

Multiple Dimensions of Library Representation in Recent Science Fiction Literature: Analysis and Implications

Authors: Li Zhe, Tong Boxuan, Yang Xinya, Li Zhe

Date: 2023-08-28T00:00:00+00:00

Abstract

Purpose/Significance With the continuous advancement of technology, library construction must respond to the transformations in future information management and knowledge dissemination. As a genre that inspires contemplation of the future, the library imagination in science fiction literature holds significant reference value for the future development of real-world libraries. This paper aims to explore the implications of library depictions in recent science fiction literature for future library construction.

Method/Process Drawing upon science fiction databases such as the “CSFDB Chinese Science Fiction Database” and the “Jiulong Project”, this study retrieves science fiction works containing relevant themes or plotlines. Through systematic analysis of the library settings within these works, it conducts an in-depth examination of the new technologies, novel social services, public spatial environments, and civilizational and cultural values they present, in order to identify potential strategies applicable to future library construction.

Results/Conclusion The study concludes that the library imagination in recent science fiction literature primarily revolves around such dimensions as technological revolution and media innovation, public space and social services, information integration and knowledge dissemination, and cultural heritage and civilization preservation. Future library construction can creatively transform these literary speculations by focusing on the relevant domains, thereby enabling future libraries to play a more active role in modern society and transforming them into sanctuaries of knowledge and cradles of innovation.

Full Text

A Multi-Oriented Analysis and Implications of Library Writing in Recent Science Fiction Literature

Li Zhe^{1,2}, Tong Boxuan³, Yang Xinya²

¹Chongqing University Library, Chongqing 400044

²Institute for Advanced Studies in Humanities and Social Science, Chongqing University, Chongqing 400044

³Department of Chinese Language and Literature, Chongqing University, Chongqing 400044

Abstract

[Purpose/Significance] With continuous technological advancement, library construction must address future transformations in information management and knowledge dissemination. As a genre that inspires contemplation about the future, science fiction's imaginative portrayals of libraries offer valuable reference points for the future development of real-world libraries. This paper aims to explore the implications of library depictions in recent science fiction literature for future library construction.

[Method/Processes] Drawing upon science fiction databases such as the "CSFDB Chinese Science Fiction Database" and the "Jiu Long Project," we retrieved relevant works featuring library-related themes or plotlines. By systematically analyzing their library settings, we conducted an in-depth examination of the new technologies, novel social services, public spatial environments, and civilizational-cultural values they present, identifying potential strategies applicable to future library construction.

[Result/Conclusion] The study finds that recent science fiction literature's library imagination primarily revolves around four dimensions: technological revolution and media innovation, public space and social services, information integration and knowledge dissemination, and cultural heritage and civilization preservation. Future library construction can creatively transform these literary speculations by focusing on these relevant domains, enabling future libraries to play more active roles in modern society and establishing them as temples of knowledge and cradles of innovation.

Keywords: science fiction literature, future libraries, library construction, technological innovation

This research is supported by the National Social Science Fund of China Western Project "Imagination of Human Community in Century-Long Chinese Science Fiction Literature" (Project No.: 21XZW001).

Author Information: Li Zhe, Librarian, MA, Corresponding Author, E-mail: lizhetumu@cqu.edu.cn; Tong Boxuan, PhD Candidate; Yang Xinya, Research Librarian, PhD.

As a genre that thrives on technological progress, science fiction literature often depicts a series of strange yet inspiring imaginative spaces by projecting real-world scientific theories and technological developments into the future or extending them to extremes. Through its creative shaping of future landscapes and civilizational destinies, science fiction, beyond its popular appeal as genre literature, has become an important vehicle for exploring human self-perception at multiple scales, the impact of future technologies, and the fate of civilization. According to the renowned science fiction theorist Darko Suvin, science fiction is a genre characterized by “cognitive estrangement,” aiming to break through readers’ familiar boundaries of reality and project a possible heterogeneous reality [1]. Science fiction guides readers to step outside existing frameworks and interrogate the real world from entirely new cognitive perspectives by setting backgrounds, spaces, or events that differ from or are relatively unfamiliar to real life.

In the spatial settings created by science fiction literature, libraries have always occupied a significant place. As institutions for storing and disseminating social information, knowledge, and culture [2], libraries in science fiction are often regarded as infrastructure for future technological progress, important symbols of knowledge iteration, and crucial repositories for preserving the flame of civilization in times of crisis, closely connected with themes of time and space, history, ethnicity, society, civilization, and culture. Science fiction writers share their visions of the relationship between knowledge inheritance, human civilization, and future technology by shaping diverse library spaces.

1 Related Research Progress and Methods

Scholarly attention has been paid to the implications of library depictions in artistic works for future library construction.

1.1 Library Research in Literary Works

Existing research has taken Hugo Award and Nebula Award-winning novels (1990-2020) as samples, classifying library images through analyzing library-related plots and summarizing several library construction experiences. However, these studies have focused on Western science fiction novels, neglecting the rich imagination in recent Chinese science fiction creations, especially short and medium-length works. Moreover, they have stopped at plot summary and library image classification, failing to grasp the settings and functions of libraries in these works holistically [3].

1.2 Library Research in Film and Television Works

Research on libraries in film and television works often begins with genre or type (such as Hollywood blockbusters, Japanese and Korean dramas, etc.) [4] or classification of libraries' images and functions [5] to discuss the overall image and artistic role of libraries in various film and television works, without specifically focusing on science fiction film and television or the associated construction of "future libraries."

