Viral Sharing Mechanisms of Online Content

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Abstract

Viral marketing refers to the marketing approach wherein high-quality online content is published through social networks to trigger consumers' voluntary sharing, thereby causing the content to spread virally. The viral sharing mechanism of online content primarily encompasses five dimensions: content characteristics, psychological motivations, emotional responses, situational factors, and individual characteristics, which can provide systematic theoretical guidance for brands and self-media to effectively enhance the sharing and forwarding rates of online content. Future research should further explore the mechanisms of action of specific emotions, identify additional situational factors within local contexts, examine the effectiveness evaluation and psychological-behavioral consequences of viral marketing, and employ more diversified research methodologies.

Full Text

The Mechanism of Going Viral: Viral Sharing Mechanisms of Online Content

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Abstract: Viral marketing refers to the marketing approach where brands publish high-quality online content through social networks to trigger consumers' voluntary sharing, causing the content to spread like a virus. The viral sharing mechanism of online content primarily encompasses five dimensions: content characteristics, psychological motivations, emotional responses, situational factors, and individual traits. This framework provides systematic theoretical guidance for brands and self-media to effectively increase the sharing and forwarding rates of online content. Future research should further explore the mechanisms of specific emotions, identify more situational factors within local contexts, examine the effectiveness evaluation and psychological-behavioral consequences of viral marketing, and adopt more diverse research methods.

Keywords: online content; viral marketing; sharing intention; forwarding

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In recent years, phenomena of viral marketing communication have become increasingly common, with some brands becoming overnight "internet celebrities." For instance, the launch news of Huawei' s MateX foldable phone, the heartwarming advertisement "Someone Secretly Loves You" by 999 Cold Remedy, and NetEase' s interactive web game "Test Your Philosophical Temperament" have each generated over 100,000 shares on social networks. Unlike traditional mass communication, this marketing approach—where high-quality online content (including articles, images, videos, interactive web games, and advertisements) is published on social networks to trigger consumer-initiated sharing, causing content to spread virally—has been aptly termed viral marketing (Petrescu & Korgaonkar, 2011). This low-cost, fast-spreading, and highly effective marketing communication method emerges in the new media environment of social networks and holds significant importance for brands (especially unknown startups with limited budgets) to rapidly build brand awareness, promote consumer online engagement, and strengthen emotional connections between consumers and brands. What, then, are the underlying principles behind these viral phenomena? What types of content are more likely to achieve viral sharing? Why do people share this content? And under what circumstances are certain individuals more willing to share? These questions constitute the core issues of viral marketing.

Regarding relevant theories, viral marketing has recently attracted attention from scholars in marketing, consumer psychology, and information science alongside the rise of social networks, gradually becoming an interdisciplinary frontier topic (Berger, 2014). To date, researchers employing different theoretical perspectives and methodologies have conducted extensive studies on five aspects of the viral sharing process: content characteristics (Huang, Lei, & Zhu, 2016; Fan & Pan, 2016; Lee & Hong, 2016), psychological motivations (Fu, Wu, & Cho, 2017; Vries, Peluso, Romani, Leeflang, & Marcati, 2017), emotional responses (Berger, 2011; Li & Liu, 2018; Jones, Gillespie, & Libert, 2019), situational factors (Hayes, Shan, & King, 2018; Consiglio, Angelis, & Costabile, 2018), and individual traits (Teixeira, 2012; Yuki, 2015), yielding fruitful results. Some scholars have noted that viral marketing has become a gradually maturing and crucial area in marketing research (Berger, 2014), representing one of the most effective tools in modern marketing and epitomizing the development trend of online marketing (Petrescu & Korgaonkar, 2011).

However, previous research remains insufficient and lacks depth, with considerable room for exploration. Moreover, these studies are relatively fragmented and piecemeal, lacking systematic and clear summaries of the viral sharing mechanisms of online content. Additionally, most existing research derives from foreign data and samples, while domestic research has only just begun, with stud-

ies based on local contextual particularities being particularly scarce. Therefore, by systematically reviewing and synthesizing relevant literature, this paper for the first time comprehensively summarizes and distills an integrated theoretical framework of online content viral sharing mechanisms from five dimensions: content characteristics, psychological motivations, emotional responses, situational factors, and individual traits. This framework presents a panoramic view of existing research findings and conclusions in this field, providing systematic theoretical guidance for brands and self-media to effectively increase online content sharing and forwarding rates. Simultaneously, this paper will outline future research directions in this domain, aiming to promote greater scholarly attention and further investigation into viral marketing.

1. Content Characteristics That Trigger Viral Sharing

What types of content are more likely to trigger viral sharing? This is the primary question viral marketing must address. Existing research has found that online content prone to viral sharing generally exhibits high novelty, interest, utility, and certain formal features.

1.1 Novelty

In his theoretical review on word-of-mouth and interpersonal communication, Berger (2014) argues that from an impression management perspective, people prefer discussing things others don' t yet know—recent, surprising, and unconventional events—to project a positive image of being trendy, forward-thinking, well-informed, and unique. In fact, online content sharing follows the same psychological principle.

