

The Transformation Mechanism from Intelligence Research to Think Tank Research: Bridging the “Last Mile” from Intelligence to Think Tanks Postprint

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Abstract

Purpose/Significance: To leverage the greater value of intelligence, intelligence science, and intelligence institutions, and to promote the transformation of intelligence research into think tank research. Methods/Process: Through literature review and comparative analysis, the concepts of intelligence and think tanks are defined, and the relationship between them is analyzed. Results/Conclusions: The “SQTSP process,” in which intelligence runs through the entire think tank research workflow, is proposed. Key issues in the transformation from intelligence research to think tank research are summarized from five aspects: thinking patterns, market nature, service targets, attribute characteristics, and guiding factors. Specific development pathways are proposed for intelligence-supported think tank construction.

Full Text

Transformation Mechanism from Information Research to Think Tank Research –Bridging the “Last Mile” from Information to Think Tank

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Abstract

[Purpose/Significance] This study aims to unleash the greater value of intelligence, information science, and information agencies, and to promote the transformation of information research into think tank research. **[Method/Process]** Through literature review and comparative analysis, this paper defines the concepts of intelligence and think tanks and analyzes their relationship. **[Result/Conclusion]** We propose the “SQTSP Process,” in which intelligence runs through the entire think tank research workflow, and summarize the key issues in transforming information research to think tank research across five dimensions: mode of thinking, market nature, service object, attribute characteristics, and guiding factors. We also propose specific pathways for intelligence to support think tank construction.

Keywords: intelligence; think tank; information research; think tank research; information science; information agencies

Classification Number: G35

In November 2012, the term “think tank” (思想库) first appeared in the report of the 18th National Congress of the Communist Party of China [1]. Beginning in 2013, think tank construction gained high-level national attention. General Secretary Xi Jinping proposed the concept of building “new-type think tanks with Chinese characteristics,” stating that “think tanks are an important component of national soft power” [2] and calling on think tanks to actively provide high-quality intellectual support for scientific decision-making at the central level. In the same year, the term “think tank” formally appeared in official CPC Central Committee documents. The “Decision of the CPC Central Committee on Some Major Issues Concerning Comprehensively Deepening Reform,” adopted at the Third Plenary Session of the 18th CPC Central Committee, explicitly stated the need to “strengthen the construction of new-type think tanks with Chinese characteristics and establish a sound decision-making consultation system” [3].

Since then, China’s think tank construction has entered a fast track. Recently, in a congratulatory letter to the BRICS Political Parties, Think Tanks and Civil Society Organizations Forum, General Secretary Xi affirmed the significance of think tanks and expressed hope that they would “fulfill their responsibilities, deepen exchanges and communication, and contribute wisdom and strength to achieving global common development and promoting the building of a community with a shared future for mankind” [4]. Think tanks play a crucial role in national diplomacy, science and technology, education, culture, and various other fields.

Think tanks represent a more advanced positioning, goal, form, and model for information agencies, representing an important direction for the high-quality development of China’s intelligence, information science, and information agencies. In October 2017, the Forum on the Development of Information Science

and Information Work was held in Nanjing, where over 100 experts and scholars in the field reached the “Nanjing Consensus on the Development of Information Science and Information Work” [5], proposing to “strive to develop information science into a discipline with think tank functions” and to “cultivate information agencies into important think tanks for national development and security.” In 2021, Professor Su Xinnian edited the “Series on Information Science and Information Work in the New Era” (11 volumes), including “Intelligence and Think Tanks” by Li Lin, Chu Jingli, et al., marking the formal entry of think tank research into the field of information science.

Overall, current research output in China’s information science remains dominated by information reports, focusing on information reporting and analysis as hallmarks of information research, rather than forming think tank reports that prioritize intelligent solutions as hallmarks of think tank research. While information research remains necessary, if it cannot evolve toward think tank research, its value and role will inevitably be limited. The transition from intelligence to think tanks, and from information research to think tank research, represents both a historical inevitability in the development of information science and a new requirement that the era has placed upon information science and information agencies.

