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## Postprint: Analysis of Research Progress on Scenario Response in Chinese Intelligence Studies

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### Abstract

[Purpose/Significance] This study summarizes the research and practical progress on context-related issues within China's information science community, strengthens context awareness in information work, enriches and expands the contextual theory of information science and information work, and provides a reference for further refining context-response theoretical methods unique to information science. [Method/Process] Under the context-response lifecycle framework, this paper employs a combination of bibliometric analysis and content analysis to examine publication years, sources, authors, keywords, and other aspects. It focuses on analyzing research content from four perspectives: theoretical interpretation of context in information science, context response in the library and information science field, context response in competitive intelligence, and context response in emergency intelligence, thereby summarizing the basic characteristics and research content of the literature. [Results/Conclusion] Research on context perspective in information science demonstrates a stable growth trend, particularly achieving considerable scale in competitive intelligence and emergency intelligence. Simultaneously, it is necessary to further deepen context analysis and strengthen research oriented toward various information work domains and information work processes.

### Full Text

## An Analysis of Situational Response Research Progress in China's Information Science Community

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**Abstract:** [Purpose/Significance] This study summarizes research and practical progress on situational issues in China's information science community, strengthens situational awareness in intelligence work, enriches and expands

situational theory in information science and intelligence work, and provides references for further refining the theoretical and methodological approaches to situational response unique to information science. [Method/Process] Under the framework of the situational response lifecycle, this study employs a combination of bibliometric analysis and content analysis to examine literature from perspectives including publication year, source, author, and keywords. The analysis focuses on four aspects: theoretical interpretation of situations in information science, situational response in library and information science, situational response in competitive intelligence, and situational response in emergency intelligence, culminating in a synthesis of the basic characteristics and research content of the literature. [Result/Conclusion] Research results related to situational perspectives in information science demonstrate a stable growth trend, particularly achieving considerable scale in competitive intelligence and emergency intelligence. Meanwhile, further in-depth investigation of scenario analysis and strengthened research across various intelligence work domains and processes are needed.

**Keywords:** situational response; information science; research progress

**Classification Number:** G250.2

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Intelligence work must integrate with social development, grounded in specific real-world contexts to serve the intelligence needs of particular domains or situations, thereby fully realizing its functions as “eyes and ears, vanguard, and staff officer.” China’s intelligence work possesses its own operational and developmental characteristics. The Nanjing Consensus on the Development of Information Science and Intelligence Work (October 2017) proposed the integration of military intelligence (military and security intelligence) and civilian intelligence (scientific and technological intelligence, social science intelligence), as well as positioning intelligence institutions as important think tanks for national development and security [?], all of which reflect the importance of information science and intelligence work serving specific domains and real-world contexts.

Since its introduction into academic research, the concept of “scenario” (情景) has been widely applied across numerous fields including business economics, medicine, education, computer science, and environmental science. In terms of conceptual definition, the *Cihai* dictionary defines scenario as “circumstances, scene; external scenery that evokes emotions, as in the fusion of emotion and scene” [?]. The *Modern Chinese Dictionary* defines it as “situation, scene” [?]. In academic research, the term first appeared in the work *The Year 2000* by American scholars J. Kahn and A. J. Wiener. French Academy member Michel Godet described scenarios as “narratives of future conditions and event processes that help people move from their original state toward future conditions,” distinguishing between “interpretive scenarios” and “preventive (or normative) scenarios” as two primary types [?]. Domestic researcher Zong Beihua defined scenario as “a description of all possible future development trends of something, including both qualitative and quantitative descriptions of the basic character-

istics of various trends and descriptions of their probabilities of occurrence” [?]. In summary, scenario emphasizes a particular condition, plot, or scene—specific circumstances and visions within particular temporal and spatial contexts.

Preliminary analysis of scenario-related research reveals associated terms including scenario planning, scenario analysis, scenario construction, scenario awareness, and scenario simulation, with rich connotations and applications across diverse fields. However, academic research also exhibits noticeable diversification and interchangeable usage of these terms, lacking clear definitions and relatively consistent understanding among these concepts.

Given this context, this paper proposes using “situational response” (情景应对) as an overarching framework for scenario-related terminology, constructing a situational response lifecycle. Specifically, situational response refers to a practical activity where actors adopt responsive measures based on scenarios, encompassing a series of scenario activities including scenario planning, scenario analysis, scenario construction, scenario simulation, and scenario optimization. This constitutes a systematic engineering project involving multiple stages and phases—a practical activity with a lifecycle, as illustrated in Figure 1 [Figure 1: see original paper].