Through coding and analyzing the most-shared articles on *The New York Times* by topic and attribute, Berger and Milkman (2009) discovered that novel (fresh, surprising, creative, unique) online content is easily shared voluntarily, achieving viral dissemination. Examples include sensational headlines, breaking major news, eye-opening product innovation introductions, and creative advertisements. Similarly, Wu and Huberman (2007) coded and analyzed article attributes on the popular voting and commenting site Digg.com, finding that story novelty could attract collective attention and facilitate article sharing and dissemination. Additionally, in specialized research on viral advertising, Dobele, Toleman, and Beverland (2005) conducted in-depth studies of multiple successful viral marketing cases from Honda, P&G, and other brands, concluding that novel creativity is key to achieving viral sharing.

Subsequent empirical research has further validated these findings. For instance, Southgate, Westoby, and Page (2010) coded attributes of 102 video advertisements on YouTube and correlated them with view and share data. They found that video ad novelty and uniqueness were closely related to consumers' viral sharing of the advertisements. Similarly, through online surveys and structural equation modeling of 402 Facebook users, Lee and Hong (2016) found that

advertising creativity significantly influenced consumers' sharing behavior and positive attitude formation.

1.2 Interest

From an impression management perspective, highly interesting (fun, interactive, entertaining, humorous, amusing) online content is also easily shared voluntarily, as sharing such content can project a positive image of the sharer as interesting and humorous (Berger, 2014). For example, people frequently share jokes, cute and interesting images, funny videos or advertisements (such as the viral "First Cultural Relics Talent Show" on Douyin in 2018), and highly interactive web games on social networks. Dobele et al. (2005) even argue that interest is paramount in viral marketing, as no one discusses or shares boring content, nor pays attention to dull marketing campaigns.

Empirical studies on viral advertising have also found that ad interest significantly affects consumers' sharing intentions. Brown, Bhadury, and Pope (2010) designed a 2 (comedic violence intensity: high vs. low) × 2 (consequence severity: general vs. serious) between-subjects experiment to verify the direct effect of comedic violence intensity in advertisements on sharing likelihood, as well as the moderating role of consequence severity. They commissioned professionals to create four versions of video ads along these two dimensions and randomly assigned 131 participants to different groups. Results showed that high-comedic-violence ads generated higher sharing likelihood than low-comedic-violence ads, with this effect being stronger under high consequence severity. Additionally, Shen and Chiou (2016) experimentally verified the direct effect of ad interactivity (high vs. low) on sharing intention. As stimulus materials, the low-interactivity version presented unilateral information through text and images, while the high-interactivity version incorporated psychological tests and games inviting consumer participation. Results indicated that high-interactivity ads generated more interest and consequently higher sharing intentions than low-interactivity ads.

1.3 Utility

Similarly grounded in impression management theory, people enjoy discussing and sharing practical matters, as sharing such content can project a positive image of the sharer as intelligent, wise, altruistic, and helpful. Moreover, practical content holds social exchange value, enabling people to generate reciprocity through sharing (Berger, 2014). For example, people frequently share practical advice for work and life, "chicken soup for the soul" inspirational content, small knowledge tips, valuable infographics, restaurant reviews, and promotional product information on social networks.

Numerous empirical studies have shown that highly practical, information-rich, and valuable online content can trigger consumer-initiated sharing to achieve viral dissemination. Through focus group interviews and content analysis of

frequently shared article topics, Phelps and Lewis (2004) found that practical information and useful advice were among the most shared topics via email. Additionally, Lee and Hong (2016) discovered through online surveys and structural equation modeling of 402 Facebook users that information-rich ads helped consumers make more rational judgments and purchase decisions, better satisfying their functional needs and consequently forming positive attitudes and sharing behavior. As Dobele et al. (2005) noted, successful viral marketing depends on consumers perceiving value upon encountering advertising information and instinctively deeming it worth sharing.

Notably, Koch and Benlian (2015) designed a 3 (scarcity: none vs. low vs. high) × 2 (personalization: none vs. present) field experiment on the real fashion product purchasing platform Style Crowd to compare how different types of promotional information affected consumers' viral sharing behavior. One hundred nineteen valid participants were randomly assigned to six groups. Results showed that compared to personalization cues, scarcity cues in promotional information significantly enhanced consumers' sharing and recommendation intentions by increasing perceived value. Similarly, Huang et al. (2016) designed a 3 (marketing stimulus: new product promotion vs. low discount vs. high discount) × 2 (relationship paradigm: communal vs. exchange) experiment to explore how economic stimuli affected sharing intention and the moderating role of relationship paradigm. One hundred sixty-nine valid participants were randomly assigned to six groups to read different versions of promotional information. Results indicated that practical economic stimuli were more effective at triggering sharing behavior among consumers in an exchange relationship paradigm than in a communal relationship paradigm. These studies demonstrate that when businesses release advertising information with high practical value, dissemination no longer relies solely on a single information source as in traditional pathways, but instead leverages thousands of consumers as disseminators, enabling rapid viral diffusion across social networks (Petrescu & Korgaonkar, 2011).