This paper strives to break away from flattened plot analysis and image 梳理 patterns, considering both Chinese and foreign works, and focusing on library settings and functions in recent domestic and international science fiction works. On this basis, it introduces an interdisciplinary perspective, attempting to discuss the interaction between science and technology and knowledge capital and their shaping power on future social forms, thereby reflecting on the possible evolutionary directions of libraries as physical entities against the backdrop of media revolution and information explosion.

1.3 Research Objects and Samples

This paper's research objects primarily consist of recent Chinese and foreign science fiction creations, also involving some classic works, covering both novels and short stories. The Chinese science fiction creations involved were mainly retrieved through databases such as the "CSFDB Chinese Science Fiction Database" [6] and the "Jiu Long Project" [7]. English science fiction creations were primarily based on recent Hugo Award and Nebula Award-winning works, from which works with explicit "library" consciousness were further selected, totaling 31 representative works:

2 Future Libraries Facing Technological and Media Revolution

In recent years, facing the overall impact of the new technological and media revolutions, the image of libraries in science fiction creations has gradually shifted from the classic classical image that dominated earlier works to more diverse technological appearances. Science fiction writing about libraries has also formed distinct creative orientations around issues such as media innovation, libraries' public attributes and social services, knowledge integration and iteration, and the construction and preservation of civilizational communities.

In his novel "The Poetry Cloud" (2003), the famous science fiction writer Liu Cixin depicts a staggering data storage device constructed by a "god-level civilization" at the cost of exhausting the entire solar system's energy—the "god-level civilization" uses this to preserve and compute all possible permutations and combinations of human text, resembling a nebula, hence the name "Poetry Cloud" [8]. The magnificent imagination of using big data systems as information storage methods in early 21st-century science fiction has gradually become

reality today. Currently, the application and promotion of new technologies such as big data, virtual reality, and artificial intelligence pose comprehensive challenges to the spatial and information management models of classical libraries that primarily store and protect traditional paper media. Science fiction literature confronts this challenge, unfolding library writing in different postures.

2.1 Technological Optimism as the Main Axis, Envisioning New Solutions for Future Library Construction

“The so-called ‘user-driven’ smart library must involve librarians using advanced intelligent technology to more efficiently, accurately, and deeply meet users’ service needs, thereby achieving an ideal service state” [9]. “The Librarian” [10] envisions future libraries where artificial intelligence serves as librarians, providing personalized services through intelligent analysis and other technical means. In this process, AI can also express its own “emotions” through service provision. “A Library of One’s Own” [11] unfolds entirely from a librarian’s perspective. In the novel, the future library is located underground, combining electronic storage with paper book storage, equipped with simulated natural systems and life support devices, implementing zoned management. Through unified system scheduling and robot assistants, a single person can manage an entire library, maximizing resource utilization.

2.2 Different Perspectives on the Future of Libraries and Print Media

Against the backdrop of rapid information technology and digital economy development, “virtual libraries” have risen rapidly and gradually become a hot topic in future library construction. However, some science fiction works sound the alarm about knowledge monopolies and cultural forgetting resulting from the disappearance of service-oriented physical public libraries. In the near-future world of “Disappear, Books!” [12], residents are assigned to different living areas based on wealth, age, and work content, with daily life controlled by the “Supernet,” from which all information must be obtained. The protagonist is employed by Scan Corp, a subsidiary of the Supernet giant, which sends employees to find all paper books on the market, purchases them at high prices, and scans their entire content into the Supernet system using “smart glasses.” The company claims that scanned publications will be freely available online, but in reality, this creates a monopoly on knowledge. Similarly, the future libraries envisioned in “Wandering the Firmament” [13] and *Theory of Bastards* [14] have also moved toward virtualization and digitization, where people can access books through virtual reality technology. Although library virtualization provides convenient access to knowledge, it also alienates people from physical books and libraries as public spaces. People in the stories begin to neglect the tactile experience and personal engagement that paper books embody, causing some unique cultures and traditions to gradually fade away. “Future Library” [15], inspired by the real-world “Future Library” project (which plans to plant a forest in Norway and, over the next 100 years, invite one writer each year

to write a work whose content will not be revealed; after completion, the work will be sealed in Norway's best library until, 100 years later, the works will be printed using paper made from that forest's wood and officially published), emphasizes the connection between "books" and paper media, as well as natural ecology, calling for the preservation of the possibility of reading paper books in the big data era.

It is evident that in the eyes of some science fiction writers, the current digital wave and the overall trend of "de-materialization" in knowledge storage will bring about serious social issues: the virtualization of knowledge storage, highly intertwined with technology and capital, will inevitably lead to knowledge monopolies, further exacerbating social stratification and the overall forgetting of certain traditional cultures. Although modern society's knowledge production efficiency and update frequency have gradually exceeded the capacity of paper media, and storage technology updates and media iteration are inevitable, science fiction literature, while envisioning a bright future, still uses its generic attributes as "future prophecy" and "realistic fable" to warn of potential knowledge crises behind technological optimism, thereby alerting library construction in real-world contexts.

3 Future Libraries as Public Spaces and Social Services

Beyond basic knowledge and material storage functions, libraries, as important public spaces and material platforms, also play distinct social service roles. In the current context of technological revolution, libraries' social service functions as part of urban space have gradually attracted the attention of science fiction literature.

