New Positioning and New Understanding of Information Science and Information Work in the New Era: Notes and Reflections on the "Information Science and Information Work Development Forum (2017)" Postprint

Authors: Chu Jingli

Date: 2023-08-26T00:00:00+00:00

Abstract

Purpose/Significance To explore the connotation of intelligence studies and intelligence work in the new era, and re-examine their current and future positioning. Method/Process Summarize the Intelligence Studies and Intelligence Work Development Forum (2017), interpret the 'Nanjing Consensus on the Development of Intelligence Studies and Intelligence Work', and propose the main characteristics and overall trends for future development. Results/Conclusion In the face of a changing era, intelligence studies and intelligence work require transformation and reform, breaking through the inherent literature-based paradigm and expanding boundaries characterized by intelligence exchange. Thus, with intelligent intelligence analysis as the core, technology development and application as the means, big data as the core capability, and data science as the new growth point, new core capabilities and competitiveness can be constructed for intelligence studies and intelligence work.

Full Text

Preamble

Volume 62, Issue 1, January 2018, ChinaXiv Partner Journal

The New Orientation and New Understanding of Information Science and Information Work in the New Era — Some Notes and Reflections on the "2017 Forum on the Development of Information Science and Information Work"

Chu Jingli

National Science Library, Chinese Academy of Sciences, Beijing 100190
University of Chinese Academy of Sciences, Beijing 100049

Abstract

[**Purpose/Significance**] This paper aims to explore the connotation of information science and information work in the new era, and to rethink the new orientation of information science and information work in the present and future. [**Method/Process**] By summarizing the "2017 Forum on the Development of Information Science and Information Work," interpreting the "Nanjing Consensus on the Development of Information Science and Information Work," and proposing the main characteristics and overall trends for the future development of information science and information work. [**Result/Conclusion**] In times of change, information science and information work must undergo transformation and reform, breaking through the traditional paradigm based on documents, expanding the disciplinary boundaries characterized by information exchange, thereby building new core capabilities and competitiveness for information science and information work with intelligent information analysis as the core, technology development and application as the means, big data as the core capability, and data science as the new growth point.

Keywords: information science; information work; information analysis; big data; data science
Classification Number: G250
DOI: 10.13266/j.issn.0252-3116.2018.01.018

Information science and information work originated from documentation, which flourished after World War II, and thus have always maintained an inseparable historical connection and professional foundation with library science and documentation. However, with the arrival of the digital, networked, big data, intelligent, and smart era, the disciplinary nature and operational characteristics of information science and information work have undergone profound changes. Their disciplinary paradigms, professional capabilities, academic influence, and social contributions have transcended the scope of traditional information science, endowing information science and information work with new orientations and requirements in the new era. Therefore, we must re-examine the changes that have occurred in information science and information work, re-establish their positioning and roles, and re-plan their practical strategies and future development goals. In this context, the "2017 Forum on the Development of Information Science and Information Work," co-sponsored by the China Society for Scientific and Technical Information and the China Society for Social Sciences Information, was held at Nanjing University on October 29, 2017. Researcher Huang Changzhu, member of the Chinese Academy of Social Sciences, and Professor Ma Feicheng, senior professor of Wuhan University, were invited to deliver keynote speeches. Together with over 100 experts and scholars in the information field, they discussed the major issue of development orientation and direction for information science

and information work. Following the conference, the "Nanjing Consensus on the Development of Information Science and Information Work" was released. Subsequently, the major national social science project "Research on the Disciplinary Construction of Information Science and the Future Development Path of Information Work," led by Professor Su Xinning of Nanjing University as the chief expert, was officially launched, marking that this research theme has received high attention from academia and society. In addition to the reports by Researcher Huang Changzhu and Professor Ma Feicheng at the Nanjing conference, many other experts and scholars elaborated on their understanding of the current and future development of information science from different perspectives. Through the one-day conference, the author summarized several main viewpoints and formed some reflections.

1. Further Strengthening Theoretical Research and Practical Innovation in Information Science

Researcher Huang Changzhu raised the proposition of "Why study information science?" As a complete disciplinary system, information science must possess and establish its own basic theoretical foundations, and continuously improve and deepen its theoretical research through practical innovation. In a changing environment, the importance of theoretical research in information science becomes more prominent. To this end, it is necessary to address a series of major theoretical questions such as what information science is, what it can do, and what its disciplinary foundation is. Professor Ma Feicheng proposed understanding and positioning information science on the information chain, finding a basic paradigm for the discipline's development. The so-called information chain refers to the information evolution process of "fact-data-information-knowledge-intelligence (wisdom)," which can also be considered the dominant trajectory of information science development and change.