Beyond these three important thematic content characteristics, scholars in computer and information science have discovered through data mining and econometric analysis of social network platforms that virally shared online content often exhibits certain formal features. For example, posts containing images with visual aesthetics receive more shares than pure text posts; vertical images generate higher sharing volumes than horizontal images; animated images, color-saturated pictures, and images containing human faces are shared more frequently; images featuring animals, computer-generated imagery, aesthetically pleasing visuals, high-definition content, and sexy images are also more likely to be shared (Guerini, Staiano, & Albanese, 2014). Additionally, based on speech act theory in linguistics, Ordenes et al. (2018) used machine learning to conduct text mining and coding of brand posts on Facebook and Twitter over two years, exploring how different language types in brand messages affected consumer sharing intention. Through modeling and econometric analysis, they found that brand posts using alliteration and repetition rhetorical devices received

more consumer shares. Most recently, Pancer, Chandler, Poole, and Noseworthy (2019) examined how text readability in online posts affected consumer sharing intention. By scraping 4,000 Facebook posts from a popular photography blog over three years and conducting coding, modeling, and econometric analysis, they found that readability significantly affected sharing volume even after controlling for photo characteristics, story valence, and other content features. In Study 2, they designed a 2 (readability: simple vs. complex) × 2 (post length: short vs. long) between-subjects experiment to further validate readability' s effect on sharing intention. The authors recruited 236 participants from MTurk and randomly assigned them to four groups to read different versions of brand information. Results showed that simple (high-readability) text information, compared to complex text, had higher information processing fluency and was therefore more likely to be shared, with this effect being stronger for long posts (vs. short posts).

In summary, existing research primarily finds that online content with high novelty, interest, and utility is more likely to trigger viral sharing. Conversely, outdated, ordinary, uninteresting, and valueless content cannot attract consumers (Phelps & Lewis, 2004). Meanwhile, certain formal features of online content (including image inclusion, rhetorical devices, readability, etc.) also affect its viral dissemination effectiveness. Researchers in this area have provided insights based on different theoretical perspectives and methodologies, with their findings and conclusions achieving relatively high consistency, comprehensively and profoundly revealing content characteristics that trigger viral sharing and offering strong explanatory power for viral phenomena in daily life.

2. Psychological Motivations for Viral Sharing

Why do people voluntarily share online content on social networks? What psychological motivations drive viral sharing? Existing research shows that self-enhancement, social bonding, and altruism are three primary psychological motivations for voluntary online content sharing.

2.1 Self-Enhancement

The need for self-enhancement refers to a fundamental human need to feel good about oneself, primarily manifested in expressing, maintaining, and improving self-concept, self-image, and self-esteem. It drives people to manage their self-image presentation in social interactions to gain positive recognition from others and create favorable impressions (De Angelis, Bonezzi, Peluso, Rucker, & Costabile, 2012). Motivated by this need, people willingly share self-related content on social networks that makes them appear better and more special, striving to construct a positive "virtual image." Simultaneously, people use sharing specific online content as a "signal" to convey particular identities (Berger, 2014). For example, sharing novel, cool, interesting, and useful information aims to express and reinforce corresponding self-images; sharing professional review articles demonstrates specific skills, knowledge, or expertise to showcase one' s

"expert identity" in that domain.

Numerous empirical studies have confirmed self-enhancement as the primary motivation for sharing online content. Through questionnaires and analysis of 582 internet users, Ho and Dempsey (2010) found that individuation—a psychological motivation reflecting people' s desire to stand out—positively influenced online sharing behavior. In other words, people primarily hope to distinguish themselves, display self-image, and gain more attention through sharing online content. Taylor, Strutton, and Thompson (2012) similarly found, through online surveys of 615 U.S. college students, that the degree to which online advertising fulfills self-enhancement needs positively affected consumers' likelihood of sharing online ads. Using in-depth interviews combined with online surveys of Facebook users, Vries et al. (2017) and Fu et al. (2017) reached the same conclusion: consumers share online content mainly for "self-serving" purposes, with self-expressive motivation positively influencing sharing intention. Self-expression was measured with items including: "It lets others know who I am," "It helps me express what kind of person I am," "It helps me convey who I am to the outside world," "It helps me construct my identity," and "It helps me express myself." Additionally, through content analysis of the 2,000 most-shared Facebook posts followed by 10,000 online questionnaires, Yuki (2015) found that consumers' motivation for sharing online content was primarily to obtain "social currency" —gaining social recognition and a positive self-image. Most recently, through online surveys of 421 monthly active WeChat users across four Chinese cities, Chu, Lien, and Cao (2018) found that Chinese tourists' self-enhancement motivation significantly influenced their online sharing behavior in WeChat Moments. Although these studies used different conceptual terms, they all essentially confirmed self-enhancement as consumers' primary motivation for sharing online content.

2.2 Social Bonding

Building and maintaining social relationships is a fundamental human need. Berger (2014) notes that daily interpersonal communication enables people to stay connected and convey care, acting like "social glue" that binds people together and continuously strengthens relationships. In social network environments, people similarly need to share emotionally engaging online content of common interest to strengthen social bonding, reduce distance, and alleviate feelings of loneliness and social exclusion. For example, sharing warm greeting posts during holidays or directing specific content to interested individuals or communities are motivated by the desire to strengthen social bonds.