3.1 Service-Oriented Library Concepts for Future Urban Spaces

"Cold Night Walker" [16] uses the story of a poet who died young as a wedge to outline a vibrant reader community that still meets regularly in the information age. An obscure poetry collection catches the attention of "me," a librarian, and through a borrower, "I" am able to join the poet's reader club, thereby uncovering the reason for the poet's obscurity: the poet's work did not gain widespread attention during her lifetime, with only one editor appreciating her poetry. The two maintained a simple friendship through years of correspondence. After the poet's death, the editor decided to compile a poetry collection to mourn her friend. However, knowing that promoting the collection through media and public channels would inevitably highlight the poet's personal experiences as sensational gimmicks to boost sales, the editor self-published the collection and sent it to friends she knew. Year after year, readers who loved these poems gradually formed similar clubs, reading and spreading her works—the poet's collection "from one person's bookshelf to another's, from one library to another" [16]. The story consciously reflects on promotion and hype in the information age, calling for a reader community formed purely through reading and appreciation, with the library providing precisely the material entity and

public space platform for exchange. *A Song for a New Day* [17] warns from the opposite perspective about the possible loss of libraries' social functions in the information age: in the novel, people obtain and share information through virtual reality technology, no longer significantly relying on traditional libraries and books, and libraries' role as public spaces is consequently lost.

3.2 Library Construction Possibilities in Extreme Environments or Near-Future Perspectives

In addition, relatively imaginative concepts exist regarding future libraries' social functions beyond general understanding:

"Apocalypse Library" [18] envisions the social functions libraries might undertake in extreme situations: the story is set in a small-town library after the apocalypse, where the well-equipped library rescues and shelters a father and daughter, and the story unfolds from there. In "No. 127 Middle Yancheng Road" [19], the community library is converted from an airship manufacturing plant and, due to its originally built-in central control system and data analysis system, is able to provide personalized reading services for community residents after renovation, thereby gaining the ability to observe human preferences and record borrowers' growth:

After several years of preparation, templated buildings were erected, residents moved into the community, and convenience facilities poured in together. No. 127 Middle Yancheng Road was also transformed into part of community life. Its portion as a central control management system was awakened and transformed together into a convenient smart library system.

The library "No. 127 Middle Yancheng Road" in the novel, as a system subject with independent consciousness, not only undertakes the basic information storage function of a library but also highlights its public cultural service function as a "community library." Due to the emergence of its self-awareness, it possesses humanized characteristics and thus the possibility of providing personalized services. "The Midnight Library" [20] focuses on the spiritual healing value of libraries and books through literary techniques: after experiencing a series of setbacks including loneliness, unemployment, and the death of a beloved pet, the despairing protagonist Nora decides to commit suicide. At the boundary between life and death, Nora's consciousness arrives at a library where each book records a different life derived from each different choice she could have made. With the help of the librarian, she is able to touch the threads of her different lives. The setting where "each book is a parallel universe" is not only a profile of libraries' storage attributes but also a call, in the technological age, for libraries to develop their social attributes and public service functions of "humanistic care."

Thus, "smart service is the core of smart library construction. Under the new era library development concept of 'service is king,' service is the top priority of library work" [21]. The library social attributes highlighted in recent science

fiction creations mostly contain implications of resisting excessive technologization and compartmentalization. These works call on libraries as physical entities to fully develop their social service functions, mobilize various technological approaches to achieve humanized and personalized experiences, and use libraries' public spaces to provide readers with platforms for reading exchanges, connecting with each other, and even self-discovery and self-healing.

4 Future Libraries for Information Integration and Knowledge Dissemination

The famous writer Jorge Luis Borges, in “The Library of Babel” [22], envisioned an eternally existing library: the books collected in this library are interpretations of world order and all knowledge. The omnipotent library corresponds to the infinite universe, encompassing all books, all possible permutations and combinations of languages and texts. These infinitely possible languages and texts constitute codes that explain the secret order of the world.

Borges' literary writing with religious overtones is precisely based on libraries' most core function—information integration and knowledge dissemination. Science fiction literature's library writing naturally cannot bypass this core function, and in science fiction's soaring imagination, the importance of libraries as material entities for information aggregation and knowledge dissemination has been effectively demonstrated.

4.1 Continuous Information Collection and Knowledge Dissemination Through Future Technologies

Blackout [23] tells the science fiction story of three Oxford University historians in 2060 who travel back to World War II through time travel to experience history firsthand. As their research progresses, the three historians first realize subtle differences between their experiences and historical records, then encounter portal malfunctions that trap them in the World War II timeline, forcing them to struggle for survival, while their actions also steer historical processes in different directions. “Libraries” occupy a significant position in the story: as historians, the three protagonists still rely on libraries and books as important channels for obtaining knowledge in the story's “near-future” world. Before traveling to the past, the historians need to fully understand the historical era they are about to enter to ensure they can integrate into that society. Libraries, as treasure troves of historical archives, provide them with background materials and daily life details from the World War II period, becoming their source for learning about historical events and social customs of that time. Similarly, in World War II-era London, the protagonists use books, newspapers, archives, and other materials recording historical events of the period to master all aspects of social life at that time. These documentary resources resemble a mobile library, providing enormous help to the scholars. *The Ministry for the Future* [24] is a science fiction work themed on climate change. The story focuses