2. Further Establishing the Disciplinary Positioning of "Grand Information Science"

Traditional information science deals with the organization and analysis of scientific and technical literature. Today's information science not only transcends the scope of literature, extending to information phenomena and various information activities such as public opinion, data, geographic information systems (GIS), e-commerce, and e-government, but also goes beyond science and technology itself, extending to social science intelligence, medical intelligence, defense intelligence, security intelligence, and so on. We must establish a grand information science perspective that includes the integration of military and civilian intelligence within a broad framework. All types of intelligence, as well as "information" and "intelligence," will be coordinated within the disciplinary category system of "information science," following the common disciplinary attributes and norms of information science and building a common theoretical foundation, while having different application values and effects in different

fields. Information science should hold high the banner of "Grand Information Science," strengthen the optimization and reorganization of its internal structure, reshape intelligence culture, and form a Chinese approach to intelligence research.

3. Expanding the Disciplinary Boundaries While Maintaining the Core of Information Science

In today's era of intensifying interdisciplinary integration and flourishing cross-boundary collaboration, disciplinary boundaries are becoming increasingly blurred. No discipline can exist in isolation, and the interdisciplinary application of theories and methods has become a common phenomenon. If information science cannot expand its own disciplinary boundaries, it is likely to be swallowed up or eroded by other disciplines. Therefore, implementing an open policy, breaking disciplinary boundaries, absorbing nutrients from other disciplines, and continuously strengthening itself is the way forward for the development of information science. However, in this process, we must adhere to the inherent disciplinary core of information science (the basic theories of information science) rather than being assimilated and losing our identity. We should adhere to the disciplinary development principle of being self-centered and using others for our own purposes.

4. Further Strengthening the Social Service Functions of Information Science and Information Work

(Note: This section appears as a heading only in the original text, with its content integrated into Section 7.)

5. Technology-Driven Development as the Dominant Paradigm for Information Science and Information Work

The development of modern information technology, represented by computers, networks, and artificial intelligence, has injected new means and momentum into all disciplines, including information science. No discipline can ignore the application and role of technology. Information science itself possesses a technological complex and advantage, and its future development will increasingly rely on technology research and development and application. Although information science may not or should not become a technical discipline, as it still needs humanistic elements, the ability and level of technology application will determine the capability, status, and value of information science. To this end, it is necessary to strengthen the introduction of technical talents, the technological transformation of information science curricula, and the technological transformation of the information science disciplinary system. Only through demand-driven technology can information science achieve higher disciplinary status and a good disciplinary image, and the role of information science and information work can be fully manifested.

6. The Data-Driven Research Paradigm Provides New Development Opportunities for Information Science

Future scientific research will be data-intensive, with data-driven approaches as the main paradigm. Information science has always had a natural connection and relationship with scientific research. The transformation of the research paradigm will inevitably affect the development of information science, which means taking data as an important object of information science research, taking data science with big data technology at its core as an intrinsic part of information science disciplinary construction, clarifying the position of data in the information science disciplinary system and development, building a new information science disciplinary system characterized by data, big data technology, and data science, and taking data collection, organization, mining, analysis, as well as data intelligence and knowledge discovery as new capabilities of information science.

7. Further Strengthening the Capabilities of Information Science and Information Professionals

No matter how information science develops, its nature as an applied discipline will not change. The influence of the information science discipline lies in the influence of information work. To this end, we should further strengthen the social service functions of information science and information work, provide cutting-edge information and information analysis for research in various disciplines, and play a think tank function in promoting national economic and social development. Think tank research should be incorporated into the grand information science disciplinary system, intelligence research should be expanded into think tank research, and intelligence research institutions should be expanded into think tank research institutions. We should monitor public opinion dissemination and provide public opinion analysis, strengthen intelligence analysis of emergency events and establish models and mechanisms, participate in enterprise competitive intelligence analysis and provide information and strategic support for enterprise competition, establish confidentiality disciplines and participate in the disciplinary construction of national security, and so on. Only when information science and information work play their roles in various fields can they continuously enhance their social status and influence. The disciplinary status and influence of information science depend on what kind of disciplinary system and capabilities can be built in terms of theory, methods, and technology, on what major social needs can be addressed and to what extent by the information work it guides, and on what core capabilities and professional technical advantages information professionals have mastered. Therefore, whether in terms of discipline, practice, or personnel, the key issue is capability. The level of disciplinary construction capability, the effectiveness of practical application capability, and the level of professional development capability will all affect the overall image of information science and its future development. Building information science capabilities that are consistent with social needs,

both current and future, is the fundamental task facing information science.