From the perspective of the situational response lifecycle, scenario planning focuses on describing and envisioning blueprints for future development possibilities, emphasizing the goals and vision of situational response. Scenario analysis employs techniques such as hypothesis, forecasting, and simulation to analyze future scenarios and their countermeasures, emphasizing process consideration and improvement. Scenario construction involves abstract modeling, element extraction, and process formulation for future scenarios, emphasizing conceptualization and design. Scenario simulation employs systems science, computer science, and mathematics to simulate and run constructed scenarios, emphasizing simulation and practical exercises, also known as scenario drills or emulation. Scenario optimization comprehensively evaluates the timeliness and effectiveness of constructed scenarios, identifies deficiencies in scenario evolution or situational response practice, and revises and improves the scenarios and related strategies and methods, focusing on assessment, feedback control, and optimization. Although each stage of the situational response lifecycle has its own emphasis and interconnections, they are not merely linear relationships; stages may overlap or cycle recursively. In short, the situational response lifecycle requires attention to both individual stages and their dynamic relationships.

Building upon this lifecycle framework, this study combines analysis of scenario-related research across different domains and scopes within China’s information science community to provide references for future research.

## 2 Bibliometric Analysis of Research Literature

A combined keyword search for “scenario” and “intelligence” in the CNKI full-text database yielded 2,156 documents as of July 30, 2019. Keyword combina-

tion searches produced 237 documents, which after analysis, deduplication, and exclusion of irrelevant articles resulted in 214 valid documents. The overview is as follows.

## 2.1 Annual Distribution of Literature

Research literature on this topic began in the 1990s (initially sporadic), with scattered growth during that decade, slow growth after 2000, and rapid growth since 2006. The annual distribution trend is shown in Figure 2 [Figure 2: see original paper].

## 2.2 Source Distribution

The 214 documents originated from 42 journals, with 16 journals publishing three or more articles, 14 publishing four or more, and 10 publishing five or more. Table 1 summarizes journals with five or more publications. Analysis reveals that these are all library and information science journals, with *Information Science: Theory and Application* (37 articles), *Journal of Intelligence* (27 articles), and *Library and Information Service* (25 articles) leading in publication volume, demonstrating their important role in guiding research in this field.

## 2.3 Author Distribution

The 214 documents included 308 authors (including co-authors), with 52 authors publishing two or more articles, 25 publishing three or more, 18 publishing four or more, and six publishing five or more. Notable authors include Wang Zhijin (research themes: competitive intelligence, intelligence war rooms, intelligence simulation, intelligence strategy, corporate crisis), Li Gang (emergency intelligence systems, emergencies, emergency decision-making, smart cities), Yan Beini (competitive intelligence, intelligence war rooms, intelligence simulation, intelligence analysis, game design), Su Xinning (emergency intelligence systems, intelligence analysis, emergency strategies, smart cities, knowledge bases), Wang Keping (competitive intelligence, corporate crisis, crisis early warning, intelligence support), and Xu Fang (competitive intelligence, crisis, intelligence war rooms, scenario analysis), indicating a relatively stable author community and research themes.

## 2.4 Funding Distribution

Among the 214 documents, 86 (40%) indicated funding support, comprising 64 distinct projects. Supported projects include major National Social Science Fund projects such as “Rapid Response Intelligence System for Emergency Decision-Making in Emergencies” and “Smart City Emergency Decision-Making Intelligence System Construction,” as well as National Natural Science Foundation projects like “Design Patterns and Operational Mechanisms of Corporate Competitive Intelligence War Rooms Based on Wargaming Methods” and

“Think Tank Collaboration Models for Emergency Decision-Making Deduction from an Intelligence Perspective.” These funding initiatives have promoted sustained, in-depth, and systematic research in the field.

### 3 Content Analysis of Research Literature

Since scenarios were introduced into academic research in the 1990s, the information science field has increasingly focused on scenarios in intelligence work. Combining bibliometric and content analysis reveals rich research results on scenarios within information science itself, the broader library and information science domain, and specialized fields such as competitive intelligence and emergency intelligence.

#### 3.1 Theoretical Interpretation of Scenarios in Information Science

Theoretical interpretation of scenarios in information science forms the cornerstone of scenario-based intelligence work research. While scenarios have been widely introduced into information science research, systematic theoretical frameworks for their interpretation remain underdeveloped. Current interpretations concentrate primarily on scenario connotation, scenario analysis, and scenario construction.

**3.1.1 Connotation of Scenarios in Information Science Research** Existing literature lacks clear definitions of scenarios in intelligence work, mostly referencing meta-concepts of scenario analysis. First, some studies elaborate on the concept itself, such as Yue Zhen et al., who state that “a scenario is a description of future situations and the series of facts that enable the transition from initial to future states” [?]. Second, some develop concepts like scenario sets and scenario groups, as Shao Bo et al. propose: “A scenario set is a collection of contrasting scenarios that can provide information about future situations, serving as a decision-making tool. Selecting an optimal reference from the set enables organizations to determine the most suitable strategy for future development” [?]. Third, some approaches are based on intelligence case studies, such as Fu Xingkui’s view that “intelligence cases objectively describe the context of intelligence activities, enabling readers to understand the intelligence activities of a country, department, region, or people as if they were personally present” [?], and Xie Jungui’s similar definition of intelligence cases as “objective descriptions or introductions of the content, context, process, and methods of specific intelligence practice activities” [?]. Intelligence cases summarize past experiences and lessons, representing, to some extent, historical scenarios. In summary, scenario interpretation in information science primarily references meta-concepts while deriving basic concepts such as scenario sets and scenario groups.