This study attempts to approach from the perspective of information science to understand think tank needs, analyze the similarities and differences between intelligence and think tanks, and provide insights for promoting information science to meet not only general needs but also the demands of high-end think tanks, thereby unleashing greater value and influence of intelligence, the discipline, and its agencies. We aim to offer reflections and inspiration for China’s transformation from information research to think tank research and for more effectively supporting think tank construction with intelligence.

2.1 Conceptual Definition of Intelligence

The concept of “intelligence” (情报) originated in Japan, with the term first appearing in China in the early 20th century publication *Ciyuan* (Etymology). Domestic research on intelligence is extensive, with numerous definitions of the term. According to a review of intelligence definitions in *Intelligence and Think Tanks* [6], various sectors of society have defined intelligence primarily from military, political, and economic perspectives. Ye Jiyuan (2022) [7] categorized domestic definitions of intelligence into three types: military theory, literature-knowledge theory, and enterprise theory. This paper mainly lists representative perspectives on scientific and technical intelligence from domestic scholars and recent expansions and updates to these definitions over the past three years.

In addition to scholarly definitions, Chinese reference works have also defined the concept of intelligence. In 2019, the National Committee for Terms in Sciences and Technologies [15] released two layers of meaning for “intelligence”: the first layer is “information,” synonymous with “信息”; the second layer is “intelligence,”

meaning reports on certain situations, typically with confidential, adversarial, or competitive characteristics. The *Encyclopedia of China (3rd Edition)* [16] defines “intelligence” (intelligence) as knowledge or facts transmitted for specific purposes.

This study defines intelligence (information/intelligence) as specific knowledge and information that facilitates analysis, judgment, and decision-making. The “intelligence” in this study emphasizes scientific and technical intelligence, without particular consideration of military intelligence, national defense intelligence, or national security intelligence.

2.2 Conceptual Definition of Think Tanks

The concept of think tanks originated in the United States. Compared with the definition of intelligence, domestic definitions of think tanks are largely similar, falling into two main types: one views think tanks as institutions [17]-[18] (the mainstream perspective), while the other views them as platforms [19]. This study briefly lists definitions of think tanks by several scholars and institutions, as shown in . In addition, domestic think tanks have spawned various related concepts such as think tank journals [20], university think tanks [21], industrial think tanks [22], and media think tanks [23].

We believe that think tanks are not merely institutions or platforms, but rather an object and phenomenon—a mechanism for proposing problem solutions to support public policy and management decision-making based on thorough and reliable intelligence and analysis. Think tanks emphasize solutions, with final outcomes oriented toward public policy and strategic planning. This study focuses on analyzing and discussing think tanks as an object and phenomenon (not merely as institutions), and also uses “think tank institutions” as shorthand for “think tanks.”

2.3 The Relationship Between Intelligence and Think Tanks

This study examines the relationship between intelligence and think tanks from each other’s perspectives [Figure 1: see original paper]. From the perspective of intelligence, intelligence is the foundation, lifeblood, and soul of think tanks. Think tanks depend on intelligence but operate at a higher level. The formation of “think tank outcomes—solutions” is based on intelligence research. From the perspective of think tanks, think tanks are an extension of information agencies, a sublimation of intelligence content, and a destination for intelligence outcomes. Think tanks represent an advanced form of information agencies and a sophisticated product of intelligence knowledge that has been processed and analyzed to support policy and decision-making.

However, not all information agencies must or will become think tanks. Intelligence serves as the eyes, ears, vanguard, advisor, and guide. Without intelligence, there would be no think tank research, no policy, and no decision-making. The role of intelligence remains irreplaceable. Nevertheless, intelligence research

cannot stop at intelligence itself; it must continuously deepen, extend, and expand, moving from intelligence and intelligence research toward think tanks and think tank research.

