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Will Artificial Intelligence Replace Knowledge Centers? Assessment of the Situation

Orhan ALAV [1*]
ORCID 1: 0000-0003-4577-0984
[1] Süleyman Demirel Üniversitesi, Bilgi Merkezi, 32260, Isparta, Türkiye.
***e-mail**: orhanalav@sdu.edu.tr*

Abstract

The study examines the historical journey of information, which started with stone and clay tablets and continued with papyrus, parchment, and paper forms, and ultimately its transformation into digital form with industry 4.0 & 5.0 information technologies (IT), the information age. The developments in IT, that is, computer, network/internet/www, have opened the doors of a new world. Based on these developments, the transformation of information and information resources into digital form, their inclusion in computers and networks, their movement at the global level (www), and their visibility and accessibility have revolutionized the world of information. It has opened the doors of a new world where the information transformed into digital form is used with open source software and internet (w2-w3) supported open data and accredited scientific research data supported by big data, and artificial intelligence software enables the information to think autonomously, produce content, speak and show actionable behaviors. The study tries to find an answer to the question that artificial intelligence (AI) could replace information centers that archive, process, manage, and provide access to accredited information and evaluate the situation.

Keywords: *Information, forms of information resources, digitalization, artificial intelligence.*

Yapay Zekâ Bilgi Merkezlerinin Yerini mi Alacak? Durum Değerlendirmesi

Öz

Çalışma, bilginin taş ve kil tabletler ile başlayan tarihsel yolculuğunu; papirüs, parşömen, kâğıt formlar ve nihayetinde bilgi çağı olan endüstri 4.0 & 5.0 bilgi teknolojileri (BT) ile dijital forma dönüşen değişim izlemiştir. BT'deki gelişmeler olan; bilgisayar, ağ/internet/www yenidünyanın kapılarını aralamıştır. Bu gelişmelere dayalı olarak bilgi ve bilgi kaynaklarının sayısal forma dönüşmesi ile birlikte bilgisayar ve ağ (network) de yer alması, küresel düzeyde (www) hareket etmesi, görünür ve erişilebilir kılınması bilgi dünyasında devrim yaratmıştır. Dijital forma dönüşen bilginin, açık kaynaklı yazılımlar ve internet (w2-w3) destekli açık veriler ve akredite olmuş bilimsel araştırma verilerinin büyük veri destekli olarak kullanıldığı ve yapay zekâ yazılımları ile bilginin otonom düşünebilmesi, içerik üretebilmesi, konuşabilmesi ve eylemsel davranışlar göstermesi yenidünyanın kapılarını açmıştır. Çalışma ile, yapay zekanın (AI) akredite bilgiyi arşivleyen, işleyen, yöneten ve erişime sunan bilgi merkezlerinin yerini alabileceği sorusuna yanıt aranmaya ve durum değerlendirilmesi yapılmaya çalışılmıştır.

***Anahtar kelimeler**: Bilgi, bilgi kaynakları formları, dijitalleşme, dijital kütüphane, yapay zekâ.*

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1. Introduction

In today's global world, we are living in a digital era of "industry 4.0 & 5.0" that started with the Internet of Things and where objects communicate with each other. Advances in information technologies (IT) have radically changed and transformed individuals, societies, governments, education/scientific studies, businesses/economy, industry, and production processes. In today's industry 4.0 & 5.0 digital era, where information has become a valuable commodity, the information object continues to develop as an IT-supported "network/internet/w3". In this process, open data, metadata, and research data, which are the components of information objects, have been transformed into digital form and are located in the network/www environment through server and identified TCP/IP terminal computers, and they talk and exchange information among themselves based on multiple components they interact with (Alav, 2023a, p.156). This process has affected and transformed almost the entire social structure. Today, there are more digital natives than digital immigrants. These developments in IT have given rise to digital information objects - electronic information resources, proprietary and open-access software, networked and self-talking information, and artificial intelligence (AI). Can artificial intelligence replace knowledge centers in the near future? This question constitutes the core of this study. The answers to the questions “How much will AI's ability to think, synthesize, speak, make decisions, and act autonomously affect information centers how will it transform these organizations, and where will human/librarians position themselves in the face of AI?” were sought in the study.