**3.1.2 Scenario Analysis in Intelligence Work** Scenario analysis, as an important tool and method in scenario theory, plays a significant role in intelligence work and research, and is widely used in information science. Zeng

Zhonglu argues that “conducting different scenario analyses helps avoid paranoia and bias in intelligence work” [?]. Wang Yonghong considers scenario analysis “a common method for intelligence analysis under incomplete information conditions, based on the fundamental view that the future is full of uncertainty but partially predictable” [?]. Wu Hui views scenario analysis as “one of the imaginative methods in intelligence research work, mostly used for systematic analysis of political and military issues and forecasting of social, economic, and technological prospects, often employing envisioned future states including non-mutation scenarios and extreme scenarios” [?]. These perspectives affirm the value of scenario analysis in intelligence research.

**3.1.3 Scenario Construction in Intelligence Work** Scenario construction represents a crucial method for concrete depiction and presentation of situations, with related terms including scenario conceptualization, scenario design, and scenario modeling. Chen Meihua et al. identify scenario conceptualization as “the final and important link in intelligence perception” [?]. Wang Keping outlines scenario construction steps including “identifying core problems to solve, conceptualizing various possibilities for these problems, listing driving factors, envisioning evolution scenarios for these factors, elaborating scenarios in detail, monitoring key indicators and precursor events, and anticipating which scenario is emerging” [?]. Gao Jinhu describes scenario conceptualization as “describing future targets in narrative form, with each scenario representing a clear, reasonable vision of a future period that helps decision-makers expand their thinking, consider alternatives, and avoid decision-making errors” [?]. Scenario construction involves numerous influencing factors; for instance, Yao Wei et al. examine “causes of cognitive bias in scenario construction from three dimensions: cognitive knowledge reserve bias, cognitive processing bias, and cognitive result expression bias” [?]. These studies demonstrate that scenario construction occupies an important position in intelligence work as a key component of future-oriented scenario thinking and shared understanding.

Overall, while scenario interpretation, analysis, and construction in information science are gradually deepening and expanding, important stages in the situational response lifecycle such as scenario planning, simulation, and optimization remain insufficiently interpreted within information science.

### **3.2 Situational Response Research in Library and Information Science**

Against the backdrop of integrated library and information science and rapid information science development, library science and information science have essential differences but undeniable commonalities. Information work has significantly impacted the development and research of both fields. In certain contexts, information work is essentially intelligence work—intelligence work originates from but surpasses information work. Libraries’ collection, tracking, mining, and analysis of massive data to provide diverse services according to user needs is essentially intelligence service, representing an advanced form of

information work. Therefore, researching intelligence work from a situational response perspective requires first understanding the situational response landscape in the broader library and information science domain.

As Sun Jianjun et al. note, “In the field of library and information work, scenario analysis methods can be studied from basic theoretical perspectives, as well as applications in competitive intelligence, library and information career development, and social science evaluation” [?]. Research results in this area concentrate on library work and situational response, social media information and situational response, and public information service and situational response.

**3.2.1 Library Work and Situational Response** Library personalized services, mobile library services, and future development all depend on situational response. Regarding personalized services, Jiao Yuying et al. studied digital library personalization from a scenario modeling perspective, arguing that “timely capture and mining of user-related contextual information (i.e., object status and environmental information) to establish user scenario models is significant for improving search accuracy and service quality” [?]. Ma Xiaoting analyzed library personalized service recommendation processes based on scenario big data from perspectives including “library big data repositories, personalized reading service decision-support big data, reader needs-oriented services, and feedback control and optimization” [?]. In mobile library services, Hou Litie et al. explored mobile library user scenario model construction from four aspects: “user basic information, user device context, user environment, and user status” [?]. Regarding library vision planning and future development, Ma Xiaoqi examined university library scenario planning models following the approach of “future uncertainty → scenario generation → university library strategic planning model construction based on scenarios,” identifying that “the premise of university library scenario planning is shared understanding of future-oriented scenario thinking, with uncertainty axes and scenario generation at the core, and the ultimate goal being to formulate strategies suitable for library future development” [?]. These studies demonstrate that situational response plays an important role in library work and intelligence services.