In terms of current development, China's information science remains largely confined within its own disciplinary system, failing to penetrate and influence broader scientific and social fields. The goal of think tanks, by contrast, is to directly support policy and decision-making across all sectors of society and science and technology. Therefore, a significant gap exists between intelligence and think tanks, and the extension and development from intelligence to think tanks is an inevitable trend in the evolution of information science.

On December 26, 2007, Jiang Mianheng, then Vice President of the Chinese Academy of Sciences, stated during an inspection of the National Science Library, "My overall direction is this: infrastructure construction means turning data into information, turning information into intelligence, and the application beyond intelligence is solution." This statement articulated the requirements and expectations for intelligence work. In early 2017, Pan Jiaofeng, Dean of the Chinese Academy of Sciences' Academy of Science and Technology for Development, drawing on his experience in building a national high-end science and technology think tank and nearly two decades of work in science and technology strategy research and major planning, summarized the general approach to think tank research problems in his book *The DIIS Theoretical Method for Science and Technology Think Tank Research*. He first proposed the think tank DIIS (data-information-intelligence-solution) theoretical methodology system, and subsequently in July 2020, first proposed the "Double Helix Structure of Think Tank Research" (Think Tank Double Helix Method), formulating the "Think Tank Double Helix Method Theory" [28].

From both the intelligence perspective and the think tank perspective, "moving from data to information, then advancing to intelligence, and ultimately achieving solution" represents the common task requirements and development path for both intelligence research and think tank research. The two share remarkable similarities and fully demonstrate the inseparable relationship between intelligence and think tanks. The process of transforming from "intelligence" to "think tank" is precisely the process of intelligence participating in think tank construction, which requires overcoming obstacles from intelligence research to think tank research and bridging the "last mile" from intelligence to think tanks.

Think tank research is a critical step before policy formulation, providing direct support and assurance for policy development. The complete process flows from intelligence research to think tank research and then to policy formulation, with intelligence's participation in think tanks reflecting both the value of intelligence and think tanks' heavy reliance on it. As shown in [Figure 2: see original paper], intelligence research participates in the entire think tank construction process, running through the generation of think tank outcomes. In the transformation from intelligence to think tank outcomes and policy, the process roughly involves five stages: "phenomenon observation/status inves-

tigation (status) —question formulation (question) —thematic discussion and research (topic) —expert consultation and judgment suggestions (suggestion) —public policy/decision-making (policy)” (abbreviated as the “SQTSP Process”). Each stage involves intelligence processing and analysis. In a sense, without intelligence participation, there would be no think tank outcomes. The intelligence processing and analysis process runs through the entire think tank research workflow, manifesting primarily in: data collection during status investigation, problem analysis during question formulation, fact verification during thematic discussion, suggestion strengthening during expert consultation, and optimization and feedback during public policy or decision-making formation—all realized or completed based on intelligence content itself or the intelligence analysis process.

Simultaneously, from the perspective of examining information science value, think tank research embodies information science research and the value of intelligence content. As think tank demand increases, intelligence must also broaden its boundaries and enhance its functions, continuously amplifying and expanding intelligence functions [29]. Only then will intelligence gain greater recognition, directly supporting think tanks and indirectly supporting decision-making, thereby better realizing the value of intelligence. While intelligence is important and needed by users, it cannot remain at the intelligence level alone. From the perspective of think tank needs, intelligence research must be continuously deepened and extended to solutions oriented toward policy and decision-making. Therefore, we must continuously promote the transformation and development of information agencies toward think tanks, applying the value generated by intelligence directly to think tanks through intelligence research.

To achieve the transformation from intelligence research to think tank research, information science, information agencies, and intelligence researchers must undergo transformation and enhancement across multiple dimensions, including mode of thinking, market nature, service object, attribute characteristics, and guiding factors, as shown in .