on a virtually constructed global organization—the “Ministry for the Future”—whose purpose is to protect Earth’s ecosystems and coordinate human measures to respond to climate disasters. Members of the “Ministry for the Future” use knowledge and skills from different fields to address issues concerning human survival and development on a global scale, while libraries and books play important roles as knowledge storage and dissemination in the novel. The library mentioned in the book is a resource-rich knowledge center and an important base for “Ministry for the Future” members to complete their missions. In this library, people can find books and materials on climate science, political strategy, economic development, technological innovation, and many other fields. Although *The Player of Games* [25] does not directly involve important library settings, the “Culture series” by science fiction writer Iain M. Banks, in which it is included, repeatedly mentions that future intelligent libraries play crucial roles in maintaining civilizational order and knowledge dissemination. These highly intelligent entities possess vast knowledge repositories, can interact with humans, answer questions, and provide convenient channels for knowledge acquisition. Although the core theme and setting of *The City in the Middle of the Night* [26] do not directly focus on libraries and books, the library writing in the work also provides support for world-building, plot advancement, and character development to a certain extent. The story takes place on a dying planet divided into eternal day and night hemispheres due to the planet’s rotation, with a city named Argelan standing at the boundary between day and night. In this work, knowledge and information are important markers of power and control, while libraries are treasure troves storing this knowledge. Argelan’s library is a valuable source of knowledge, collecting all information about this world, which is crucial for understanding the ecology, social composition, and historical background of this strange planet.

Chinese science fiction writer Yang Feng’s “Cloud Travel Notes • The Collector” [27] is more like a kind of “meta-science fiction” writing compared to the “grand settings” mentioned above. The work has the flavor of “urban legends,” telling the story of a mysterious “C” who knows everything, like a mobile database. Whenever the protagonist has new writing inspiration and consults “C,” “C” can always find some novel that has already told a similar story. “C’s” identity is a mystery, resembling both an omniscient God and a highly sophisticated database, inevitably triggering the author’s reverie:

“I even had a dream in which I saw Borges’ Library of Babel, and C was entrenched deep in the library, holding the Book of Sand that symbolizes infinity, blinking billions of compound eyes densely covering the vault like a nebula, examining the text on each page of the book and recording it in a gigantic head” [27]. The online science fiction “Escape from the Library” [28] serialized by Die Zhiling tells a story about the “library” in an alternate world: the protagonist Yue Xingwen was writing a paper in the library until late at night, accidentally left his phone in the library, and when he returned to find it, was unexpectedly recruited by the library system, stepping into an escape game called *Escape from the Library*. The library in this other dimension adopts a credit system,

where students entering the library take required and elective exams to accumulate credits. Required courses can be retaken once if failed; if the makeup exam is failed, the student dies in the real world. After passing all required courses and earning 100 credits, one can return to the real world. The other-worldly library is all-encompassing, highlighting the interdisciplinary attributes of libraries through its required and elective course selection model.

4.2 Critique of the Entanglement of Future Technology, Knowledge, and Power as Represented by Libraries

While imagining future libraries or “library-like” devices greatly extending their basic functions of knowledge storage and information integration through revolutionary information storage and dissemination technologies, science fiction literature also keenly perceives the complex entanglement of technology, knowledge, and power that may occur in the future:

A Memory Called Empire [29] is set against the backdrop of a vast interstellar civilization—the “Teixcalaanli Empire.” After the accidental death of the previous ambassador, Yaotlek, Lsel Station sends a new ambassador, Mahit, to the imperial capital “The City.” Her mission is to investigate the truth behind her predecessor’s death and employ diplomatic means to prevent the station from being annexed by the empire. Lsel Station has “living memory” implantation technology, where people can store the memories of the deceased in their own brains through memory transplantation to better complete tasks. This technology expands the media and channels for information storage, but at the beginning of the investigation, Mahit’s memory device malfunctions, losing the help of the previously implanted Yaotlek memories. After this, Mahit can only rely on the empire’s archives, libraries, and other facilities to find clues to her predecessor’s mysterious death. The empire’s information storage institutions are also highly complicit with political power, making Mahit’s investigation journey full of twists and turns.

Similarly, in *The Collapsing Empire* [30], although no scenes similar to traditional “libraries” are explicitly described, some groups or characters in the novel possess the ability to collect and process information, thus being connectable to the concept of “libraries” to a certain extent. These groups and characters include intelligence agencies within the empire, politicians, businessmen, and other interest groups, who obtain information through various channels and resources and use it for political maneuvering, decision-making, control, and competition among themselves. *The Library at Mount Char* [31] is not strictly science fiction, but the novel similarly regards the library as the crystallization of all knowledge. After the original library owner, God the “Father,” dies, the librarians compete for control of the library by each learning a specific category of knowledge. Knowledge here points not only to specific professional categories but more to the power of “control” and “domination.”

The continuous emergence of technological events in recent years has highlighted

the highly embedded relationship between technology and social material production and cultural production, while increasingly fierce technological “decoupling” directly reveals the existence of “technology-hegemony.” “The accumulation of knowledge and skills, the accumulation of the general productive forces of social intelligence, is absorbed into capital in opposition to labor, thus appearing as an attribute of capital” [32]. Marxist political economy holds that capital is a certain social relationship that can be embodied in some object and endowed with social attributes. When capital in the information society transforms into “knowledge,” “knowledge” inevitably becomes “capitalized,” thereby integrating with the entire unequal global political and economic order [33]. In the science fiction literature listed above, especially in recent Western science fiction works, vigilance against the power and capital logic behind knowledge seems to have become an unspoken consensus among writers. Libraries, as important carriers of “knowledge,” are represented in some works as symbols of power, which should not become the ultimate goal of future library construction. Libraries’ collection and storage of information and knowledge should be based on social welfare and the continuation of civilizational communities. They should actively use libraries as public platforms to carry out important tasks such as social and cultural education, protection of national cultural resources, and popularization of public concepts under the 加持 of various new technologies, allowing knowledge to serve the public.