**3.2.2 Social Network Information and Situational Response** With the popularization of mobile devices and various apps, user scenarios in social network information behavior have become research hotspots. Jin Yan et al. studied Web dynamic navigation based on scenarios, defining scenario as “the current information environment in which users find themselves, where dynamic navigation based on scenarios generates different navigation paths or information in real-time according to scenario changes, guiding users through Web navigation” [?]. Zhan Lihua, analyzing causes of UGC (User-Generated Content) behavior, identified seven aspects of user behavior scenarios: “user natural scenario, physical scenario, temporal scenario, social scenario, computational scenario, historical scenario, and immediate scenario,” noting that these scenarios significantly influence topic creation, online behavior, user frequency, user normativity, be-

havior quality, and offline behavior in UGC contexts [?]. These findings indicate that real-time and user scenarios in situational response have important impacts on social network information.

**3.2.3 Public Information Services and Situational Response** Improving the quality and effectiveness of public domain information services also depends on situational response. In cloud computing and big data environments, Liu Haiou noted that “contextualized recommendation mechanisms mine user location, time, and business needs, exploring changes in user interests based on different resources and scenarios. User scenario interest descriptions such as geographic location, temporal scenario, and social scenario form the core of big data knowledge service contextualized recommendation, which combines rating scenarios with matrix selection to recommend specific service items” [?]. Yu Mengyue et al. explored government open data metadata ontology design needs through scenario steps including “scenario description, scenario deduction, and scenario verification” [?]. Li Fenglin et al. examined scenario-based pharmaceutical information service ontology modeling and rule reasoning, arguing that “scenario-based methods are effective approaches for achieving personalized health information services,” using antihypertensive drug information services as a case study for scenario modeling and rule reasoning [?]. These studies demonstrate that situational response has specific connotations, steps, and processes in big data environments, government open data, and health service information.

Overall, situational response research in library and information science (primarily library work, social network information, and public information) covers broad perspectives and domains, addressing various stages of the situational response lifecycle and providing foundations for intelligence work research and practice.

### 3.3 Situational Response Research in Competitive Intelligence

As a method, scenario analysis was introduced into China’s business management and other fields in the late 1980s. Concurrently, competitive intelligence for business management developed rapidly in China, naturally incorporating scenario analysis. Through their mutual development, competitive intelligence has yielded rich research results on situational response, concentrating on scenario analysis methods, scenario planning, scenario simulation, and scenario construction.

**3.3.1 Scenario Analysis and Competitive Intelligence** Systematic discussions address the role, advantages, disadvantages, and specific applications of scenario analysis in competitive intelligence.

**(1) Role of scenario analysis in competitive intelligence.** Chen Ruoyun notes that in corporate competitive intelligence, scenario analysis “can be used

to predict competitor reaction patterns when enterprises adopt certain measures, forecast future competitive environments, and anticipate the intensity of competitive practices” [?]. Li Yan points out that “developing competitive intelligence methods, particularly scenario analysis and strategic gaming methods, provides important support for establishing and implementing corporate strategic risk management” [?]. Zha Xianjin et al., researching corporate crisis early warning and competitive intelligence, propose institutionalizing scenario analysis, arguing that “enterprises should incorporate scenario analysis as part of daily work, not treating creative outcomes as the sole objective but rather as a collective learning activity that inevitably stimulates new thinking patterns and concepts when conducted continuously and digested” [?]. These perspectives demonstrate scenario analysis’s supporting role in environmental analysis, strategic management, and enterprise development within competitive intelligence.

**(2) Advantages and disadvantages of scenario analysis in competitive intelligence.** Bao Changhuo notes that scenario analysis “has become an important competitive analysis method, enabling managers to discover certain trends or patterns in future changes and avoid decision-making errors from overestimating or underestimating future changes and impacts” [?]. Huang Xiaobin et al. identify advantages including “greater flexibility, advanced predictability, integration of qualitative and quantitative analysis, systematic comprehensiveness, and strong operability,” while noting disadvantages such as “complex processes, insignificant short-term effects, constraints from traditional models, and potential errors from improper operation” [?]. Xu Fang et al. argue that traditional competitive intelligence processes insufficiently focus on competitive environments and lack dynamic adaptation capabilities, and that redesigning competitive intelligence processes based on scenario analysis helps overcome these limitations, providing a case study of Xerox Corporation [?]. These studies indicate that scenario analysis in competitive intelligence offers predictive, flexible, and operable advantages alongside complexity, limited short-term effectiveness, and error risks from improper implementation, requiring 扬长避短 (maximizing strengths while minimizing weaknesses) to optimize utility.