3.1 From Intelligence Thinking to Think Tank Thinking

In the process of crossing from intelligence to think tanks, researchers must possess think tank thinking. The transformation, training, and establishment of thinking modes are crucial in upgrading intelligence capabilities to think tank capabilities. Without the shift from intelligence thinking to think tank thinking, there can be no transformation of research capabilities from intelligence to think tanks, and consequently no realization of the transition from intelligence to think tanks. In other words, it is far from sufficient for intelligence researchers to possess only intelligence thinking; they must learn, develop, and master think tank thinking.

Intelligence thinking often manifests as data thinking, tool thinking, process thinking, and results thinking, whereas think tank thinking focuses more on

problem thinking, strategic thinking, goal thinking, and effectiveness thinking. As intelligence personnel, they are often skilled at collecting data, using tools for analysis, emphasizing research processes, and providing results to users. However, such intelligence research tends to have the characteristics of intelligence engineering. Think tank thinking differs fundamentally. Think tank research must first be adept at identifying problems, examining them from strategic heights, focusing on objectives to be achieved, and using actual effectiveness as the gold standard for think tank research. The starting points, research processes, and outcomes differ between the two.

3.2 From Raw Material Market to Idea Market

If we view both intelligence and think tanks as products, their different attributes lead to different meanings and values in the demand market. If intelligence is compared to a gold mine, then think tanks are the gold—the transformation from intelligence research to think tank research is the gold-panning process. Without gold mines, there would be no gold, but we cannot have only gold mines without panning for gold.

Intelligence belongs to the raw material market. Intelligence research is intelligence-oriented, primarily addressing the production and preliminary processing of raw materials—collecting, integrating, and clarifying various types of data and materials to provide users with rich information and knowledge, helping them discover and utilize intelligence, and changing the state of information shortage or overload. This mainly satisfies users' basic information needs. Intelligence is the soul of intelligence research.

Think tanks, however, belong to the idea market. Think tank research is problem-oriented. Based on identifying problems and relying on intelligence, think tanks draw on expert wisdom to propose ideas for solving problems, forming forward-looking, creative, and insightful solutions. Decision-making's dependence on think tanks is essentially dependence on ideas, and ideas are the key to think tank research. Ideas are the soul of think tank research.

3.3 From Research-Oriented to Think Tank-Oriented

Traditionally, intelligence research has primarily oriented toward the scientific research process and scientific research users, serving academic research and aiming to provide assistance or support for scientific researchers or the development of science and technology. The generation of intelligence is essentially a process of using researchers' knowledge or methods in relevant fields to analyze information, thereby changing the structure and function of information in that field [30]—a process of adding value to knowledge. This is also what Brookes proposed as the value-added role of intelligence. Intelligence is inseparable from scientific research, and its role in ensuring and supporting research activities is irreplaceable.

Think tank research, by contrast, orients toward the decision-making process

and decision-making users, serving top-level design and aiming to provide consultation or reference for policymakers or public policy formulation. As Pan Jiaofeng proposed [24], think tanks provide policy recommendations and services to the government through high-quality consultation reports, provide knowledge and information to the public through publicly released research reports, and provide innovative tools and perspectives to academia and decision-making circles through theoretical and methodological research. Think tanks rely heavily on expert wisdom to serve national strategic decision-making, and their role in ensuring and supporting national public policy is equally irreplaceable.

3.4 From Information Attributes to Policy Attributes

From the perspective of intelligence and think tanks themselves, although they are highly correlated, they belong to two different fields with different research attributes and disciplinary attributes, as well as different functional orientations and roles. From a disciplinary perspective, intelligence belongs to the first-level discipline of “Information Resource Management,” while think tanks belong to the first-level discipline of “Public Administration.”

Intelligence is information-driven, possessing characteristics of knowledge, transmissibility, and utility. Intelligence personnel are committed to providing users with information and knowledge that is authentic, useful, timely, and complete. The core of intelligence is discovering, collecting, processing, and providing information. Think tanks, however, must be problem-driven. Based on possessing information, they integrate expert wisdom and thinking to transform it into targeted, countermeasure-oriented, forward-looking, and reserve countermeasures and suggestions. The core of think tanks is proposing, discovering, analyzing, and solving problems.