5 Future Libraries for Cultural Heritage and Civilization Preservation

Science fiction literature has distinct attributes of “thought experiments,” that is, discussing the rationality and limits of experiences, conventions, and institutions that are taken for granted in the real world by creating alienated worlds, cosmic landscapes, or extreme scenarios with a sense of distance. In science fiction creations, besides serving as providers of information and clues to advance plot development, libraries are often placed in extreme environments (such as apocalypses, moments of major historical transformation, world wars, interstellar travel, etc.). In extreme scenarios, libraries’ basic functions in the real world, such as storing information and providing public services, are constrained by the environmental settings of the text and difficult to 发挥, making their connotation as civilizational symbols responsible for protecting cultural heritage and civilizational resources prominent in science fiction works.

5.1 Possibilities for Cultural Heritage Preservation in Future Extreme Conditions

A Canticle for Leibowitz [34] portrays a library image with classical colors, highlighting the positioning of libraries as civilizational preserves: in the twentieth century, human civilization was destroyed by nuclear war. The surviving humans hated wisdom and civilization so intensely that they burned books and hunted scholars. In contrast, a small team of monks risked their lives to trans-

port surviving books to the Leibowitz Abbey in the desert. The monks of Leibowitz Abbey 坚守 a duty unchanged for millennia, preserving the flame of civilization for humanity. Human civilization continuously experiences cyclical reincarnation, while Saint Leibowitz Abbey, as a library preserving humanity's last flame *The Memorabilia*, develops complex relationships with various forces over the long passage of time. Issues such as knowledge and power, royal and religious authority, technological revival and technological abuse all become key concerns and discussions in the novel. "The Librarian and the Robot" [35] is set against the backdrop of interstellar war. In the future, humans have widely colonized space, and interstellar wars between different star systems ultimately destroy most civilizations. The protagonist converts robots originally used for war into book-collecting robots and returns to Earth with them, collecting relics of human civilization at the origin of human civilization and preserving these civilizational heritages using the remaining libraries on Earth as platforms. *Bannerless* [36] also chooses a devastating disaster as its background. The story takes place on a future Earth destroyed by environmental disasters. Climate change has created typhoons that regularly strike the California coast, causing the region to regress nearly entirely to an agricultural society. To control population, the region has adopted strict birth control measures. The protagonist, Enid, is an investigator who, with her partner Thomas, is called to the Pasadena community to investigate a suspicious death. In the novel's post-disaster world, libraries become key venues for preserving knowledge. Although the process of civilization has suffered irreversible damage, libraries remain valuable resource centers, preserving various types of information on pre-disaster civilization's technology, culture, and traditions. The two protagonists use libraries to obtain needed information during their investigation. Additionally, libraries in post-disaster society continue to play a role in providing public services: libraries provide infrastructure for learning knowledge for people of all age groups. Notably, although the development of digital and internet technologies is limited due to climate disasters, the post-disaster world has already begun to recover vitality in more "natural" ways: physical books and archives in libraries have once again become important channels for knowledge acquisition. This also highlights the vulnerability of digital media in responding to extreme environments and the importance of preserving traditional knowledge and information transmission methods.

5.2 Lost Civilizations and Local Knowledge Preservation with Reference to Anthropology and Archival Science

Some science fiction creations take anthropology and archival science as references, either by envisioning an advanced civilization using rich technological means to collect information and cultural heritage of other civilizations as the main thread, highlighting the important role of libraries as physical entities in preserving cultural and civilizational resources; or by setting up a lost world with libraries as important carriers for preserving lost civilizations, guiding protagonists to appreciate neglected "local knowledge":

In the short story “Give the Family My Love” [37], an alien civilization with advanced technology establishes a “library” to preserve archives, materials, and knowledge for all “conscious” life in the universe. The alien civilization can also understand the spiritual connotations of other civilizations and communicate with them by collecting, reading, and understanding these civilizational materials. The “alien library” in the story expresses the author’s grand hope of using libraries as physical entities as intermediaries to achieve mutual learning between civilizations through reading and understanding other cultures’ resources and knowledge. “Winter Night Traveler” [38] sets an alien civilization called “Bookmakers,” which uses images and living beings’ own memories as knowledge storage devices and transmission media, as a “mirror image” of human civilization, using the complex entanglement between knowledge, power, and capital encountered by the Bookmaker civilization in its technological development and social progress as a metaphor for human civilization’s knowledge situation.

Erika Swyler’s novel *The Book of Speculation* [39] is a mysterious story centered on family history and libraries. The protagonist, Simon Watson, is a young librarian who accidentally obtains a mysterious book bearing his grandmother’s name, and the story unfolds from there. In this novel, libraries and books play crucial roles as important venues for preserving history, disseminating knowledge, and providing clues. Simon’s profession allows him to access a large number of books, thereby demonstrating his passion for reading and excavating history, books, and his family’s past. To some extent, the library becomes a sanctuary sheltering Simon, allowing him to focus on finding answers to his family’s puzzles. Overall, the novel emphasizes the importance of libraries and books in discovering and disseminating knowledge, revealing historical truths, and changing destinies. In this work, libraries and books are not only important venues for preserving and disseminating knowledge but also bonds connecting past, present, and future, showing readers the potential power of books to unravel life’s mysteries.

