Postprint: The Impact of Online Information Representation in Crisis Events on Users' Continuous Sharing Intention

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Abstract

[Purpose/Significance] To explore the influence mechanism of online information representation in crisis events on users' continuous sharing intention, this study classifies and grades information with different representations on the internet, conducts differentiated monitoring and governance of crisis information, and strengthens users' continuous sharing intention for positive information from the perspective of information representation.

[Method/Process] A research theoretical model was constructed with information representation as the independent variable, continuous sharing intention as the dependent variable, and experience retention and perceived permeability as mediating variables. Relevant data were collected through questionnaire surveys, and structural equation modeling was employed for data processing and analysis using AMOS 22.0 statistical software.

[Results/Conclusion] The research findings indicate: In crisis events, action representation, image representation, and symbolic representation of online information exert significant positive impacts on users' continuous information sharing intention through the mediating effects of experience retention and perceived permeability; Action representation information has the greatest influence effect on users' continuous sharing intention, followed by image representation information, with symbolic representation information having the smallest effect; The influence effect of information representation on users' continuous sharing intention shows significant differences across demographics.

Full Text

Preamble

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Research on the Influence of Network Information Representation on Users' Continuous Sharing Intention in Crisis Events

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Abstract

[**Purpose/Significance**] This study explores the influence mechanism of network information representation on users' continuous sharing intention in crisis events. By classifying and grading different types of represented information online, it enables differentiated monitoring and governance of crisis information while strengthening users' continuous sharing intention for positive information from the perspective of information representation. [**Method/Process**] The study constructs a theoretical model with information representation as the independent variable, continuous sharing intention as the dependent variable, and experience retention and perceived permeability as mediating variables. Data were collected through questionnaire surveys and analyzed using structural equation modeling with AMOS 22.0 statistical software. [**Results/Conclusions**] The findings indicate: (1) In crisis events, network information's motion representation, image representation, and symbolic representation significantly and positively influence users' continuous information sharing intention through the mediating effects of experience retention and perceived permeability; (2) Motion representation has the greatest effect on continuous sharing intention, followed by image representation, with symbolic representation having the smallest effect; (3) The influence of information representation on continuous sharing intention shows significant demographic differences.

Classification Number: G206
Keywords: Crisis Event; Information Representation; Continuous Sharing Intention; Network Communication

Introduction

In recent years, with continuous socioeconomic development and increasingly fierce social competition, enterprises have placed greater emphasis on brand building. Meanwhile, as China's comprehensive reforms deepen, society has entered a critical period of transformation that has brought tremendous benefits while accumulating numerous complex social risks and contradictions. With citizens' growing awareness of rights protection, crisis events have become increasingly frequent and have emerged as a universal phenomenon that must be confronted during social development, as evidenced by the rising frequency of

mass incidents and public crises in recent years. Concurrently, rapid information technology development has given rise to various new media forms, making online media the primary channel for information acquisition and dissemination. In this environment, when crisis events occur, their development is not only related to the crisis response capabilities of the involved parties but also significantly influenced by various media outlets, particularly the rampant reprinting and commenting by online media, which enables crisis information to spread rapidly across extensive ranges, forming uncontrollable public opinion trends in both virtual and real-world environments. Examples such as Ctrip's "bundled sales" controversy and the kindergarten abuse incident in 2017, and the Didi ride-hailing murder case in 2018, all illustrate this pattern.

To understand network users' information sharing behavior and the formation mechanism of information representation, academic research on this topic is burgeoning, with scholars continuously exploring from different perspectives. However, existing research has primarily focused on information content format, media attributes, relationship strength, and cognitive styles, employing methods such as regression models, variance analysis, and complex networks to examine relationships between variables. Yet three specific questions remain underexplored: (1) What are the influence paths and mechanisms of network information representation on users' continuous sharing intention in crisis events? (2) How do different forms of information representation differentially affect continuous sharing intention? (3) What demographic differences exist in how information representation influences continuous sharing intention across gender, age, and education levels?

