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A Preliminary Exploration of Online-Offline Integrated Governance Models for Information Behavior in National Public Security: Review of the Postprint “Research on the Interaction Mechanism between Sudden Public Crisis Events and Online Public Opinion”

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Abstract

[Purpose/Significance] To provide an evaluation of Professor Qi Jiayin et al.’s work “Research on the Interaction Mechanism between Sudden Public Crisis Events and Online Public Opinion”. [Method/Process] To conduct an objective evaluation of the work from three aspects: characteristics of the content system, innovative aspects, and research value. [Results/Conclusion] This work focuses on the interaction mechanism between sudden public crisis events and online public opinion, examining from four dimensions—macro, meso, micro, and decision-making—the basic patterns of sudden public crisis event outbreaks, online public opinion situation awareness, the coupling relationship between endogenous and exogenous driving forces and the causes underlying the formation of coupling mechanisms, public opinion heat early warning, and other related topics. The work is characterized by detailed research data, rich case studies, and rigorous methodology, constituting an important theoretical research achievement in the field of public safety emergency management, and offering significant practical guidance for decision-making in public safety management agencies and social affairs management agencies.

Full Text

Preamble

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An Initial Exploration of Online-Offline Integrated Governance Models for Information Behavior Affecting National Public Safety: A Review of *Research on the Interaction Mechanism Between Sudden Public Crisis Events and Online Public Opinion*

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Abstract

[Purpose/Significance] This paper provides a critical review of Professor Qi Jiayin et al.'s book *Research on the Interaction Mechanism Between Sudden Public Crisis Events and Online Public Opinion*. **[Method/Process]** The review offers an objective evaluation from three perspectives: characteristics of the content system, innovative contributions, and research value. **[Result/Conclusion]** The book focuses on the interaction mechanism between sudden public crisis events and online public opinion, examining fundamental patterns of crisis outbreak, online opinion situation awareness, coupling relationships between endogenous and exogenous driving forces and their formation mechanisms, and early warning of opinion trends from macro, meso, micro, and decision-making perspectives. With detailed research data, rich case studies, and rigorous methodology, this work represents an important theoretical achievement in public safety emergency management and offers significant practical guidance for decision-making in public safety and social affairs management institutions.

Keywords: public safety; information behavior; integrated governance; sudden public crisis events; online public opinion

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China is currently undergoing economic and social transformation, with frequent occurrences of various sudden public crisis events related to environmental pollution, healthcare, employment security, demolition and resettlement, and internet finance [1]. Any such crisis spreads and diffuses through new online media, whose real-time, popular, interactive, and trans-regional characteristics have subverted traditional constraints on communicators and audiences, bypassing the “gatekeeper” theory and “agenda-setting” theory of conventional media. This creates mutual reinforcement between sudden public crisis events, online mass incidents, and real-world mass incidents, potentially transforming individual incidents into collective ones, regional events into national crises, internal contradictions among the people into antagonistic contradictions, and domestic issues into international problems, thereby posing serious threats to national public safety [2-3].

Consequently, governing internet information behavior for national public safety cannot focus solely on online activities. Instead, we must identify an online-offline integrated governance approach within the interaction mechanisms be-

tween virtual and physical realms. Professor Qi Jiayin's academic monograph *Research on the Interaction Mechanism Between Sudden Public Crisis Events and Online Public Opinion* exemplifies this new governance paradigm. Based on systematic refinement of six national fund projects, this work examines the relationship between sudden public crisis events and online public opinion, models online public opinion situations, explores evolution patterns, analyzes coupling mechanisms between opinion trends and crisis diffusion, provides early warnings for online public opinion situations, and constructs risk response decision models from an online-offline integrated governance perspective. This outstanding contribution to public safety emergency management demonstrates distinctive characteristics in its content system, innovations, and academic value.

2. Novel Perspectives, Rigorous Structure: Multi-level Content System Characteristics

Reviewing existing domestic and international research on sudden public crisis events reveals abundant achievements with various features, covering multi-dimensional and multi-field studies on crisis characteristics, impacts, emergency responses, and information dissemination [4-10]. However, research on the relationship between sudden public crisis events and online public opinion remains insufficient, failing to adequately explain how crises evolve into online public opinion through new media or how online opinion iteratively amplifies crisis impacts. This has made it difficult to identify optimal governance methods for crisis-related online opinion. Moreover, crisis research has concentrated primarily in political science, sociology, and communication studies, while online opinion early warning research has mainly developed within information science, leaving few systematic management studies on the relationship between crises and online opinion.

Addressing these gaps, the book focuses on the interaction mechanism between sudden public crisis events and online public opinion. Grounded in public crisis management theories by scholars such as Foster, Rosenthal, and Marton, the work presents a multi-level framework from macro, meso, micro, and decision-making perspectives. At the macro level, the authors conduct in-depth research on the evolution process, path, causes, and mechanisms of online public opinion during sudden crises, establishing a macro-level "state-potential" theory and constructing scientific measurement systems for endogenous and exogenous driving forces, thereby advancing existing crisis management theory. At the meso level, the research reveals that endogenous and exogenous driving forces generating significant online opinion comprise multi-level, multi-type factors belonging to different actors who interact and influence each other. These factors are not isolated but interdependent, interacting, and mutually constraining in complex, tightly coupled relationships. Uniquely, the authors employ system dynamics methodology to construct a system dynamics model of the interaction mechanism, analyzing feedback loops and control variables to examine how actors and variables affect the entire system. This significantly extends quantitative

management research on sudden public crisis events in sociology and political science.