The Barrow Will Send What It May [40] is part of Margaret Killjoy’s Danielle Cain series, with strong mystical and fantasy colors. In the story, Danielle and her team arrive in a small town where there is a mysterious library run by anarchists and residents claiming to have “returned from the dead.” Danielle encounters various bizarre events and interventions by mysterious forces in the town. In the process of investigating the causes of the mysterious events, they discover clues about this mysterious library—the library contains the roots of the town’s mysterious phenomena and related knowledge. The library setting in the story demonstrates from one side the library’s protection of characteristic culture and rare resources.

5.3 The Information Value and Cultural Significance Revealed Through “Time Travel”

Some science fiction works place their stories at major transformative moments in human history, using technological imaginations such as time travel to lead readers back to the past or shuttle through interlaced temporal spaces of history and reality, experiencing the cultural connotations carried by libraries and books in temporal-spatial transitions:

The Last Library [41] uses time travel to lead readers through painful cultural disaster moments in human history, from Qin Shi Huang’s burning of books and burying of scholars, to the burning of the Library of Alexandria by Christians, to the looting of the Alamut Library by Mongol armies. The novel’s protagonist takes saving civilization and culture as his mission, moving through the vortexes of history to rescue libraries from various historical periods. This core plot highlights libraries’ cultural preservation functions and their symbolic status as preservers of human civilization.

Cloud Cuckoo Land [42] uses the fictional place “Cloud Cuckoo Land” from the ancient Greek playwright Aristophanes’ comedy *The Birds* as its blueprint, fictionalizing a mythological legend with this title in the story. This myth runs through the entire novel, spanning 600 years from the Byzantine era to a possible future space starship era, giving different people strength and wisdom in four complexly intertwined main storylines. The entire story poetically demonstrates the power of “libraries” and “books”—they provide people with bonds to communicate with past, present, and future, just as the book says: “Books are places where the living store memories, a way for memories to remain when souls travel far.”

As a genre with “civilizational vision” and adept at constructing imaginative “civilizational forms” from a technological perspective, science fiction literature envisions the important significance of future libraries for civilizational communities in literary strokes. Since ancient times, civilization’s development has been accompanied by various technological advances, while libraries, as warehouses of knowledge, have preserved civilization’s collective memory and become symbols of civilization in various literary works. From the preservation of ancient papyrus and copied manuscripts to the application of modern digital technology, technological development has continuously led changes and updates in civilization’s recording forms. Libraries in the information age have already shifted from traditional paper book storage models to highly digitalized and internet-based service models. It can be said that libraries, as bridges of knowledge, connect past, present, and future civilizations, facilitating possibilities for dialogue beyond time and space.

6 “The Future is Already Here”: Implications of Recent Science Fiction Literature for Future Library Construction

Although science fiction literature is not equivalent to “future prophecy” and is difficult to evaluate with strict technical logic regarding its envisioned future worlds or extreme situations, it is adept at using its keen sense of the times and unique technological vision to glimpse the distant prospects of technological development: Hugo Gernsback’s 1911 publication *Ralph 124C 41+* successfully predicted civilian technologies now taken for granted, such as solar energy, radar, tape recorders, and video chat; Philip K. Dick’s *Nick and the Glimmung* (1966) envisioned an alien that could “print” any object it saw, foreseeing today’s widely used 3D printing technology... From this perspective, the technological futures envisioned by science fiction literature may also serve as “mirrors” and “fables” of “reality,” providing necessary inspiration and warnings for current and future library construction. Meanwhile, the library imagery in science fiction literature also represents public expectations for libraries. Excavating and analyzing the settings, functions, and meanings of future libraries in science fiction works can help library professionals stimulate innovative thinking, apply some of these implications and visions to actual library planning, management, and services, and promote the continuous development of the library cause. In summary, through 梳理 recent science fiction literature’s library writing, at least four implications can be identified:

6.1 Taking Information Storage and Knowledge Integration as the Core Focus, Continuously Improving Information Storage Technology

One of libraries’ core functions is providing information resource services. In the wave of the new technological revolution, the speed of human knowledge iteration continues to accelerate, with new knowledge and information constantly emerging, correspondingly increasing demands for libraries’ information storage capacity and ability to provide information resource services. Recent science fiction literature’s library writing still focuses considerably on libraries’ information storage functions, envisioning comprehensive upgrades to supercomputers, cloud computing, and cloud storage technologies to contemplate knowledge preservation in future society. Modern information society takes information resources as core competitiveness; future library construction should still take information storage and knowledge integration as the core focus, highlighting libraries’ functional attributes as knowledge integration platforms, and jointly upgrading libraries’ storage and integration capabilities through technological upgrades and related industrial upgrades to better respond to the new round of knowledge renewal triggered by the new technological revolution.

6.2 Upholding Social and Public Attributes While Guarding Against Knowledge Monopolies

Beyond imagining future libraries improving information storage and knowledge aggregation capabilities through new technologies, science fiction literature

also demonstrates keen contemporary sensitivity to the serious consequences of knowledge being 裹挟 by non-public welfare technologies and monopolistic capital, thus showing vigilance in some texts against possible monopolization conditions of libraries and the knowledge culture they represent. Contemporary information society development has facilitated information access while also creating “information cocoons” and “digital divides” to a considerable extent. Future library construction must be “people-oriented, respecting and safeguarding everyone’s equal right to access knowledge and information” [43].