Related empirical research also indicates that strengthening social bonding is an important psychological motivation for voluntary online content sharing. Through focus group interviews and content analysis of frequently shared article topics, Phelps and Lewis (2004) found that people primarily share certain content with specific friends via email to express care and strengthen social bonds. Libert and Tynski (2013) similarly found in a survey study that rein-

forcing shared passions and interests (measured by "It connects me with friends over a common interest") and socializing (measured by "It helps me maintain social relationships with friends") were important reasons for sharing online content. Additionally, through in-depth interviews with 40 consumers and 605 online questionnaires, Vries et al. (2017) found that socializing was a psychological motivation for deep engagement in content creation and sharing. Socializing was measured with items including: "I can stay in touch with people who share my interests," "I can meet people with similar interests," "It makes me feel connected with others," and "It connects me with like-minded people." Similarly, through focus group interviews and 265 online questionnaires, Fu et al. (2017) found that communal motive positively influenced consumers' online content sharing intention, where communal motive specifically referred to connecting with others and obtaining group joy.

2.3 Altruism

Beyond these two self-interested motivations, altruism is also considered by many scholars as a driver of voluntary online content sharing. Sometimes people share content largely selflessly and for public benefit, aiming to help others and improve their welfare (Berger, 2014). For example, sharing a missing person notice on social networks hoping to help, sharing information about a public welfare project to encourage participation, sharing an insightful article for others' learning, or sharing an excellent consumption experience to reward outstanding companies. Some related empirical studies have also confirmed the existence of altruistic motivation. Through questionnaires and analysis of 582 internet users, Ho and Dempsey (2010) found that altruistic motivation positively influenced consumers' online content sharing intention, defining altruistic motivation as willingness to help others with specific items including "to help others" and "to share what I have with others." Libert and Tynski (2013) also found in a survey study that increasing social benefit (measured by "It might be useful to my friends" and "I want to help this public cause") was a reason for sharing online content. Additionally, Fu et al. (2017) found that altruistic motivation could positively influence consumers' online content sharing intention.

In summary, existing research primarily identifies self-enhancement, social bonding, and altruism as three important psychological motivations for voluntary online content sharing. These studies effectively explain the internal causes of viral sharing formation from the perspective of psychological needs, advancing viral marketing research to a deeper psychological level. Notably, Berger (2014) maintains that sharing online content is essentially self-serving, arguing that all seemingly altruistic sharing behaviors described above are actually self-serving and motivated by self-enhancement—to project an image of the sharer as warm-hearted and helpful. Scholars hold differing views and interpretations on this point. However, this paper argues that no absolute boundaries exist among these three motivations; they are not completely independent but rather overlapping, often coexisting in people' s psychological processes when sharing

content, with only their relative proportions varying across different situations.

3. Emotional Responses That Trigger Viral Sharing

Beyond the psychological motivations discussed above, many scholars consider emotional responses as another important cause of viral online content sharing. According to emotion regulation theory, when something triggers emotional fluctuations, people need to manage their emotions and express, vent, and release these emotions through sharing the matter to restore normal emotional states (Berger, 2014). Similarly, when online content triggers strong emotional responses in consumers, they also express and regulate emotions by voluntarily sharing the content on social networks.

Numerous empirical studies show that emotional intensity and emotional arousal are closely related to viral online content sharing. Through coding, content analysis, and subsequent experiments on the most-shared articles on *The New York Times*, Berger and Milkman (2009) and Berger (2011) found that viral dissemination of online content is primarily determined by the degree of emotional arousal it triggers—high-arousal emotions (whether positive or negative) lead to viral content dissemination. Additionally, after coding and content analyzing 65,000 articles on news websites, Jones, Libert, and Tynski (2016) proposed a "valence-arousal-dominance" model to explain emotions' effect on viral sharing. They found that beyond emotional arousal, high-dominance emotions (emotions with high perceived control, such as admiration and feeling inspired) also triggered viral sharing, with the combination of "high arousal, high dominance"proving most effective for viral dissemination. Correspondingly, Guerini and Staiano (2015) scraped 53,226 and 12,437 news articles from rappler.com and corriere.it respectively, combined them with readers' emotional evaluations of each article, and conducted modeling and econometric analysis. They found that viral sharing of online content matched well with the "valence-arousal-dominance" model of emotions it could evoke. Most recently, to overcome limitations of traditional Likert scale measurements, Jones et al. (2019) specifically used galvanic skin response—a physiological measurement—to verify the relationship between emotional responses and viral ad sharing. They selected 15 high-sharing and low-sharing image ads as experimental and control groups, randomly assigned 22 invited participants to two groups for viewing, and used Shimmer GSR devices to collect participants' skin conductance responses. Results showed that participants in the high-sharing ad group exhibited significantly higher levels of emotional arousal and skin conductance responses than those in the low-sharing ad group. Although the specific processes through which emotions affect viral sharing are highly complex, overall, most existing research has explored how specific emotional responses affect viral sharing primarily through the valence classification of emotions (i.e., positive and negative emotions).