**(3) Application of scenario analysis in competitive intelligence.** Huang Xiaobin et al. examined applications in “competitive environment monitoring, competitor analysis, competitive strategy formulation, and crisis analysis and risk management,” noting that applications should address “identification of key factors, construction of multiple scenarios, establishment of scenario simulation models using information technology, and integration with other analytical methods” [?]. Xu Fang et al. studied scenario analysis application in competitive intelligence process optimization, proposing “a dynamic, nonlinear competitive intelligence process redesign based on scenario analysis that fully considers stakeholder needs to improve intelligence quality and efficiency” [?]. Gong Huaping et al. researched scenario analysis application in small and medium enterprise competitive intelligence, helping “promote internal dynamic cooperation, fully utilize information resources, achieve environmental intelligence, and obtain

precise, scientific, and timely intelligence strategies at relatively low cost” [?]. These studies explore specific application links, issues, and considerations for scenario analysis in competitive intelligence work.

**3.3.2 Scenario Planning and Competitive Intelligence** As an important stage in situational response, scenario planning in competitive intelligence often integrates with strategic analysis and corporate planning. Representative research includes: Zhu Ruijuan et al., studying dynamic strategic methods based on competitive intelligence, note that “scenario planning is a strategic analysis and formulation method suitable for complex, uncertain environments, offering advantages over traditional strategic methods by enabling enterprises to anticipate potential threats, change leadership mindsets, and prepare for multiple futures” [?]. Wu Xiaowei et al. point out that “competitive intelligence software planning functions can be implemented using scenario planning methods, whose relatively standardized construction approaches facilitate automated implementation in competitive intelligence software” [?].

**3.3.3 Scenario Simulation and Competitive Intelligence** Scenario simulation finds extensive application in corporate competitive intelligence war room simulations and emulation. Wang Zhijin et al. note that “the conceptual framework of corporate competitive intelligence war rooms comprises intelligence collection, processing, and output structures, where the simulation aspect of the processing 环节 (stage) manifests primarily as scenario simulation. Simulation platform design involves creating scenarios for competitors, competitive environments, and competitive decisions, establishing decisions based on characteristic descriptions of future competitive situations” [?]. In corporate competitive intelligence war rooms, “environmental scanning identifies basic scenarios and general conditions of the enterprise’s environment (including political, legal, economic, technological, and socio-cultural scenarios), describes and visually displays possible environmental scenarios, analyzes the matching degree between the enterprise and competitive environment, and designs adjustment plans and strategic/tactical implementations” [?]. Chen Jing notes that “corporate competitive intelligence war rooms have scenario simulation functions and can introduce scenario calculus methods to express actions and changes” [?]. These studies demonstrate that war rooms represent an important form of scenario simulation in competitive intelligence, providing foresight and guidance for corporate plan adjustments, strategic deployment, and tactical implementation.

**3.3.4 Scenario Construction and Competitive Intelligence** Scenario construction has specific applications in competitive intelligence scenario design and modeling. Yan Beini identifies scenario construction as a crucial 环节 (stage) in competitive intelligence strategic game design, noting that “scenarios include general and specialized scenarios, both containing four elements: end states, strategies, driving forces, and logic. General scenario construction follows game

requirement outlines, while specialized scenario construction requires designers to deeply assess competitor actions and their consequences” [?]. These studies indicate that situational response in competitive intelligence has been continuously strengthened alongside deepening competitive intelligence research, with natural interactive relationships since their inception. From the situational response lifecycle perspective, scenario planning, analysis, construction, and simulation in competitive intelligence represent both deeply researched areas and key domains for further expansion.

### 3.4 Situational Response Research in Emergency Intelligence

In recent years, major natural disasters have prompted heightened national attention to emergency management, leading to the establishment of the Ministry of Emergency Management in 2018. Emergency management practice and research now involve multi-stakeholder participation, multi-department collaboration, and interdisciplinary approaches. Information science and intelligence work in the new era should position themselves to meet national economic, social development, and security needs, becoming powerful supports for management and decision-making. Intelligence work oriented toward emergency management and decision-making both responds to the specific context of emergency management and fulfills the need for intelligence work to operate within concrete domains and situations.

**3.4.1 Scenario Analysis and Emergency Intelligence** Emergency intelligence work requires scenario-based analysis for different emergency management contexts, with scenario analysis serving as an important tool. Sun Shaocong et al. note that in counter-terrorism intelligence crisis early warning, scenario analysis “defines the scope of the counter-terrorism intelligence crisis early warning environment by examining various possible states of counter-terrorism intelligence affecting national security and their probabilities, proposing early warning directions and response measures based on the highest-probability development trends” [?]. Yang Feng et al. explore resource foundations, implementation paths, and service methods in emergency intelligence perception from a scenario analysis perspective, pointing out that “all-source intelligence scenario description forms the foundation of intelligence perception, active-passive combined perception paths are the instruments, and scenario-developed intelligence assessment is the effect” [?].

