1998). Such advertisements rely on media authority to strengthen counter-stereotypical information credibility, but their effectiveness highly depends on audience trust in traditional media (He & Zhu, 2014). Research finds that with authoritative media endorsement, counter-stereotypical information is more easily attributed to "social progress" rather than "individual exceptions" (Hewstone et al., 1994), thereby increasing the likelihood of cognitive reconstruction. Additionally, traditional media's linear communication model limits audience active participation, often reducing counter-stereotypical information to "labeled symbols." For example, while newspapers' objective reporting on scientist group diversity (such as non-"nerd" images) can reduce stereotype intensity (He & Zhu, 2014), it lacks emotional arousal paths (Berger & Fitzsimons, 2008). This one-way nature results in audiences' processing of counter-stereotypical information remaining at shallow cognitive levels, making it difficult to trigger deep attitude change.

3.2 Counter-Stereotype Research in New Media Marketing

New media marketing refers to marketing methods that use information technology and digital means to achieve brand promotion, product sales, and customer relationship management objectives (Dai, 2020), including social networking platforms, livestreaming, and short videos. New media marketing, with its characteristics of diversity, high penetration, and strong interactivity, can create synergistic effects with existing marketing channels, achieving integrated communication effects difficult to realize through traditional marketing models. Existing research shows new media marketing expands consumers' sensory modalities and behavioral experiences (Xu et al., 2021), which is significant for breaking stereotypes.

Counter-stereotype research in new media marketing also follows the ADO framework and presents broader research perspectives than traditional media marketing. Based on the core distinction between information characteristics and presentation methods, this paper categorizes previous research into content attributes and form attributes (Paul et al., 2021) to explore counter-stereotype strategies in new media advertising communication (as shown in Table 1).

Table 1 Counter-Stereotypes in New Media Marketing Advertising Communication

Content Attributes	Form Attributes
Gender (Male vs. Female) (Jiang et al., 2022)	Short video vs. Livestreaming vs. Social Media (User Generated Content, UGC)
Appearance (Typical occupational appearance vs. Atypical) (Dean, 2021)	Video frame orientation (Horizontal vs. Vertical)
Age (High-profile elderly vs. Low-profile elderly)	Interaction methods (Real-time interaction vs. Bullet comments)
Person perspective (First-person vs. Third-person)	Interaction scale (Single-person vs. Multi-person)
Narrative emotion (Intensity overload vs. Non-overload)	Interaction subjects (Brand self-broadcasting vs. Endorser livestreaming)
Visual (Cool colors vs. Warm colors)	Interaction intensity (High vs. Low)
Auditory (Human vs. AI voice-over)	Technical implementation forms
Multimodal fusion (Text vs. Audio vs. Text+Audio)	Algorithm recommendation vs. KOL cooperation vs. Platform linkage (Ye et al., 2023) (Gan et al., 2023) (Cao et al., 2024) (Wen et al., 2025) (Wang et al., 2024) (Choi et al., 2025) (Li & Sun, 2024) (Liu & Zhang, 2024) (Feng et al., 2024) (Zou et al., 2023) (Han et al., 2024) (Qian et al., 2024)

Previous research has validated the universality of counter-stereotypes in new media marketing from multiple perspectives and theories. However, 梳理 reveals shared underlying mechanisms: the classification of content and form attributes in new media marketing information essentially represents a synergistic effect of “cognitive deconstruction—transmission optimization.” Through innovative designs in role shaping, narrative reconstruction, and multi-sensory experiences, content attributes can reconstruct consumers’ cognitive schemas, effectively blocking the automatic activation process of stereotypes. Form attributes optimize information transmission efficiency and emotional arousal through different characteristics of media, interaction, and technology, reducing cognitive defense. In fact, with technological development and deeper exploration, increasing research attempts to combine both approaches—triggering deep thinking through multi-dimensional content deconstruction (Cao et al., 2024) while achieving precise reach and immersive experiences through technological em-

powerment of forms (Li et al., 2024; Qian et al., 2024)—ultimately forming a new media marketing communication model with strong persuasive power.