3.1 Positive Emotional Responses

Through focus group interviews and content analysis of frequently shared article topics, Phelps and Lewis (2004) were among the first to discover that consumers voluntarily shared online content via email primarily because the content evoked strong positive emotions, such as pleasant, warm, exciting, and inspiring feelings. Similarly, Dobele et al. (2005) and Libert and Tynski (2013) found through in-depth studies of successful viral marketing cases that positive emotions like surprise, joy, and admiration could promote ad sharing intention. Subsequent empirical research has further validated the role of positive emotions in online content sharing intention.

Berger and Milkman (2009) found that online content with positive emotions was more likely to go viral than content with negative emotions, and that awe—a high-arousal positive emotion—was an important emotion triggering viral sharing. They also designed a single-factor between-subjects experiment to verify the causal relationship between amusement (a specific positive emotion) and sharing intention. Using ad stories as stimulus materials, the authors randomly assigned 49 recruited participants to high-amusement and low-amusement groups. Results showed that participants in the high-amusement group had significantly higher sharing intention than those in the low-amusement group. Additionally, Eckler and Bolls (2011) designed a within-subjects experiment to study how video ad emotional tone affected consumers' sharing intention. They first selected 12 real video ads of similar duration in a pilot study and invited 38 undergraduates to rate them by emotional tone, then divided them into pleasant, moderate, and unpleasant groups. Subsequently, they invited 42 other undergraduates to watch the 12 video ads in the main experiment. Results showed that pleasant, positive emotional tone evoked the highest sharing intention compared to the other two groups. Similarly, Fan and Pan (2016) found through experiments that positive emotional arousal in narrative ads helped stimulate consumers' brand identification, thereby enhancing sharing intention. Finally, through 393 online questionnaires and hierarchical regression analysis, Cohen (2014) found that the pleasure and positive emotional responses generated by video games positively influenced consumers' sharing intention.

3.2 Negative Emotional Responses

Through in-depth studies of viral marketing cases, Dobele et al. (2005) and Libert and Tynski (2013) found that when online content triggered strong negative emotional responses in consumers (such as sadness, anger, anxiety, fear, and disgust), they similarly needed to share the content to vent and express emotions. For example, news of celebrity deaths, videos of animal or child abuse, and news about AI replacing human jobs trigger strong negative emotions like sadness, anger, and anxiety, respectively, leading to viral sharing. Related empirical studies also show that negative emotional responses are an important cause of viral online content sharing. Berger and Milkman (2009) verified the causal relationship between anger (a specific negative emotion) and sharing intention

through a single-factor between-subjects experiment. Using negative customer experience stories as stimulus materials, the authors randomly assigned 45 participants to high-anger and low-anger groups. Results showed that participants in the high-anger group had significantly higher sharing intention than those in the low-anger group. Using a similar single-factor between-subjects experimental design, Guadagno, Rempala, Murphy, and Okdie (2013) also explored the formation causes of viral videos on social networks. They collected eight typical videos from YouTube that could stimulate various emotions and recruited 256 undergraduates for the experiment. Results showed that videos evoking disgust and anger significantly increased consumers' sharing intention. Most recently, after coding and content analyzing 65,000 articles on news websites and conducting follow-up questionnaires, Jones et al. (2016) found that although negative emotions appeared less frequently than positive emotions in viral marketing cases, viral sharing could still occur if sad negative emotions in ads could ultimately incorporate hope and surprise.

In summary, substantial research has identified the pathway of "marketing stimulus–emotional response–sharing behavior," suggesting that emotional arousal is an important cause of consumers sharing online content, including specific mechanisms of many different positive and negative emotions. These findings reveal the specific process of viral online content sharing through the lens of emotional responses, discovering the "emotional mediation mechanism" of viral sharing–an important contribution to viral marketing theory.

4. Situational Factors That Trigger Viral Sharing

In fact, the entire formation process of viral sharing is highly complex (Teixeira, 2012). Even when content characteristics, psychological motivations, and emotional responses all meet the conditions discussed above, people may not necessarily share certain online content. So under what circumstances are consumers more willing to share? Consequently, many studies have further identified situational factors affecting viral sharing, mainly including social tie strength, consumer-brand relationship strength, and other factors.

4.1 Social Tie Strength

According to Berger (2014), people' s willingness to voluntarily share online content also depends on the social tie strength between content receivers and senders. Through computer simulation studies of real-time data from an actual viral marketing campaign, Bampo, Ewing, Mather, Stewart, and Wallace (2008) found that social network structures indeed significantly influence viral marketing effectiveness.