**3.4.2 “Scenario-Response” and Emergency Intelligence** In emergency intelligence work, adopting responsive measures for different scenarios constitutes the “scenario-response” model, widely applied in emergency intelligence system construction and intelligence strategies. Li Gang notes that in emergency intelligence systems, scenario-based emergency event chain modeling methods “extract key events from scenarios based on actual conditions and expert judgment, construct networks integrating multi-semantic relationships relying on ‘scenario-response’ theory or technology, and generate scenario development

trend maps” [?]. Chen Zuqin et al. studied reusable emergency strategy intelligence processing methods under the “scenario-response” model, arguing that “the decision-making model generating response plans based on emergency scenarios indicates that similar emergency scenarios can adopt similar response measures, likely producing similar results, making emergency strategies reusable,” and systematically elaborated on scenario-response perspective-based emergency strategy intelligence processing models, technical analysis, and algorithmic issues [?]. These studies demonstrate that emergency intelligence situational response research has emerged alongside emergency management as a new field and currently represents a popular research theme, with foreseeable future deepening in scenario planning, analysis, scenario-response, and simulation.

## 4 Summary and Outlook

As Hua Bolin et al. note, “The transformation from focusing on analysis processes to emphasizing problems and scenarios represents a trend in intelligent intelligence analysis system development, with numerous studies on scenario issues and application scenarios in intelligence systems” [?]. Emergency intelligence work oriented toward emergency management problems and scenarios has gained increasing social attention. In summary, research on intelligence work from a situational response perspective has achieved notable results but also exhibits shortcomings.

### 4.1 Achievements

**4.1.1 Bibliometric Analysis Reveals Stable Growth Trends** Specifically, first, in terms of publication volume, research on intelligence work from a situational response perspective has gained increasing attention, particularly in the past decade thanks to social concern and substantial support from the National Natural Science Foundation and National Social Science Fund for projects in competitive intelligence, emergency intelligence, and library and information science. Second, regarding journal sources, the research has relatively stable academic exchange platforms, with results concentrated in core journals including *Information Science: Theory and Application*, *Journal of Intelligence*, and *Library and Information Service*, providing influence guarantees. Third, concerning author distribution, a group of relatively stable research teams and core authors has emerged, whose sustained, in-depth, and systematic research provides momentum for field development. Finally, from keyword distribution, core domains of shared interest including competitive intelligence, emergency events, and crisis intelligence have formed.

**4.1.2 Content Analysis Reveals Established Core Themes** First, competitive intelligence was the earliest field to introduce and continuously explore scenarios, with flourishing research on scenario analysis’s role, advantages, disadvantages, and applications, as well as scenario planning, simulation, and con-

struction. Second, situational response and emergency intelligence (intelligence work in emergencies and crisis management) represents a rapidly growing and deeply researched new field in the past decade, with scenario response widely applied to emergency intelligence system construction, emergency intelligence strategies, counter-terrorism intelligence early warning, scenario element extraction, and scenario simulation, providing new research perspectives for emergency management and decision-making. Additionally, theoretical interpretation of scenarios in information science and situational response research in library and information work have achieved notable results, laying foundations for further research.

## 4.2 Shortcomings

**4.2.1 Research Remains at a Preliminary Stage** Although research attention and interest have continuously increased over the past decade, the topic remains at a relatively low level compared to both situational response research in related fields and intelligence work itself. For instance, CNKI searches reveal over 14,000 documents on situational response-related themes, with more than 500 documents in disciplines including education, medicine, drama/film/television arts, economic management, environmental science, and computer science, while intelligence work-related situational response research accounts for only about 1.5% of total literature.

**4.2.2 Limited Thematic and Stage Expansion** First, from a situational response perspective, research concentrates primarily on scenario analysis. While competitive intelligence has relatively deep research on scenario planning, analysis, construction, and simulation, other intelligence work domains show weakness in scenario simulation and optimization, and even lack in-depth discussion of scenario concepts and connotations. Second, from an intelligence work perspective, research focuses mainly on competitive intelligence and emergency intelligence, with insufficient attention to situational response in other intelligence domains and specific intelligence work processes and stages.

## 4.3 Future Trends

**4.3.1 Strengthening Theoretical Research on Situational Response in Intelligence Work** While situational response theories flourish in other disciplines, their insufficient depth and systematicity in intelligence work stems largely from theoretical shortcomings. Strengthening theoretical research requires clarifying fundamental issues including concepts, connotations, elements, principles, methods, models, and processes of situational response in intelligence work, providing theoretical support for in-depth research.

**4.3.2 Expanding Research Domains of Situational Response in Intelligence Work** Current research domains show certain limitations. Future research should, first, address practical domains and specific intelligence needs

such as scientific and technological intelligence, social science intelligence, military intelligence, and public security intelligence. Second, research should expand the full situational response lifecycle—including scenario planning, analysis, construction, simulation, and optimization—through in-depth interactive studies across all stages and processes of intelligence work.