Literature Review

Domestic research on network users' information sharing behavior includes: Ding Songyun et al., who found that user emotional stimulation significantly affects novelty, norms, goals, internal comfort, and coping ability, with novelty, goals, and internal comfort having important impacts on information sharing intention. Zhang Dayong et al. noted that WeChat users exhibit high dependency, with strong burstiness in the time interval distribution between information sharing and reading, and longer sharing path lengths compared to Weibo content. Lan Xue et al. discovered that adaptive information sharing behavior on social media is influenced by user preferences, motivations, benefits, and compulsions. Zhang Ting et al. found that user self-consistency positively affects information sharing, moderated by relationship strength, with ideal self-consistency having a stronger impact than actual self-consistency. Jin Xiaoling et al. demonstrated that users' existing cognitive structures significantly influence Weibo information sharing behavior. Li Chen et al. identified dependency, generality, and convenience as three important factors affecting WeChat users' information sharing behavior.

International research includes: M.W. Barbosa et al., who analyzed the relationship between user information sharing behavior and network centrality, finding

that primary users' information sharing status is closely related to their structural centrality. J. Jin et al., using Zhihu as a research sample, found that community members' self-expression, other-awareness, and social learning positively influence information sharing behavior. S. Kwon and M. Cha et al. empirically studied the characteristics and influence mechanisms of information forwarding behavior, constructing a theoretical model for predicting and analyzing users' forwarding behavior. Y. Wang and Z. Jin et al. built a new information dissemination model using the SIS virus model, suggesting that users who haven't followed information publishers may still forward information, and that forwarding users might repeatedly forward the same information. D. Boyd and S. Golder et al. analyzed various forms of information forwarding behavior on Weibo and explored multiple possible motivations for users' forwarding behavior. J. Yang and S. Counts empirically studied Twitter, summarizing 22 features of information forwarding behavior from temporal distance, user attributes, and post characteristics to predict the evolution of user forwarding behavior.

Regarding network information representation, domestic research includes: Xue Ke et al., who took motion, image, and symbolic representations in media communication as independent variables and audience socialization as the dependent variable, finding that motion and image representations affect socialization through self-regulation and elaboration likelihood, while symbolic representation only affects socialization through elaboration likelihood. Wang Ruiming et al. explored information representation under classification learning conditions, finding that complete presentation only represents diagnostic information, while partial presentation can represent both diagnostic and non-diagnostic information. Guo Yanbiao et al. examined the effect of temporal distance on narrative flashback information representation. Shi Zifu et al. analyzed psychological representation models. Wang Ruiming et al. studied the impact of knowledge background on information representation in language comprehension, finding that perceptual symbol representation is not an automatic process but is influenced by knowledge background.

International research includes: S.Y. Chen et al., who explored the relationship between user cognitive style and information representation, finding that cognitive style affects participants' organization of topic categories, presentation of results, and response to screen layout. S. Hirsch argued that information representation significantly influences users' information search and navigation systems. J. Llorens et al. proposed an information representation model based on relationship degree that allows processing all types of information services using the same representation pattern without information loss.

Although these studies have achieved considerable results, there remains room for improvement. First, regarding research content, in crisis information dissemination, besides content format, media attributes, relationship strength, and cognitive style, information representation—as the presentation mode of information in the mind—essentially constitutes people's information processing systems. When processing external information (input, encoding, conversion, stor-

age, retrieval, etc.), information is presented in the form of representation in the mind. Representation is both the reflection of objective reality in the mind and the object of cognitive processing. Different representation forms of the same object often lead to differentiated cognitive and processing procedures, resulting in different cognitive outcomes. According to information processing theory and cognitive fluency theory, different information representations significantly affect users' information processing paths, forming different psychological fields and cognitive depths, thereby influencing user information behavior characteristics. Therefore, for the same information content, different representations may elicit different information behaviors. Particularly in the current network environment, user information behavior is largely influenced by information context, exhibiting strong context effects. A comprehensive and in-depth understanding of information behavior influence mechanisms requires exploration from the perspective of information representation. Although previous studies have mentioned or elaborated on the important influence of representation forms on user information behavior, specific research on how representation forms affect user information behavior remains lacking. Second, regarding research methods, previous studies often treated the mechanism between variables as a "black box" process, typically only providing conclusions about whether the influence of independent variables on dependent variables is significant, the magnitude and direction of effects, etc., without revealing the specific influence paths and processes—knowing "what" but not "why." Additionally, research conclusions were mainly derived from overall sample data analysis, with less consideration that relationships between variables might differ due to user group differences. However, previous studies found that information's persuasive effects and behavioral influences on audiences are affected by demographic variables, with different user groups exhibiting different attitudes and behavioral characteristics toward the same information, making past research conclusions potentially less operable or targeted in practical guidance.