Some scholars' research supports the positive role of strong ties in viral sharing. For instance, through in-depth studies of viral marketing cases, Dobele et al. (2005) were among the first to discover that trust in content senders affected ad sharing intention. Correspondingly, Cho, Huh, and Faber (2014) designed a

2 (sender trustworthiness: high vs. low) × 2 (advertiser trustworthiness: high vs. low) field experiment in a real marketing context to study how sender and advertiser trustworthiness affected ad attitudes and sharing intention. After analyzing 204 valid online questionnaires, they found that consumers had significantly more positive attitudes and higher sharing intentions toward ads from high-trustworthiness senders than from low-trustworthiness senders, with sender trustworthiness even overcoming low advertiser trustworthiness to positively influence sharing intention. Additionally, through a 2 (social relationship: strong vs. weak) × 2 (interactivity: high vs. low) between-subjects experiment, Shen and Chiou (2016) specifically examined the moderating role of social tie strength in the effect of ad interactivity on sharing intention. They randomly assigned 246 undergraduates to different groups to read different versions of ad information. Results showed that social tie strength positively moderated the effect of ad interactivity on sharing intention. Most recently, through modeling and econometric analysis of content sharing data on Twitter and Digg, Peng, Agarwal, and Hosanagar (2018) found significant effects of network overlap on content sharing—when content receivers and senders shared more common followees, common followers, and common mutual followers, the receiver' s probability of sharing online content was higher.

However, other research has reached opposite conclusions, suggesting that weak ties are more conducive to viral sharing. For example, through online questionnaires of 1,116 respondents, Bruyn and Lilien (2008) found that although strong ties significantly increased receivers' attention and interest in pushed content, the demographic similarity brought by strong ties negatively affected subsequent sharing behavior. Additionally, in a real viral marketing field experiment with a mobile carrier, Hinz, Skiera, Barrot, and Becker (2011) compared the actual effects of four different viral ad seeding strategies. Through data analysis, they found that although strong-tie individuals had higher participation rates, weak-tie individuals actually exerted greater influence on peers. Similarly, Pescher, Reichhart, and Spann (2013) also designed a field experiment in a mobile carrier' s viral marketing context to explore factors influencing consumer participation in viral marketing programs. In the first phase, they randomly sent different types of promotional messages to 26,137 consumers, asking them to share with friends, then sent them questionnaire links a week later. Data analysis of 943 valid questionnaires ultimately revealed that social tie strength negatively affected consumers' information reading and sharing behavior, while network centrality actually had no significant effect on consumers. Most recently, based on modeling and econometric analysis of sharing and forwarding data on the Twitter platform, Shi, Rui, and Whinston (2014) found that one-way-follow weak ties were more likely to participate in social exchange processes of content sharing than two-way-follow strong ties; compared to two-way-follow followers, a one-way-follow follower had a 3.1% higher probability of sharing online content.

Clearly, scholars remain controversial about the specific role of social tie strength in content sharing behavior, requiring more empirical research to reveal its mech-

anisms across different contexts and conditions. This paper argues that although strong ties benefit attention to and reception of certain online content, they also bring overlapping interpersonal networks and demographic similarity, making people reluctant to share content to avoid duplication with others' shares. Conversely, under weak ties, relationship networks and demographic characteristics differ more substantially, leading to higher perceived novelty of certain content and thus promoting sharing behavior.

4.2 Consumer-Brand Relationship Strength

Word-of-mouth research shows that compared to purely functional products, consumers are more willing to generate positive word-of-mouth for products that reflect self-image and have high self-relevance (such as clothing and cars). Similarly, some empirical studies have found that the strength of consumers' relationships with a brand positively affects their evaluation, acceptance, and sharing intention of that brand' s advertising. In other words, compared to ordinary consumers, a brand' s fans are more likely to share the brand' s online content. For example, Taylor, Strutton, and Thompson (2012) found through online surveys and structural equation modeling of 615 U.S. college students that self-brand congruity had a significant positive effect on consumers' ad sharing intention. Similarly, Ketelaar, Janssen, Vergeer, Reijmersdal, and Jonathan (2016) tracked browsing and sharing data of three recent viral ads on the social networking site Hyves, combined with data analysis of 8,510 returned questionnaires. They found that consumer brand attitude had a significant positive effect on ad sharing behavior. Additionally, Hayes, Shan, and King (2018) studied the interaction between brand relationship strength and interpersonal relationship strength on consumers' intention to share online video ads through a 2 (brand relationship strength: strong vs. weak) $\times$ 2 (interpersonal relationship strength: strong vs. weak) online experiment. They recruited 405 Facebook users from MTurk to click online links to watch video ads and participate in the experiment. Results showed that consumers with high brand relationship strength had significantly higher sharing intention than those with low brand relationship strength. However, individual studies have reached opposite conclusions. In Study 1, Huang and Zhou (2016) used a 2 (brand familiarity: high vs. low) $\times$ 2 (brand relevance: high vs. low) between-subjects experiment to study how brand familiarity and relevance affected ad sharing intention. They invited 122 participants and randomly assigned them to different groups to watch ads. Surprisingly, they found that both brand familiarity and brand relevance had negative effects on ad sharing intention, with the highest sharing intention occurring only under low brand familiarity and low brand relevance. Further, in Study 2, they validated their conclusions through questionnaires and data analysis of 3,749 Youku website users. These findings differ substantially from other research, indicating that the effect of consumer-brand relationship strength on online content sharing intention is not absolute and requires further consideration of different circumstances and conditions.