In summary, new media has 重构 the communication paradigm of counter-stereotypical advertising through diversity, interactivity, algorithmic adaptation, and massive User Generated Content on new media platforms. Its real-time feedback mechanisms and fragmented communication characteristics both expand information coverage and intensify effect uncertainty. First, new media platforms achieve personalized push of counter-stereotypical advertising through algorithmic analysis of user behavioral data. For example, short-video platforms match “first-person narrative + emotional content” based on user interest tags (Gan et al., 2023), enhancing acceptance by reducing cognitive defense. Empirical research shows algorithm-driven counter-stereotypical advertising can effectively improve information reach efficiency, but over-reliance on algorithms may lead to “information cocoons,” reinforcing existing biases (Wang et al., 2021). Additionally, new media like live e-commerce dynamically adjusts counter-stereotypical information presentation through diverse interactions with audiences. For instance, hosts alleviate cognitive conflict through 话术 optimization (such as avoiding excessive self-praise) (Liu & Zhang, 2024) or enhance emotional resonance through “social presence” (Gao et al., 2022). Finally, social media’s User Generated Content dissolves authoritative discourse through grassroots narratives, forming bottom-up counter-stereotypical demonstration effects. For example, emojis enhance “perceived warmth” in utilitarian product reviews (Wang et al., 2018; Jiang & Zou, 2023), thereby improving counter-stereotypical information credibility. However, the fragmented nature of User Generated Content may also cause information distortion, such as “appearance fallacies” in influencer marketing (Li & Sun, 2024) potentially weakening the seriousness of counter-stereotypical information.

3.3 Media Compatibility in Counter-Stereotype Communication

Traditional and new media exhibit both common paths and differential characteristics in counter-stereotype marketing, 主要体现在 three aspects.

First, similarities and differences in communication models. Traditional media relies on authority and linear communication models to challenge stereotypes through elite demonstration effects (Chen, 1998), but its one-way communication characteristics limit emotional arousal and deep attitude change. New media reconstructs counter-stereotype communication paradigms through algorithmic adaptation, diverse interactions, and User Generated Content. However, new media’s fragmented communication may weaken the seriousness of counter-stereotypical information, and over-reliance on algorithms may exacerbate “information cocoons” (Wang et al., 2021). Regardless of media context, information credibility is a crucial factor affecting advertising effectiveness (Krakow et al., 2018), significantly influencing counter-stereotype effects.

Second, similarities and differences in interaction forms. Traditional media interaction is limited to ratings and letter feedback, with weak real-time correction capabilities for advertising content. New media enables two-way real-time interaction through bullet comments and livestreaming 连麦, dynamically adjusting conflict intensity (Liu & Zhang, 2024). Both can enhance consumer participation through interaction, but differences in feedback depth and speed make new media more proactive and flexible in counter-stereotype strategy adjustments.

Third, similarities and differences in conflict intensity. Traditional media, due to weak interaction and slow adjustment, struggles to match high-conflict-intensity advertising information. Conversely, new media, with strong interaction and rapid adjustment, can match higher conflict intensity advertising information. However, both must follow information acceptance threshold effect principles to avoid negative effects from counter-stereotype backlash (Wen et al., 2020).

Therefore, this paper synthesizes previous research, concluding that counter-stereotype strategies must dynamically match media characteristics—that is, media compatibility differences exist. Traditional media suits high-authority, lower-conflict-intensity counter-stereotypical information (such as gender equality public service advertisements), triggering shallow cognitive reconstruction through symbolic narratives. New media suits high-interactivity, higher-conflict-intensity counter-stereotypical information (such as virtual spokesperson gender reversal), deepening attitude change through emotional resonance and user co-creation. This finding breaks through previous studies' 笼统 discussions of media channels, providing theoretical foundations for precise communication and intervention of counter-stereotypes.

4.1 Summary

As consumers increasingly focus on diversity and social equity, counter-stereotypes have become an indispensable strategic tool in advertising communication. This paper comprehensively discusses counter-stereotypical advertising communication effects based on the Stimulus-Organism-Response (SOR) theoretical framework and fully analyzes counter-stereotypes in media marketing advertising communication using the Antecedents-Decisions-Outcomes (ADO) framework. The paper reveals the “cognitive-emotional” dual-path interaction mechanism, acceptance threshold effects, and media compatibility characteristics of counter-stereotypes in advertising communication, providing new perspectives for theory and practice.