Theoretical Foundation and Hypotheses

Information Use Environment Theory posits that information use environments can prompt users to form information needs and drive them to actively engage in information search, query, and utilization behaviors. The flow, transfer, and utilization of information among users are all influenced by the information use environment, which can be used to judge information usefulness and value. According to differences in work attributes and social roles, users can be divided into different groups, facilitating in-depth research on information behaviors of different user types. As the endpoint of the information utilization loop, users' continuous information sharing behavior constitutes an important part of this cyclic process. Therefore, information representation, as a crucial way of expressing and presenting information content, belongs to the situational component of the information environment and significantly influences users' continuous sharing behavior.

Information Representation and Experience Retention

Representation is the presentation mode of information in the mind, essentially belonging to people's information processing systems. When processing external information (input, encoding, conversion, storage, retrieval, etc.), information is presented in the form of representation in the mind. Representation is both the reflection of objective reality in the mind and the object of cognitive processing. According to representation theory and user experience theory, motion, image, and symbolic representations reflect differences in information visualization degree. Visualization enables data information content and attributes to achieve three-dimensional, vivid, and animated display effects, enhancing the intuitiveness of data information presentation, allowing users to intuitively and quickly discover information content and potential features, relationships, and patterns, thereby rapidly cognizing abstract data. In information processing, when information display effects are intuitive and vivid, users perceive lower effort levels required for information processing. Thus, visualization increases cognitive fluency, reducing the processing difficulty caused by surface attribute features of information and providing a relaxed perceptual experience.

Based on the relationship between information representation and user experience, in crisis information network dissemination, the dynamic nature of information presentation significantly improves users' cognitive fluency regarding information content, reduces perceived difficulty in information processing, and enhances user experience effects. Compared with motion representation, image representation results in poorer processing fluency, weaker experience quality, and memory retention. Symbolic representation requires more abstract thinking and logical deduction to transform content into perceivable situational images, a complex transformation process that reduces individual processing fluency and weakens audience experience quality and memory retention. Therefore, we propose the following hypotheses:

H1a: Motion representation has a significant positive effect on experience retention, with the greatest effect among the three representations.
H2a: Image representation has a significant positive effect on experience retention, with a relatively large effect among the three representations.
H3a: Symbolic representation has a significant positive effect on experience retention, with the smallest effect among the three representations.

Information Representation and Perceived Permeability

The Elaboration Likelihood Model (ELM) emphasizes that information processing involves central and peripheral routes, with central route processing causing deeper changes in cognition, attitude, and behavior than peripheral route processing. Information representation, as an important way of presenting information content, significantly influences the processing methods and paths people adopt, thereby affecting their perception. Perception is the impression and viewpoint formed after analyzing and identifying things. Perceived per-

meability refers to the directionality and concentration of attention on specific objects or features during cognitive processes. When people achieve perceived permeability toward specific objects or features, it indicates they are thinking, imagining, experiencing, and remembering the object, thereby obtaining clear, profound, and comprehensive understanding. Perceived permeability has two basic characteristics: (1) specificity—attention selectively focuses on certain features while excluding others; (2) concentration—the degree of attention and cognitive intensity directed at the phenomenon or feature. High perceived permeability means senses and perceptions simultaneously focus on the targeted object while excluding others, generating deeper cognition and experience.

According to ELM and user perception theory, information representation significantly influences user perception attributes. Information visualization enhances cognitive focus and attracts users. When users encounter motion representation, they develop stronger focus and higher situational involvement, resulting in higher perceived permeability. Image representation presents information in picture form, reflecting only static situations with poorer visualization and lower user involvement, thus resulting in lower perceived permeability. However, people typically prefer intuitive, vivid information coding methods that generate cognitive fluency. Therefore, for symbolic representation information, audience involvement is lower, and they tend to adopt peripheral route processing, resulting in lower perceived permeability. Based on this, we propose:

H1b: Motion representation has a significant positive effect on perceived permeability, with the greatest effect among the three representations.
H2b: Image representation has a significant positive effect on perceived permeability, with a relatively large effect among the three representations.
H3b: Symbolic representation has a significant positive effect on perceived permeability, with the smallest effect among the three representations.