Libraries should actively advocate the concepts of “open source” and “open access,” strengthen social service awareness, promote the dissemination of public domain knowledge, and create broad social effects. Under the increasingly popular background of digital technology, future libraries should 致力于 achieving online-offline integration, expanding service fields, and breaking users’ temporal and spatial limitations in accessing resources by building online platforms. Additionally, libraries should use the internet to expand cooperation with other cultural and social institutions to share resources. For paid resources, libraries should purchase sufficient licenses to solve reading barrier problems and safeguard the public welfare nature of knowledge. At the same time, libraries should actively 发挥 their advantages as physical entities, strive to build public discourse platforms, actively carry out in-depth cooperation with experts and scholars in various fields, disseminate knowledge, popularize the scientific spirit, and create a fair and just knowledge environment.

6.3 Adhering to a “Balanced Virtual-Physical Approach,” Vigorously Expanding Libraries’ Service Scope and Awareness as Social Public Spaces, and Enhancing the Possibility of Humanized and Personalized Management Under New Technology Support

The digitalization trend of information carriers and storage methods, while breaking temporal and spatial limitations in accessing resources and improving libraries’ resource service scope and efficiency, has also considerably weakened the cultural significance and service functions carried by libraries’ physical spaces. Some science fiction works, based on imagining the assistance that future AI’s possible precise human-computer interaction models could provide for library service personalization and the importance of maintaining physical libraries for daily life and reader community construction, express concerns about libraries’ comprehensive virtualization and digitization while imagining technologies such as “metaverse,” human-computer interaction, and virtual reality reshaping libraries’ physical forms.

“Libraries have developed for thousands of years, experiencing the traditional library period focusing on physical collections, the digital library period where digital carriers prevail and network-based services are provided, and are currently 致力于 the construction and development of smart libraries with humanized and personalized services” [44]. Future library construction should “balance virtual and physical,” develop equally in both physical and digital domains, and build a

more diversified, intelligent, and personalized service system aimed at meeting the needs of different groups. As social public spaces, libraries should continuously innovate service forms to meet diversified needs, holding people-oriented rich activities for reader groups of different ages, interests, and cultural levels, such as lectures, reading clubs, and reader group social activities. Through these content-rich, interactive service projects, libraries can become important carriers for interpersonal communication and cultural dissemination.

At the same time, with the support of possible future new technologies, future libraries should 着力 improving personalized service levels, using big data and artificial intelligence technologies to provide readers with reading recommendations more aligned with personal preferences, and using “Internet of Things” technology to achieve intelligent borrowing and returning and automatic guidance, making libraries more convenient and efficient.

6.4 Elevating Libraries’ Self-Positioning, Focusing on Excellent Cultural Resource Preservation and Cultural Heritage with Civilizational and Global Vision

The interconnection of civilizations is not only envisioned by science fiction literature but is also an inevitable trend in the future development of human society. Libraries are not only treasure houses of knowledge but also important carriers for protecting and inheriting excellent cultural resources. In the era of global cultural exchange and mutual learning, leading future library development with global and civilizational vision, focusing on collecting excellent cultural resources from around the world, and 致力于 the protection and dissemination of world cultural heritage will be important missions for future libraries.

Future libraries should focus on the collection, organization, and preservation of cultural resources, striving to promote cultural preservation work with civilizational and global vision that pays attention to excellent cultural resources of different ethnic groups and regions. Libraries should use digital technology to digitally protect cultural resources including books, manuscripts, and artworks, forming rich databases with literature, images, audio, and other elements as main content, preserving footprints and silhouettes for civilizational development.

At the same time, future libraries should 着力 activating cultural heritage and promoting cultural inheritance and development. With the support of new technologies, future libraries can hold exhibitions, lectures, and research activities unconstrained by temporal and spatial conditions, actively excavating the historical stories and humanistic values behind cultural heritage and disseminating them to readers. On this basis, they should cooperate with domestic and foreign research institutions and universities to promote global cultural resource sharing and jointly contribute to the development of human civilization.