4.3 Other Situational Factors

Beyond these two main factors, scattered studies have successively identified additional situational factors affecting viral sharing. For example, Taylor et al. (2012) found through online questionnaire surveys that product category involvement had a significant positive effect on ad sharing intention—the more interested and concerned consumers were about a product category, the more likely they were to share related online content. Additionally, through in-depth studies of viral marketing cases, Libert and Tynski (2013) believed that content push timing also affected viral marketing effectiveness. For instance, "time windows" such as after lunch and after work are active periods when consumers use social networks, making them more likely to notice and share online content. Moreover, much content has high timeliness requirements—people only share holiday-related content on the actual holiday. Most recently, Consiglio et al. (2018) found through multiple studies that social density significantly affected information sharing intention. They first collected population density data from multiple Italian cities and corresponding total Twitter post volumes, finding positive correlations between urban population density and Twitter information sharing volume. Subsequently, they designed a single-factor between-subjects experiment, randomly assigning 86 college students to high-density environments (all seated in a 24-seat classroom) and low-density environments (dispersed across two identical 24-seat classrooms) to read an article and answer questions. Results showed that participants in high-density environments had significantly higher sharing intention than those in low-density environments. Further experiments revealed the mediating role of sense of control—that consumers in high social density environments were more willing to share online content to rebuild internal self-control.

Other studies have shown that content acquisition methods also significantly affect sharing intention. Aral and Walker (2011) found through randomized field experiments and modeling analysis of 9,687 Facebook users that active, personalized push methods generated 98% of sharing volume, while passive, mass-pushed information generated 246% of sharing volume, demonstrating greater peer influence and viral spread. Notably, Chen and Berger (2016) studied how content acquisition methods affected sharing intention mechanisms through a 2 (content acquisition method: self-discovery vs. others' push) $\times$ 2 (content characteristic: high interest vs. low interest) experiment. They recruited 192 participants from MTurk and randomly assigned them to different conditions to read an article. Results showed that consumers had significantly higher sharing intention for high-interest articles than low-interest articles, but this effect was attenuated when articles were self-discovered (vs. sent by others).

In summary, scholars have identified many situational factors affecting viral sharing from different theoretical perspectives, mainly including social tie strength, consumer-brand relationship strength, product category involvement, push timing, social density, and content acquisition methods. These studies reveal boundary conditions and moderating effects in the formation process

of consumers' online content sharing intention, enabling deeper and more comprehensive understanding of viral sharing formation mechanisms and thus providing important supplements and improvements to the theoretical system.

5. Individual Characteristics

It must be acknowledged that even when online content perfectly meets viral dissemination requirements, only a minority of people will actually share it. So what individual characteristics make people more willing to share online content on social networks? According to a survey by Libert and Tynski (2013), nearly 18% of internet users share online content at least once a week, with 9% sharing daily. Many scholars believe that consumer individual characteristics significantly affect their content sharing intention, so when conducting viral marketing, businesses need to accurately identify target audiences during the initial push stage, sending content to "the right people" who are truly willing to listen and are interested, and learn to identify and leverage these "super-sharers" to improve overall viral marketing success rates (Phelps & Lewis, 2004; Teixeira, 2012).

Some empirical studies show that people with high sharing intention indeed differ significantly in demographic and personality characteristics from those with low sharing intention. For example, through focus group interviews and content analysis of frequently shared article topics, Phelps and Lewis (2004) found that women were more inclined than men to share online content with friends. Through 393 online questionnaires and hierarchical regression analysis, Cohen (2014) reached the same conclusion in the context of video game sharing. Meanwhile, Yuki' s (2015) large-scale questionnaire survey of 10,083 Facebook users found that gender and age affected consumers' content sharing preferences. Results showed that men' s sharing motivation was primarily to obtain an "interesting" image, while women' s was mainly to obtain a "smart" image; young people' s motivation was primarily to obtain smart and interesting personal images, middle-aged people preferred sharing storytelling content, and older groups preferred sharing practical content. Additionally, by using eye-tracking and facial expression capture systems to analyze consumers' eye movements, expressions, and behavioral responses when watching viral ads, Teixeira (2012) found that people who were more extroverted, open, and self-centered tended to share more content on social networks to enhance others' perception of their social status and display self-image. This finding is consistent with related research conclusions on self-enhancement motivation discussed earlier. In summary, these studies reveal that consumer individual characteristics also serve as boundary conditions in viral sharing formation processes, further supplementing and improving the online content viral sharing mechanism and providing high reference value for businesses' initial content seeding strategies in viral marketing campaigns.

6. Conclusion and Discussion

By systematically reviewing and synthesizing relatively fragmented literature in related fields, this paper for the first time distills an integrated theoretical framework of online content viral sharing mechanisms from five dimensions: content characteristics, psychological motivations, emotional responses, situational factors, and individual traits. These five research areas respectively answer several logically progressive important questions: "What content is more likely to be shared?" , "Why do people share?" , "Under what circumstances are people more willing to share?" , and "What kinds of people are more willing to share?" , ultimately constituting the theoretical system of online content viral sharing mechanisms, as shown in Figure 1 [Figure 1: see original paper].

In this framework, content characteristics serve as antecedent factors; psychological motivations and emotional responses explain the specific mechanisms through which content characteristics affect sharing intention, playing mediating roles; while situational factors and consumer individual characteristics constitute boundary conditions of the main mechanisms, playing moderating roles.