3.5 From Basic Intelligence Needs Orientation to Major Public Problem Orientation

Intelligence is oriented toward users’ intelligence needs, committed to providing users with the information and knowledge they require—giving users what they need. Its research mainly revolves around information flow, serving the needs of scientific researchers, research processes, and research tasks to provide support and assurance.

Think tanks, however, are oriented toward major public problems, committed to solving important issues for the nation and society, and proposing recommendations or countermeasures (what the solutions are). Their research mainly revolves around potential problems that may exist in various social fields, proactively and forward-looking providing corresponding solutions or wisdom for decision-makers.

4.1 Solid Intelligence Foundation

The starting point and foundation of think tanks and think tank research is intelligence itself and the results of intelligence analysis. Think tanks and think tank research represent one of the important goals of information science and intelligence analysis. The rigor of intelligence processing and analysis is crucial for the objectivity of policies, the accuracy of final results, and the scientific effectiveness of decision-making. Think tank outcomes are a more advanced form of intelligence outcomes, and think tank institutions are an advanced form of information agencies. The relationship between intelligence and think tanks is inseparable. To cross the “last mile” from intelligence to think tanks requires a solid intelligence foundation, advancing to a higher stage while retaining one’s own advantages.

4.2 Enhancing Intelligence Researcher Capabilities

Whether the transition from intelligence to think tanks can be achieved is ultimately a matter of capability. First, one must possess intelligence capabilities: the ability to collect, analyze, and judge intelligence. Without intelligence capabilities, there can be no think tank capabilities. At the same time, one must also possess think tank capabilities: the ability to propose, analyze, and solve problems. Intelligence researchers often have strong intelligence capabilities but relatively lack think tank capabilities, and therefore need to strengthen think tank awareness and capabilities. Think tank researchers often have strong think tank capabilities but relatively lack intelligence capabilities, and therefore need to strengthen intelligence awareness and capabilities.

4.3 Multi-Domain Cross-Disciplinary Collaboration

Intelligence itself has a dependent attribute, closely related to context such as disciplines, tasks, needs, and locations, and has different requirements as the context changes. Think tanks also face various fields, characterized by multi-disciplinary, multi-attribute, and multi-scenario features. Facing complex demands, both intelligence research and think tank construction require cross-disciplinary collaboration with multiple other fields, forming a “small core, large network” layout to achieve large-scale coordination across multiple disciplines and interdisciplinary fields. This better leverages the comprehensive nature of intelligence and the diversity of think tanks, realizing the value of intelligence and think tanks across various social fields.

5 Conclusion

As part of information, intelligence is closely related to data, literature, and knowledge. Intelligence is meaningful and valuable knowledge for users, integrated from data and literature. Facing national strategic needs, the role of intelligence will become increasingly important. At the same time, the transformation of intelligence research to think tank research and the transformation of

information agencies to think tanks represent the responsibility of intelligence personnel, the value of information agencies, and the mission of the information discipline. Intelligence and think tanks are interdependent, complementary, and mutually reinforcing. In the process of extending from intelligence to think tanks, we must expand the horizons and research scope of information science itself, extend the intelligence chain, and directly meet higher-level user needs. Intelligence personnel must fully utilize their advantages, play more important roles, move from supporting to collaborating, from supporting actors to leading actors, and further demonstrate the influence of intelligence and intelligence research. Of course, this does not mean that all information agencies need to completely transform into think tank institutions; information agencies still need to exist, but they must vigorously enhance their think tank research capabilities and strengthen think tank functions. The transformation and leap from intelligence to think tanks represent not only a change in the capabilities of information agencies but also a responsibility, mission, and commitment of information agencies.

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Author Contribution Statement:

Chu Jingli: Proposed the research topic, designed the research framework, revised and guided the paper.

Ren Jiaohan: Drafted the initial manuscript and revised the paper.

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

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