8. Building Disciplinary and Professional Confidence in Information Science and Information Work

Compared with traditional large and dominant disciplines, information science still appears weak and "humble," unable to compare with many other major disciplines, and many people still do not understand the nature and role of information science. This is an objective reality. However, we should also recognize that in the past decades, through the unremitting efforts of the information science community, the status and influence of information science have gained increasing recognition. In today's demand and technology environment, the objective environment for the development of information science and information work is unprecedentedly favorable, the disciplinary advantages and capabilities of information science will be greatly stimulated, and the role of information science in solving major social needs will be further strengthened. We should build disciplinary confidence in information science and professional confidence in information work, organically combine domain knowledge with professional and technical capabilities, and find our own coordinates in the development of the discipline and career. The Nanjing conference has ended, and the "Nanjing Consensus" has been released. However, the road ahead for information science disciplinary construction and the future development of information work is still long, the challenges are severe, and the tasks are arduous. No matter how the information environment changes or how user needs change, information science and information work cannot cling to tradition. We must intensify transformation and reform, break through the traditional paradigm based on documents, return to the origin of intelligence, expand the disciplinary boundaries characterized by information exchange, delve into the content and processes of intelligence, information, smartness, and wisdom, and build new core capabilities and competitiveness centered on intelligent information analysis, with technology development and application as the means, big data as the core capability, and data science as the new growth point, thus ushering in a new era for information science and information work.

The Nanjing Consensus on the Development of Information Science and Information Work

On October 29, 2017, the "2017 Forum on the Development of Information Science and Information Work," co-sponsored by the China Society for Scientific and Technical Information and the China Society for Social Sciences Information, organized by the School of Information Management of Nanjing University, and co-organized by the Center for Studies of Information Resources of Wuhan University and the *Journal of Library and Information Science* magazine, was held in Nanjing. Over 100 experts and scholars in the information field from across the country attended the conference. The meeting focused on discussions

about the disciplinary construction of information science and the development of information work, aiming to develop information science and position information work under the guiding ideology of national development and security, and to strive to promote information science and information work to play a new and greater role within the framework of national innovation, sharing, development, and security.

In the early days of the People's Republic of China, according to the needs of national construction and scientific and technological development, the information work established on the basis of scientific and technical literature played an important role in the development of science and technology and socialist construction. In 1964, the China Society for Scientific and Technical Information was established, which greatly guided and promoted scientific and technical information work. After the reform and opening up, the prosperity of humanities and social sciences research brought attention to social science information. In 1986, the China Society for Social Sciences Information was established, marking that China's social science information science and industry entered a new stage of development. China's social science information research has gradually become an important field of information science research.

Since the late 1970s, information science has gradually developed as a discipline in China, with an important symbol being the development of information science education. In 1978, information science education was initiated.

The New Orientation and New Understanding of the Information Science and Information Work in the New Era

National Science Library, CAS, Beijing 100190
University of Chinese Academy of Sciences, Beijing 100049

Some Notes and Thoughts of the "2017 Forum of the Information Science and Information Work"

Abstract: [Purpose/significance] This paper aims at exploring the connotation of the information science and information work in the new era, and rethinking the new orientation of the information science and information work. [Method/process] This paper summarized the "2017 Forum of the Information Science and Information Work", and explained the Nanjing Consensus of the Information Science and Information Work, the main features and overall trends of the future development of the information science and information work. [Result/conclusion] In changing times, the information science and information work must be transformed and changed to breakthrough the tradition paradigm of the subject based on documents. The subject boundary of the information communication should be broadened, and the new core capability and the competitive force of the information science and information work should be developed by taking the information analysis as the core method, the IT development achievements as the means, the big data as the core capability, and the data

science as a new growth point.

Keywords: information science information work information analysis big data data science

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