References

- [1] Darko Suvin. *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*[M]. Translated by Ding Suping, et al. Hefei: Anhui Literature and Art Publishing House, 2011.
- [2] Wu Weici. *Introduction to Library Science (Revised Second Edition)*[M]. Beijing: National Library of China Publishing House, 2008.
- [3] Liu Yunong. A Glimpse of the Future: Reflections on Libraries and Related Issues in Science Fiction Literature[J]. *Journal of Academic Libraries*, 2022, 40(03): 56-62. DOI:10.16603/j.issn1002-1027.2022.03.009.
- [4] Tao Rongxiang. Analysis of Library Phenomena in Film and Television Works[J]. *Journal of the National Library of China*, 2016, 25(06): 38-43. DOI:10.13666/j.cnki.jnlc.2016.06.006.
- [5] Jin Rufan. Libraries in Film and Television Works[J]. *Home of Drama*, 2016(23): 89-91.
- [6] Chinese Science Fiction Database. CSFDB[DB/OL]. <https://csfdb.scifi-wiki.com/>.
- [7] Jiu Long Project. Chinese Science Fiction Historical Publications Digital Archive[DB/OL]. <https://www.sfjiulong.org/>.
- [8] Liu Cixin. The Poetry Cloud[J]. *Science Fiction World*, 2003(03): 6-16.
- [9] Chu Jingli, Zhang Guorui. Librarian Capacity Building for Smart Libraries[J]. *Library Theory and Practice*, 2022(04): 1-3. DOI:10.14064/j.cnki.issn1005-8214.20220315.001.
- [10] Yao Renjie, Robert Dawson. The Librarian[J]. *World Science*, 2019(06): 62-63.
- [11] Zhong Tianxin. A Library of One's Own[J]. *Oriental Outlook*, 2011(10): 34-35.
- [12] Robert Sheckley. *Disappear, Books!*[M]. Translated by Song Shuming. Tianjin: Tianjin People's Publishing House, 2021.
- [13] Hao Jingfang. *Wandering the Firmament*[M]. Nanjing: Jiangsu Phoenix Literature and Art Publishing House, 2016.
- [14] Audrey Schulman. *Theory of Bastards*[M]. New York: Europa Editions, 2018.
- [15] Liu Penglin, Geng Hui. Future Library[J]. *Yilin*, 2023(03): 127-142.
- [16] Xia Jia. Cold Night Walker[N]. *Guangming Daily*, 2015-06-05(14).
- [17] Sarah Pinsker. *A Song for a New Day*[M]. New York: Berkley, 2019.
- [18] Zhu Tao. Apocalypse Library[EB/OL]. [2023-08-16]. <https://read.douban.com/ebook/9329799/>.
- [19] Bu Ma De Mao. No. 127 Middle Yancheng Road[J]. *Science Fiction Cube*, 2022(07): 94-101.
- [20] Matt Haig. *The Midnight Library*[M]. Translated by Zhang Jinwei. Taipei: Walker Culture, 2021.
- [21] Chu Jingli, Ren Jiaohan, Wang Yihan. From Digital Libraries to Smart Libraries[J]. *Journal of Academic Libraries*, 2022, 40(02): 52-58. DOI:10.16603/j.issn1002-1027.2022.02.007.
- [22] Jorge Luis Borges. The Library of Babel[EB/OL]. [2023-08-16]. http://www.bengu.cn/homepage/library/borges_{{{babel}}}{{{library}}}.htm.

- [23] Connie Willis. *Blackout*[M]. *Spectra*, 2010.
- [24] Kim Stanley Robinson. *The Ministry for the Future*[M]. New York: Orbit, 2020.
- [25] Iain M. Banks. *The Player of Games*[M]. Translated by Liu Sihan. Beijing: New Star Press, 2022.
- [26] Charlie Jane Anders. *The City in the Middle of the Night*[M]. London: Titan Books, 2019.
- [27] Yang Feng. *Cloud Travel Notes • The Collector*[EB/OL]. [2023-08-16]. <https://www.kedo.net.cn/c/2020-05-28/1035098.shtml>.
- [28] Die Zhiling. *Escape from the Library*[M]. Chengdu: Tiandi Press, 2022.
- [29] Arkady Martine. *A Memory Called Empire*[M]. Translated by Sun Jia. Chengdu: Sichuan Science and Technology Publishing House, 2021.
- [30] John Scalzi. *The Collapsing Empire*[M]. London: Titan Books, 2017.
- [31] Scott Hawkins. *The Library at Mount Char*[M]. Translated by Sun Jia. Chengdu: Tiandi Press, 2016.
- [32] Karl Marx/Friedrich Engels. *Complete Works of Marx and Engels (Vol. 31)*[M]. Translated by the Compilation and Translation Bureau of the Works of Marx, Engels, Lenin, and Stalin of the CPC Central Committee. Beijing: People's Publishing House, 1998: 92-93.
- [33] Tu Yinqiao. *Knowledge Fetishism and Global Knowledge Planning: The Power Structure of the Techno-Cultural Empire*[J]. *Marxist Philosophy*, 2023(03): 106-115.
- [34] Walter M. Miller Jr. *A Canticle for Leibowitz*[M]. Translated by Luan Jie. Beijing: Beijing Daily Press, 2023.
- [35] Shi Heiyao. *The Librarian and the Robot*[A]. In Li Ting. *Offline • Try Restarting*[M]. Beijing: Electronic Industry Press, 2022.
- [36] Carrie Vaughn. *Bannerless*[M]. New York: John Joseph Adams/Mariner Books, 2017.
- [37] A.T. Greenblatt. *"Give the Family My Love"*[EB/OL]. [2023-08-16]. https://clarkesworldmagazine.com/greenblatt/{02}_{19}.
- [38] Ying Shencao. *Winter Night Traveler*[EB/OL]. [2023-08-16]. <https://www.kedo.net.cn/c/2021-07-23/1824250.shtml>.
- [39] Erika Swyler. *The Book of Speculation*[M]. New York: St. Martin's Press, 2015.
- [40] Margaret Killjoy. *The Barrow Will Send What It May*[M]. New York: Tom Doherty Associates, 2018.
- [41] Si Yu. *The Last Library*[J]. *World Science*, 2022(03): 62-63.
- [42] Anthony Doerr. *Cloud Cuckoo Land*[M]. Translated by Gao Huanyu. Beijing: CITIC Press Group, 2023.
- [43] Bian Changyun. *Research on Strategies for Public Libraries to Provide Knowledge Assistance to Vulnerable Groups from the Perspective of Library Spirit*[J]. *Jiangsu Science and Technology Information*, 2020, 37(29): 25-27.
- [44] Yang Xinya, Qian Guofu, Chang Tingting, et al. *Is the Metaverse the Future of Libraries?*[J]. *Library Tribune*, 2021, 41(12): 35-44.

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

Source: ChinaXiv — Machine translation. Verify with original.