Perceived Experience and Continuous Sharing Intention

The Technology Acceptance Model (TAM) suggests that continuous information behavior is influenced by user satisfaction after use, with user experience being an important factor in satisfaction formation. Perceived permeability indicates that during cognitive processes, attention is directed and concentrated on specific objects or features, showing that users are perceiving, thinking, remembering, and experiencing the object to obtain clear, profound, and comprehensive understanding. According to ELM theory, different information processing path choices lead to different cognitive structures, which in turn produce different information behaviors. Cognitive depth in information processing facilitates better persuasive effects.

Based on the influence of user experience and perception on information behavior, combined with cognitive balance theory, in crisis communication, people's crisis experience storage in memory and crisis information permeation in perception strengthen their perception of crisis event harmfulness, causing certain

physiological deficiencies and tension formation, leading to psychological imbalance and uncomfortable states. Physiological tension provides driving force for psychological motivation and need formation. In such situations, cognitively imbalanced individuals tend to change attitudes or take actions to satisfy specific needs or create certain situations, thereby eliminating or reducing physiological tension and psychological discomfort, ultimately restoring psychological balance. Reinforcement theory emphasizes that the profitability of a behavior's outcome strengthens its repeated occurrence. When users share information once, the elimination of psychological imbalance provides psychological satisfaction, which in turn promotes repeated crisis information sharing behavior, forming continuous sharing motivation and intention.

Therefore, we propose:

H4a: In network communication, user experience retention has a significant positive effect on continuous crisis information sharing intention.
H4b: In network communication, user perceived permeability has a significant positive effect on continuous crisis information sharing intention.

Theoretical Framework

This study takes motion representation, image representation, and symbolic representation of network information in crisis events as independent variables, continuous sharing intention as the dependent variable, and experience retention and perceived permeability as mediating variables to construct a theoretical model examining how network information representation forms affect users' continuous sharing intention. The theoretical framework is shown in [Figure 1: see original paper].

Scale Design and Data Collection

Scale Design

The study's scales and questionnaire variables and items are designed as follows:

(1) Dependent Variable: Continuous sharing intention refers to users' psychological intention to share information again after initial sharing. Based on Li Chen et al.'s research, it includes dimensions such as continuous sharing intention magnitude and duration length, with 6 items.

(2) Independent Variables:
- **Motion representation:** Users understand external things and adapt to the environment through perceived actions. Based on Xue Ke et al.'s scale, it includes dynamic features such as video and animation, with 3 items.
- **Image representation:** Uses images, graphics, or mental representations to reproduce knowledge and experience, transforming temporal, spatial, and orientation structures into representations. Based on R. Vidal et al.'s scale, it includes static features such as pictures and graphics, with 3 items.

- **Symbolic representation:** People process symbols and transform their meanings into understanding of things through recognition. Based on Guo Yanbiao et al.'s scale, it includes features such as scientific language and symbols, with 3 items.

(3) Mediating Variables:

- **Experience retention:** The degree to which impressions or cognitions formed about things can be originally presented and sustainably remembered in subsequent memory. Based on J. Saurro and J.R. Lewis's scale, it includes dimensions of memory degree, persistence, and fluency, with 3 items.
- **Perceived permeability:** The direction and concentration of attention on specific objects or features during cognitive processes. Based on I. Reychav and D. Wu's scale, it includes dimensions of concentration, depth, and direction, with 3 items.

All variables were measured using a 5-point Likert scale, with integers 1-5 indicating agreement levels. The scale and questionnaire design primarily referenced previous research, classic scales, and were revised according to this study's content and framework. The main scale items are shown in .

Data Collection

Data were collected through an online questionnaire survey conducted in May 2018. Since the study focused on continuous sharing intention of online crisis information, respondents were asked whether they had participated in online crisis information sharing (forwarding or commenting). Only users who answered "yes" were selected as the final sample. To improve survey quality and reliability, filtering questions were included. A pre-test of 200 questionnaires yielded 142 valid responses, with cumulative variance explanation of 86.04% and Cronbach's α values above 0.70. Items Q17 and Q19 had CITC indices of 0.23 and 0.41 (below the 0.50 threshold) and were removed. After removal, all subscale Cronbach's α values exceeded 0.70, as did the overall scale, indicating improved questionnaire structure.

For the formal survey, research team members contacted friends nationwide via phone, WeChat, and face-to-face meetings, explaining the survey requirements and using a snowball method. A total of 4,537 willing participants were recorded. Following the demographic distribution characteristics in CNNIC's 43rd Statistical Report on China's Internet Development (as of December 31, 2018), stratified random sampling combined with multi-stage sampling was used. The first layer divided the sampling frame by gender (male/female), the second by age group ($ $29, 30-39, 40-49, $ $50), and the third by education (university and above, high school/technical secondary, junior high, primary and below). From 2,000 distributed questionnaires, 1,684 were returned. After removing invalid and anomalous samples, 1,381 valid questionnaires remained. Sample demographic characteristics are shown in .