At the theoretical contribution level, this paper introduces the SOR theoretical framework into counter-stereotype research reviews, breaking through traditional single-disciplinary perspective limitations. By integrating psychology, sociology, and marketing theories, the study proposes that counter-stereotype antecedents can be attributed to the synergistic effect of external stimuli (such as advertising spokespersons, content, and forms) and internal factors (such as individual cognitive styles and cultural backgrounds). Regarding mechanisms,

the study reveals a “cognitive conflict-emotional arousal” dual path: counter-stereotypical information forces consumers to shift from intuitive to analytical processing by breaking the Stereotype Content Model’s (SCM) “warmth-competence” dimensions, while the emotional path triggers attitude change or behavioral avoidance by balancing surprise emotions and identity threats. Notably, through constructing the ADO framework, this paper finds that cognitive and emotional paths do not operate in isolation; their interactive effects are significantly moderated by media contexts—traditional media achieve shallow cognitive reconstruction through authority, while new media deepen emotional resonance through algorithmic adaptation and real-time interaction.

By reviewing existing research, this paper emphasizes the “double-edged sword” nature of counter-stereotypes. Moderate conflict designs (such as products with innovative appearance but continued functionality) can maximize positive effects (such as enhanced cognitive flexibility and purchase intention), while excessive intervention may trigger cognitive overload or cultural backlash. Additionally, this paper proposes the “media compatibility” principle: traditional media suits low-conflict-intensity symbolic information, while new media better fits moderate-conflict immersive content, providing references for cross-media integrated marketing.

The study also systematically reviews negative outcomes of counter-stereotypes. Interventions beyond thresholds may not only cause consumer rejection but also exacerbate stigma internalization or social conflict. These backlash effects remind practitioners to dynamically balance intervention intensity and cultural norms, avoiding the trap of “counter-stereotyping for counter-stereotyping’s sake.” Finally, this paper reveals the profound impact of media characteristics on counter-stereotype strategies by comparing traditional and new media communication effectiveness. While traditional media’s one-way communication can leverage authority to strengthen information credibility, it struggles to trigger deep attitude change. New media’s fragmentation and algorithmic recommendations expand coverage but may also 固化 prejudice through “information cocoons.” Therefore, future counter-stereotype marketing must balance media authority, interaction intensity, and grassroots power of User Generated Content (UGC) to achieve coordinated optimization of cognition and emotion.

Overall, this study not only constructs a theoretical framework for counter-stereotypical advertising communication but also provides directions for its application in frontier fields like artificial intelligence and cross-cultural marketing. However, the complexity of counter-stereotypes requires academic and practical communities to continuously monitor their dynamic evolution, particularly in the dual context of technology empowerment and social value changes. Achieving a balance between “breaking” and “building” remains the core proposition for future research.

4.2 Future Outlook

Current research on counter-stereotypical advertising communication has made significant progress, but under the dual backdrop of accelerating technological iteration and diversifying social values, its dynamics, boundary conditions, and interdisciplinary applications still offer vast exploration space. Based on the ADO framework and SOR theory constructed earlier, combined with core findings on media compatibility and information acceptance threshold effects, future research can deepen and expand in the following directions:

First, explore how to use counter-stereotypes to improve social prejudice and stereotypes, endowing counter-stereotypical advertising communication with deeper social significance. While previous sections revealed the “double-edged sword” characteristics and critical role of acceptance threshold effects, how to quantify the nonlinear relationship between intervention intensity and effectiveness in specific contexts requires deeper investigation. For example, in cross-cultural marketing, collectivist societies (such as East Asian markets) show significantly lower acceptance thresholds for gender role changes than individualist societies (such as European and American markets), a difference likely stemming from cultural values’ moderating effect on need for cognitive closure (Han & Shavitt, 1994). Future research can combine quantitative experiments with real advertising scenarios to explore multi-dimensional dynamic communication effect evaluation systems, more precisely capturing counter-stereotypes’ complex effects. For instance, using eye-tracking and neuroimaging technologies (such as fMRI) to dynamically monitor attention allocation patterns, cognitive load, and emotional fluctuations when audiences from different cultures encounter counter-stereotypical advertisements, constructing quantitative models of “conflict intensity—cultural adaptation—behavioral response.” Additionally, using social network technologies to study how counter-stereotypical advertisements affect intergroup relationship structures and cognitive networks, evaluating their long-term potential to promote social cognition. Moreover, addressing differences in traditional versus new media communication characteristics, further exploration of threshold 叠加 effects from multi-media 联动 is possible. For example, can traditional media’s low-conflict symbolic narratives (such as female scientist public service advertisements) triggering shallow cognitive reconstruction (Banchefsky et al., 2016) combined with new media’s algorithmically pushed moderate-conflict content (such as virtual spokesperson gender reversal short videos) deepening emotional resonance (Mohan et al., 2022; Song et al., 2024) break through single-media threshold limitations? Such research can provide precise strategies for global brands’ counter-stereotypical advertising marketing. Meanwhile, existing research mostly compares media based on 固有 attributes; future studies must further examine how audiences’ dynamically changing media usage habits profoundly reshape these differences’ actual effects, such as investigating how playback speed and short-video “swiping” habits affect audience attention to and comprehension of counter-stereotypical narrative clues.