## References

- [?] China Society for Scientific and Technical Information. Nanjing Consensus on the Development of Information Science and Intelligence Work [?]. *Journal of the China Society for Scientific and Technical Information*, 2017, 36(11): 115-116.
- [?] Xia Zhengnong, Chen Zhili. *Cihai* [?]. 6th ed. Shanghai: Shanghai Lexicographical Publishing House, 2009: 1837.
- [?] Dictionary Editorial Office, Institute of Linguistics, Chinese Academy of Social Sciences. *Modern Chinese Dictionary (6th Edition)* [?]. Beijing: The Commercial Press, 2012: 1062.
- [?] Wang Huijiong. *Methodology of Social Systems Engineering: Applications in Basic Theory, Planning, Policy, Think Tank Construction, etc.* [?]. Beijing: China Development Press, 2015: 140.
- [?] Zong Beihua. *Scenario Analysis Method in Strategic Forecasting* [?]. *Forecasting*, 1994(2): 50-51, 55, 74.
- [?] Yue Zhen, Lai Maosheng. Progress of “Scenario Analysis” Methods Abroad [?]. *Journal of Intelligence*, 2006(7): 61-62, 66.
- [?] Shao Bo, Song Jiwei. Risk Identification and Ranking in Counter-Competitive Intelligence Early Warning [?]. *Information Science: Theory and Application*, 2007(5): 642-645.
- [?] Dong Yin, Yin Fang. Research on Open Source Intelligence Analysis Methods Based on “Group” Concepts [?]. *Information Science: Theory and Application*, 2013, 36(12): 54-58, 63.
- [?] Fu Xingkui. The Role of Intelligence Cases in Information Science Research [?]. *Journal of Intelligence*, 1991(2): 54-56.
- [?] Xie Jungui. Preliminary Exploration of Intelligence Cases [?]. *Library and Information Service*, 1992(4): 18-21.
- [?] Zeng Zhonglu. Confirmatory Bias in Competitive Intelligence Work and Its Overcoming Methods [?]. *Information Science: Theory and Application*, 2009, 32(6): 42-45.
- [?] Wang Yonghong. Incomplete Information Phenomena in Intelligence Analysis and Countermeasures [?]. *Journal of Intelligence*, 2007(6): 54-56.

- [?] Wu Hui. On Imaginative Methods in Intelligence Research Work [?]. *Modern Information*, 1999(4): 32, 37.
- [?] Chen Meihua, Wang Yanfei. Analysis of Conditions for Intelligence Perception [?]. *Information Science: Theory and Application*, 2018, 41(8): 5-10.
- [?] Wang Keping. Analysis of Intelligence Support Based on Crisis Lifecycle [?]. *Information Science: Theory and Application*, 2009, 32(2): 33-36.
- [?] Gao Jinhu. On the Application of Critical Thinking in Intelligence Analysis [?]. *Journal of Intelligence*, 2013, 32(9): 1-5, 33.
- [?] Yao Wei, Yan Beini. Intelligence Analysis Strategies for Overcoming Individual Cognitive Bias [?]. *Information Science: Theory and Application*, 2012, 35(10): 47-51.
- [?] Sun Jianjun, Ke Qing. Intelligence Analysis Methods in Incomplete Information Environments—Scenario Analysis and Its Application in Intelligence Research [?]. *Library and Information Service*, 2007(2): 63-66, 120.
- [?] Jiao Yuying, Yuan Jing. Research on Digital Library Personalized Services Based on Scenario Models [?]. *Journal of Library Science in China*, 2008(6): 58-63.
- [?] Ma Xiaoting. Research on Library Personalized Service Recommendation System Based on Scenario Big Data [?]. *Modern Information*, 2016, 36(4): 90-94.
- [?] Hou Litie, Li He, Yuan Cuimin. Research on Mobile Library User Scenario Model Construction Based on Ontology [?]. *Research on Library Science*, 2018(3): 35-40.
- [?] Ma Xiaoqi. Construction and Implementation of University Library Scenario Planning Models—Taking Hong Kong Polytechnic University Library as an Example [?]. *Library and Information Service*, 2015, 59(11): 48-54.
- [?] Jin Yan, Ai Danxiang. Research on Web Dynamic Navigation Based on Scenarios [?]. *Modern Library and Information Technology*, 2007(5): 49-52.
- [?] Zhan Lihua. Analysis of Causes of UGC User Behavior—From Dual Perspectives of User Data Literacy and User Behavior Scenarios [?]. *Information Science: Theory and Application*, 2018, 41(4): 28-32, 37.
- [?] Liu Haiou. Contextualized Recommendation of Big Data Knowledge Services for Cloud Computing [?]. *Library Construction*, 2014(7): 31-35.
- [?] Yu Mengyue, Shen Jing, Zhai Jun. Ontology Design for Chinese Open Government Data Based on Scenario Analysis [?]. *Information Science*, 2019, 37(2): 143-148.
- [?] Li Fenglin, Li Na. Ontology Modeling and Rule Reasoning for Scenario-Based Pharmaceutical Information Services [?]. *Information Science: Theory and Application*, 2016, 39(5): 120-124, 100.