Data Analysis and Hypothesis Testing

Reliability and Validity Analysis

(1) Scale Reliability: Using SPSS 22.0, the Cronbach's α values for each subscale were 0.84, 0.79, 0.89, 0.78, 0.85, and 0.76, all exceeding the 0.70 threshold, indicating reliable survey results.

(2) Convergent and Discriminant Validity: Confirmatory factor analysis showed all item standard loadings exceeded 0.70, with t-values above 1.96 (p=0.05) (see). All variable AVE values exceeded 0.50, CR values exceeded 0.70, and the square roots of AVE values were greater than correlations between constructs (see), demonstrating good convergent and discriminant validity.

Path Analysis and Hypothesis Testing

(1) Direct Effects: Before analyzing the mediation model, regression analysis verified the significance of relationships between variables. As shown in , the regression equation's F-value was 17.08 ($p<0.01$), indicating significant joint effects. The adjusted R^2 of 0.84 showed that the three representation types explained 84% of variance in continuous sharing intention. All regression coefficients were significant at $p<0.01$, confirming that motion, image, and symbolic representations significantly affect continuous sharing intention.

(2) Path Analysis: The theoretical model was estimated using AMOS. The initial p(^{2}) value was 0.0000 (<0.05). Modification indices suggested establishing a covariance relationship between observed values Q5 and Q11's error terms, reducing the chi-square value by at least 51.47. After modification, all fit indices reached reference values, indicating good model-data fit. The modified model results are shown in [Figure 2: see original paper].

Path coefficient tests showed that all hypotheses were significant at $p<0.01$ except H3a. Motion and image representations had stronger effects on experience retention (path coefficients 0.67 and 0.58) than on perceived permeability (0.62 and 0.56). Symbolic representation had a stronger effect on perceived permeability (0.49) than on experience retention (non-significant).

(3) Mediating Effects: Following Baron and Kenny's framework, all direct effects were significant, and all path coefficients were significant except "symbolic representation → experience retention," indicating significant mediating effects of experience retention and perceived permeability. Mediation effect sizes are calculated in . The total effects of motion, image, and symbolic representations on continuous sharing intention through both mediators were 0.88, 0.73, and 0.31, respectively. Motion and image representations had larger mediating effects through experience retention (0.48 and 0.37) than through perceived permeability (0.40 and 0.36), while symbolic representation had a larger effect through perceived permeability (0.31) than through experience retention (non-significant).

(4) Test Results: As summarized in , all hypotheses were supported at $p<0.01$ except H3a. However, H3a was supported at $p<0.05$, indicating that symbolic representation's effect on experience retention exists but is weaker than other variables' effects.

Group Analysis

To better understand differences in continuous sharing behavior, further comparison and analysis were conducted across gender, age, and education groups. Results in show:

- **Gender:** All path coefficients were larger for males than females.
- **Age:** Path coefficients were largest for the 30-50 age group, followed by those under 30, and smallest for those 50 and above.
- **Education:** Path coefficients were largest for primary school and below, followed by junior high-high school, and smallest for university and above.

Conclusions and Discussion

Conclusions

Through hypothesis development and theoretical model construction, this study collected data on users' crisis information sharing behavior on network platforms. The scale and data demonstrated good reliability and validity. Structural equation modeling yielded the following conclusions:

(1) In crisis communication, network information's motion, image, and symbolic representations significantly and positively affect continuous sharing intention through the mediating effects of experience retention and perceived permeability.

(2) Motion representation has the greatest effect on continuous sharing intention, followed by image representation, with symbolic representation having the smallest effect. Motion and image representations have larger effects through experience retention than through perceived permeability, while symbolic representation has a larger effect through perceived permeability.

(3) The influence of network crisis information representation on continuous sharing intention shows significant demographic differences. Path coefficients are larger for males than females; by age, they are highest for 30-50 years, followed by under 30, and lowest for 50+; by education, they are highest for primary school and below, followed by junior high-high school, and lowest for university and above.