At the micro level, the authors identify non-linear relationships between modules generating significant online opinion, clarifying coupling relationships between endogenous and exogenous forces and their formation mechanisms from trait and adaptability analyses, and establishing coupling degree measurement models. Through quantitative measurement of factor coupling relationships, they verify how coupling magnitude affects crisis impact intensity. Distinctively, the book examines not only top-down influences on crisis development but also bottom-up drivers of online opinion emergence, evolution, and social impact—the coupling mechanism itself. At the decision-making level, the authors validate multiple early warning methods through extensive empirical research, establishing a Bayesian network early warning model for online opinion heat based on Web information mining. Through reliability verification and multi-case analysis, they provide early warnings and develop measurement methods for government communication information risks and utility during crisis response, offering decision-making references for network governance.

3. Emphasis on Evolution Dynamics and Quantitative Coupling Analysis: Highlighting the Work's Innovations

The book demonstrates rigorous research logic in exploring relationships between sudden public crisis events and online public opinion, examining how endogenous and exogenous driving forces of online dissemination affect crises under new media environments, and constructing system dynamics models, opinion heat early warning models, and network governance communication risk models. This represents a highly challenging and forward-looking research agenda. Theoretically, the work addresses sudden public crisis events in national economic and social development, aiming to demonstrate and scientifically warn about relationships between online opinion and crises in new media contexts. Applying system dynamics to this sociological problem, the authors establish a theoretical framework for analyzing online opinion dynamics, offering new perspectives through three-factor analysis of destructive, driving, and regulatory forces. The system dynamics model and simulation results reveal online opinion evolution patterns, providing scientific guidance for understanding, monitoring, and positively influencing opinion development—a significant innovation in crisis network governance theory.

Practically, the authors dissect endogenous and exogenous driving force components through analysis of nearly 100 real cases, examining coupling relationship characteristics and conducting quantitative measurements to demonstrate how these interactive relationships significantly affect crisis social impact. Based on this, they propose a Bayesian network early warning method for online opinion heat, using nearly 60 cases as training and test sets to identify key factors driving opinion surges. These findings provide scientific foundations for government decision-making and represent important practical innovations in online-offline

integrated governance of crisis-related information behavior.

4. Addressing Current National Political Needs: Outstanding Theoretical Value and Practical Guidance

The publication of this monograph represents a new exploration in sudden public crisis event research that aligns with current national political needs for strengthening internet social governance, offering outstanding theoretical value and practical guidance. Theoretically, it fills research gaps in crisis-online opinion interaction mechanisms, providing foundational theoretical support for online-offline integrated governance models affecting national public safety. The findings verify close relationships between crises and online opinion, particularly in analyzing how endogenous and exogenous opinion factors influence crisis evolution, elevating general issues to theoretical common laws that enable effective foresight and practical guidance for similar social phenomena.

Practically, the system dynamics model enables simulation of governance strategies, compensating for unpredictability in network behavior governance effects and enhancing operational feasibility. Using data from nearly 150 typical cases to validate model 科学性, the authors conclude that government microblog credibility and influence critically affect information communication risks in crisis network governance, and that the information space formed by opinion leaders, online media, and involved parties constitutes key factors driving opinion surges. These conclusions offer important practical guidance for public safety and social affairs management institutions.

Professor Qi Jiayin's book features clear research themes, rigorous structure, standardized methodology, and convincing conclusions, making it a distinctive masterpiece in public safety emergency management. It provides powerful tools for thoroughly understanding crisis-online opinion relationships and offers important references for online-offline integrated governance models of internet information behavior affecting national public safety. Naturally, the work could be further perfected in integrating theoretical and empirical research design, particularly by expanding beyond mass incidents to explore other public safety-related internet information behaviors such as online financial fraud and cyber-terrorism dissemination.

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Author Contributions

Deng Jiangaog: Responsible for paper writing;

Duan Xindi: Responsible for literature review and comparative research on sudden public crisis event management and online public opinion governance.

Innovating Exploration of Online-Offline Cooperative Governance Model of Information Behavior Affecting Public Safety

—Book Review on *Research on Interaction Mechanism Between Paroxysmal Public Crisis Event and Network Opinion*

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Abstract: [Purpose/significance] The purpose of this paper is to give a detail comment on the book *Research on Interaction Mechanism Between Paroxysmal Public Crisis Event and Network Opinion*, written by Professor Qi Jiayin et al. [Method/process] This paper is to make an objective evaluation on three aspects: characters of content system, innovation and research values. [Result/conclusion] This book focused on influence mechanism between paroxysmal public crisis events (PPCE) and network opinion (NO). Basic breaking out rules of PPCE, situation perception of NO, co-coupling relationship between in-

side motivation and outside motivation of NO, formation reasons of co-coupling mechanism, and early warning tactics of NO heat were analyzed on four aspects: macro, meso, micro, and decision. In this book, the data is elaborate, cases are enough, and research method is preciseness. So it is a great theoretical job of public safety emergency management, and will do great help to the decision for public safety management institutions and social event management institutions.

Keywords: public safety; information behavior; cooperative governance; paroxysmal public crisis event; network opinion

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

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