- [?] Chen Ruoyun. Collection and Research of Corporate Competitive Intelligence [?]. *Journal of Intelligence*, 2000(6): 15-17.
- [?] Li Yan. Competitive Intelligence and Corporate Strategic Risk Management [?]. *Information Science: Theory and Application*, 2006(1): 20-24.
- [?] Zha Xianjin, Zhang Gang. Corporate Competitive Intelligence Research for Crisis Early Warning [?]. *Information Exploration*, 2008(5): 3-6.
- [?] Bao Changhu. *Competitor Analysis* [?]. Beijing: Huaxia Publishing House, 2003: 411.
- [?] Huang Xiaobin, Ma Fang. Application of Scenario Analysis in Competitive Intelligence Research [?]. *Information and Documentation Services*, 2009(6): 22-26.
- [?] Xu Fang, Chen Quanping, Wang Shuyi. Research on Competitive Intelligence Process Optimization: Application of Scenario Analysis Methods [?]. *Library and Information Service*, 2010, 54(22): 16-19, 24.
- [?] Gong Huaping, Gao Hongxin. Research on Application of Scenario Analysis Based on Domain Ontology Models in SME Competitive Intelligence [?]. *Information Science*, 2017, 35(10): 101-104.
- [?] Zhu Ruijuan, Yang Guangming, Li Lingkai. Dynamic Strategic Methods Based on Competitive Intelligence [?]. *Competitive Intelligence*, 2005(3): 5-7.
- [?] Wu Xiaowei, Song Wenguan, Xu Fuyuan. Research on Current Status and Trends of Competitive Intelligence Software Development [?]. *Journal of Intelligence*, 2006(6): 2-5.
- [?] Wang Zhijin, Chen Jing, Li Tong, et al. Conceptual Framework Design for Corporate Competitive Intelligence War Rooms [?]. *Information Science: Theory and Application*, 2009, 32(4): 4-8.
- [?] Wang Zhijin, Chen Jing, Chen Weijun, et al. Functional Design and Case Analysis of Corporate Competitive Intelligence War Rooms [?]. *Journal of Intelligence*, 2010, 29(9): 67-72, 88.
- [?] Chen Jing. Application of Ontology Technology in Corporate Competitive Intelligence War Rooms [?]. *Library and Information Service*, 2009, 53(8): 72-75.
- [?] Yan Beini. Analysis of Competitive Intelligence War Game Design for Corporate Strategy [?]. *Information Science: Theory and Application*, 2011, 34(7): 103-107.
- [?] Hua Bolin, Li Guangjian. Architecture Design and Key Technology Research for Intelligent Intelligence Analysis Systems [?]. *Library and Information*, 2017(6): 74-83.
- [?] Sun Shaocong, Jin Juanjuan. Research on National Security and Counter-Terrorism Intelligence Crisis Decision-Making Mechanism Construction [?].

Journal of Intelligence, 2017, 36(3): 6-12.

[?] Yang Feng, Yao Leyie, Fan Wei. Scenario-Embedded Emergency Intelligence Perception: Resource Foundation and Implementation Path [?]. Information and Documentation Services, 2016(2): 41-46.

[?] Li Gang, Ye Guanghui. Discussion on “Wisdom” Construction Themes in Emergency Intelligence Systems from a Network Perspective [?]. Information Science: Theory and Application, 2014, 37(8): 51-55.

[?] Chen Zuqin, Ge Jike, Su Xinning, et al. Research on Reusable Emergency Strategy Intelligence Processing Methods Under the Scenario-Response Model [?]. Journal of Intelligence, 2017, 36(9): 35-41.

### **Review of “Situational” Researched by Information Science Researchers in China**

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**Abstract:** [Purpose/significance] To summarize situational research literature in information science, strengthen situational awareness in intelligence work, and enrich situational theory to provide references for refining information science-specific situational response methodologies. [Method/process] Under the situational response lifecycle framework, bibliometric analysis examined literature by year, source, author, and keywords, combined with content analysis focusing on theoretical interpretation, library and information science, competitive intelligence, and emergency intelligence, culminating in synthesis of basic characteristics and research content. [Result/conclusion] Situational perspective research in information science shows steady growth, particularly achieving scale in competitive and emergency intelligence, while requiring deeper scenario analysis and strengthened research across intelligence work domains and processes.

**Keywords:** situational response; information science; research progress

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

*Source: ChinaXiv — Machine translation. Verify with original.*