6.1 Implications for Viral Marketing Strategies

The integrated theoretical framework distilled in this paper can provide systematic theoretical guidance for brands and self-media to increase online content sharing and forwarding rates. Generally, marketers need to ask themselves a series of questions when developing online content: Will target consumers be interested in this? Can the content' s theme and format effectively attract consumers? Will they voluntarily share this content? Can the content effectively satisfy consumers' relevant psychological motivations? Can it strongly evoke relevant emotional responses? Have relevant situational factors been considered when pushing the content? Has it been sent to the right people? Specifically, to maximize viral sharing effects, online content should ideally possess high novelty, interest, or utility and meet relevant formal requirements; the content should ideally complement and showcase consumers' positive images, satisfying their psychological motivations of self-enhancement, social bonding, or altruism; the content should ideally evoke strong emotional arousal; when pushing the content, marketers should fully consider situational factors such as target audiences' social networks, timing, and push methods, and preferably first push to "the right people" who are genuinely interested and enjoy sharing.

6.2 Future Research Directions

Although scholars have achieved fruitful research results in viral marketing, many theoretical issues in this field remain worthy of further exploration.

First, regarding consumers' emotional responses, most existing studies have only generally discovered the effects of positive or negative emotions on viral sharing. However, which specific emotions promote consumers' online content

sharing intention? What are their specific mechanisms? These questions require further in-depth exploration across different contexts to establish more specific and diverse emotional stimulation targets for viral marketers, enhancing the operability of viral marketing. For example, existing research has found through content analysis that awe (Berger & Milkman, 2009) and admiration (Libert & Tynski, 2013) can promote online content sharing intention, but what are their specific mechanisms and underlying principles? Additionally, based on observed phenomena, cool product innovation content and product images with cute appearances also frequently trigger consumer sharing. Do coolness and perceived cuteness truly promote sharing intention? More empirical research is needed to explore these questions.

Second, regarding situational factors in viral sharing, scholars remain controversial about the role of social tie strength. Some argue strong ties are more conducive to viral sharing (Ketelaar et al., 2016), while others contend weak ties are more beneficial (Pescher et al., 2013). Under what circumstances are these conclusions respectively valid? This question requires more empirical research considering different specific situations, such as structural characteristics of social network platforms or different stages of viral dissemination. Currently, scholars are employing different theoretical perspectives to identify situational factors affecting viral sharing, such as product category involvement (Taylor et al., 2012), content acquisition methods (Chen & Berger, 2016), and environmental social density (Consiglio et al., 2018). Future domestic scholars need to conduct in-depth research on local viral marketing cases and consumer behaviors in China to further propose and validate more situational factors and individual characteristics affecting viral sharing. For example, some consumers dislike sharing content in WeChat Moments but enjoy sharing on Weibo—does this structural characteristic of social network platforms (open vs. closed) affect sharing intention? Moreover, in cross-cultural contexts, the same online content may yield different sharing results across countries—do different national cultural values affect consumers' online content sharing intention?

Third, previous research has primarily focused on exploring viral sharing formation mechanisms, but future studies also need to evaluate viral marketing effectiveness by developing relevant evaluation criteria to better measure viral marketing performance. Additionally, research is needed on the positive and negative psychological and behavioral consequences resulting from consumer sharing behavior. For example, does consumers' sharing of brand online content reduce psychological distance from the brand? Does consumers' sharing of certain content types reduce their interest in similar products? Does frequent sharing negatively affect consumer mental health? Furthermore, viral marketing has its drawbacks, easily generating vulgar content and ethical issues regarding consumer privacy infringement—how to further regulate viral marketing activities and achieve synergistic effects with other marketing methods also warrants further scholarly investigation.

Fourth, regarding research methods, the viral marketing field needs to adopt

more interdisciplinary approaches to obtain more accurate and reliable conclusions. Most previous research has used sharing intention as the outcome variable, but sharing intention does not necessarily translate into actual sharing behavior. Therefore, future research needs to examine factors influencing actual sharing behavior through more archival data analysis methods and field experiments. For example, secondary archival data could be used to build econometric models, and qualitative text data mining could discover correlations between variables and actual content sharing outcomes; laboratory and field experiments could explore specific psychological mechanisms and establish causal relationships; and neuroscience methods could further reveal the physiological and neural mechanisms underlying viral sharing.

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A Literature Review on the Factors That Make Online Contents Viral

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Abstract: Viral marketing refers to the marketing approach through which marketers generate online contents on social networks and attract consumers to share them and make them viral. The paper develops a literature review on the factors that make online contents viral, including content characteristics, psychological motives, emotional responses, situational factors, and individual traits. The framework can provide theoretical guidance for brands and We

Media to increase sharing rate of their online contents. Future studies should focus on exploring the influential mechanism of specific emotions on sharing intention, identifying more situational factors in the context of Chinese culture, measuring the performance of viral marketing, investigating psychological and behavioral consequences of viral marketing, and adopting multiple methods.

Key words: online contents; viral marketing; sharing intention; forwarding

Note: Figure translations are in progress. See original paper for figures.