Second, promote interdisciplinary collaboration in counter-stereotype research. Counter-stereotypes involve multiple disciplines including psychology, sociology, communication, and cultural studies. Promoting interdisciplinary collaboration not only helps deepen understanding of stereotype formation, dissemination, and change processes but also effectively explores how to use counter-stereotypes to improve social prejudice and stereotypes. In psychology, researchers focus on stereotype and prejudice formation mechanisms and how to change them through cognitive and emotional interventions (Ashby & Isen, 1999; Zhai et al., 2010; Prati et al., 2015). In sociology, scholars focus on how social structures and cultural environments shape stereotypes and prejudices, examining cognitive bias issues faced by diverse groups including social class differentiation (Harrits, 2019), racial differences (Gonzalez et al., 2021), and gender dimensions (Skočajić et al., 2020), while systematically exploring effective paths for social cognitive reconstruction through educational innovation and communication interventions (Pugh, 1998; Crisp & Hewstone, 2007; Skočajić et al., 2020). In communication studies, researchers focus on how to disseminate counter-stereotypical information through media and other channels, studying media's role in shaping and spreading stereotypes and how to use media to influence public cognition and attitudes (Luong & Knobloch-Westerwick, 2017; Galdi et al., 2023). In cultural studies, researchers focus on stereotype and prejudice manifestations and impacts across different cultural backgrounds, exploring intercultural differences and conflicts, and studying how to reduce stereotypes and prejudices through cross-cultural communication and cultural fusion (Cheng, 1997; Shao et al., 2014). In summary, interdisciplinary collaboration in counter-stereotype research has achieved important results but still faces many challenges and issues. Future research can attempt to construct joint experimental paradigms to strengthen interdisciplinary cooperation and communication. For example, using EEG technology to 解析 neural encoding characteristics when consumers process counter-stereotypical information, while using Natural Language Processing (NLP) to mine emotional polarity in User Generated Content, thereby revealing multi-level mechanisms from “neural—behavioral—social” perspectives.

Third, explore the impact of counter-stereotype applications in artificial intelligence on advertising communication. Counter-stereotype applications in AI profoundly change marketing communication methods, injecting powerful momentum into marketing development. Recent research extensively focuses on counter-stereotype effects on AI's virtual images, voice, and algorithms, making considerable progress, yet many issues remain for further exploration. For example, how to 调节 AI virtual image anthropomorphism to enhance perceived authenticity and thereby promote purchasing behavior remains a major challenge (You & Liu, 2024). Future research should particularly focus on different anthropomorphic images' roles in emotional transmission, breaking the stereotype of single human figures as virtual spokespersons. Additionally, research proves that different AI gender voices matching product characteristics can generate positive effects (Li et al., 2024), but does not elaborate on underlying mechanisms. Future research can 细分 product characteristics, explore internal mechanisms

of different voice effects, and particularly consider differences between AI voice persuasion and human persuasion under varying product involvement levels. It can also compare differences between various persuasion styles, aiming to leverage the role of voice counter-stereotypes. Furthermore, while AI algorithm bias has been optimistically confirmed to promote organizational fairness (Forouzan-deh et al., 2021), this conflicts with corporate innovation management. How to balance the conservatism and creativity of biased AI algorithms to better guide marketing activities is an urgent problem and a future research focus.

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