Discussion

Regarding H3a's test results—symbolic representation's effect on experience retention exists but is weaker than motion and image representations—possible reasons include: First, crisis events are destructive and inevitably cause psychological harm, creating cognitive imbalance. For polar information (negative or positive), representation concreteness significantly affects polarity effects in the mind, with higher concreteness producing more obvious polarity representations. Symbolic representation, using symbols to present the external world, cannot provide at-a-glance scenarios for crisis events. These symbolic messages require more abstract thinking and logical deduction to transform polar content into perceivable situational images, reducing processing fluency and weakening experience and memory of crisis event harmfulness. Second, the diverse and inclusive online context, with different social ideologies competing for discourse power, creates a decentralized, non-authoritative pattern. Fragmented, scattered information weakens systematic knowledge construction and cognitive frameworks, reducing deep thinking about complex matters. Therefore, while symbolic representation affects situational experience, its effect and significance are relatively weak.

The influence of information representation on continuous sharing intention through experience retention and perceived permeability reflects the entire motivational process from cognition to behavior. Different representations create differential physiological stimuli, affecting perception attributes and ultimately behavioral intention. Crisis information, as polar information with strong energy, can significantly alter psychological perception and physiological experience, forming specific perceptual evaluations that influence continuous sharing intention. Different representations also affect whether users adopt central or peripheral processing routes, creating differences in perceived permeability. Visualization differences create varying processing difficulty perceptions, leading to different experience retention strengths. Under these mediators, users develop differential perceived harm from crises and different memory storage durations, affecting continuous sharing intention.

Group analysis shows demographic differences because different groups' social characteristics and roles shape information behavior. General information behavior theory indicates that occupation and social role significantly influence information behavior, cultivating different behavioral features. When acquiring and using information, multiple mediating variables affect behavior and motivation, including psychological characteristics, demographics, and social roles. Gender differences exist in information processing modes and behaviors. Age represents social experience richness and cognitive maturity differences, with different age groups playing different social roles and responsibilities, affecting information thinking modes, cognitive styles, and behavioral features. Education, as a means to reshape thinking and cognition, creates differences in cognitive and attitudinal approaches, with higher-educated individuals typically having more cautious and scientific perspectives than lower-educated individuals.

Implications

Despite design improvements, limitations remain. The sampling method—conducting general surveys first then screening for crisis information sharing experience—reduced effective sample rates and increased costs. Future research could use big data methods for targeted user screening to improve efficiency and reduce costs.

The findings offer theoretical and practical contributions. Theoretically, they provide references for further exploration of network user behavior characteristics and theory construction, and contribute to deepening information behavior theory, information field theory, and information context theory in network environments. Practically, conclusions can be applied to network crisis information governance by identifying and classifying different represented information for differentiated monitoring.

First, in crisis information classification and grading, motion representation should be the priority for regulation due to its greatest effect on continuous sharing intention, followed by image and symbolic representations. By weakening experience retention and perceived permeability, continuous sharing intention can be reduced, achieving graded management of crisis information dissemination. For positive information propagation, motion representation should be prioritized, followed by image and symbolic representations, to strengthen experience retention and perceived permeability.

Second, representation is the internal reproduction of external objects in mental activities, existing in different forms—specific images, words, or propositions. Dual coding theory posits that people have parallel verbal and imagery cognitive systems. The verbal system processes language information, while the imagery system encodes, stores, converts, and retrieves specific object or event information. In information processing, the perceptual stage focuses on physical feature representation, working memory emphasizes verbal and visual representation, and long-term memory focuses on propositional or semantic representation. Therefore, language and visual representations should be the focus of network crisis information monitoring, while propositions and semantics should be the content focus.

Third, people process information through classification, grouping different information stimuli into categories for processing. Decisions involve categories, which are concepts and the core of thinking processes. In positive information dissemination, emphasis should be placed on conceptual encoding in information representation and the presentation of relationships and categories between concepts to facilitate categorical cognition and continuous sharing intention.

Finally, encoding systems group and organize environmental information, consisting of hierarchical structures of related categories that play important roles in information maintenance and transfer. Higher-level categories are more abstract, while lower-level categories are more concrete. When remembering spe-

cific things, people subconsciously activate this encoding system, using "mental images" to replace specific objects and reshape details. Therefore, in positive crisis information encoding, attention should be paid to hierarchical structure arrangement, strengthening concrete information encoding to materialize mental images and improve information retention and transfer, thereby developing targeted crisis information governance strategies and positive information dissemination measures.

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