Purpose of the Study

These organizations are transforming into new-generation knowledge centers with digitized information/knowledge sources and network/internet structures, and the transformation is still ongoing. In the digital age of IT and Industry 4.0 & 5.0, the current situation of information center libraries in the near future with "AI" and the prediction of how it will undergo a change and transformation in the near future has been discussed with the support of literature, and the study aims to provide current situation and mental thinking support to future scientific studies.50 years after Cahit Arf asked the question in 1959 just as "Can the machine think and how can it think?" (Arf, 1959, p. 91-103), a big dream has become a reality by evolving/transforming into "Machines that Talk to Each Other" (Alav, 2023a, p.156) and artificial intelligence AI (Korteling et al., 2021, p.1-13) that can be articulated to the big data pattern, process digital information, generate new information, think and decide autonomously. The study seeks the answers to the questions such as "the effects of artificial intelligence on information centers", what research data and information centers may become in the future, how they will serve, and where librarians will be in this development, based on the future prediction on the axis of the structure of IT / Network / Internet / W3 / AI.

2. Material and Method

The research utilized the "description method" was used in the research (Ekiz, 2009, p.22). With this method, a cause-effect relationship was established between events. In addition, a theoretical evaluation supported by the literature was put forward in the research, using qualitative and quantitative data (Tutar & Erdem, 2020, p.245-295). As a quantitative data set, e-user data set statistics of academic electronic libraries were used.

Literature Review of the Research

National and international scientific studies related to the research topic were examined. In the national literature search; TÜBİTAK/TR Index and DergiPark, TR-National TEZ, EKUAL, SOBIAD Index databases, Turkish Academic Archive - HARMAN, E-Hiperkitap, E-Akademi Kitap, Google Scholar and e-databases of university libraries and the Bibliography of Turkish Articles were examined. In the international literature review; Library, Information Science & Technology Abstracts (LISA), Web of Science (WOS): SSCI / ESCI Index, Elsevier /Emerald E-Database, Wiley Online Library, ERIC, GALE, DOAJ, Taylor & Francis, Summon, Springer, ScienceDirect, Scopus, Sage e-Journals, Proquest databases were utilized. Since the literature search is very extensive, in this section, the prominent scientific studies on the subject of the study are examined as domestic/national and foreign/international literature.

National Literature

Among the prominent publications; Arf (1959)'s "Can machines think and how can they think?", Tonta & Madran (2023)'s "Artificial Intelligence and the Future of Information Access" (Tonta & Madran, 2023a-b-c; Youtube), The Impact of Artificial Intelligence on Scientific Communication, The Role of Information Professionals in the Age of Artificial Intelligence, Coşkun (2007)'s Artificial Intelligence Optimization Techniques: Literature Review (Coşkun, 2007, p.142-146),

Alpaydın (2011)'s "Artificial Learning (Alpaydın, 2011, p.1-486), Pirim (2006). Artificial Intelligence (Prim, 2006, p.81-93), Kaya (2022)'s The Rise of Robots: Artificial Intelligence and the Danger of a Jobless Future (Kaya, 2022, p.115-119), Esen (2019)'s Artificial Intelligence: Past and Future (Esen, 2019, p.308-311), Tellan (2020)'s The Responsive Machine: The Maturity Age of Artificial Intelligence (Tellan, 2020, p.142-146), Alav (2023a)'s Machines Talking to Each Other: The Evolution of Knowledge Towards Open Access Supported by Open Data. Erkutlu et al. (2023)'s Artificial Intelligence and Organizational Behavior, Gürsakal (2018)'s "Machine Learning", and Karaboğa (2017)'s "Artificial Intelligence Optimization Algorithms" are included. (Karaboğa, 2017, p.1-246).

International / Foreign Literature

It is seen that the first studies on artificial intelligence started with research on the thinking capacity of machines under the leadership of Allen Turing's Can Machines Think? (Turing, 1950, p.433-460), John McCarthy 's The term "Artificial Intelligence" and ALGOL language structure studies-Dartmounth Conference 1956, The Birth of Artificial Intelligence inside Rebecca E. Skinner's "the Originsof Artificial Intelligence Computing" (Skinner, 2012, p. 1-213). Dennis Shasha and Cathy Lazere's "John Mccarthy: the uncommon logician of common sense" (Shasha & Lazere, 2004, p.1-10), Vasil Teigenes's "Intelligence Artificial -AI" 4th Industrial Revolution (Teigenes, 2020, p.1-132), Arthur Samuel,'s "Some Studies in Machine Learning Using the Game of Checkers" (Samuel, 1959, p.210-229), N. Nilsson's "Learning Machines" (Nilsson, 1965, p.1-137), Mitchell (1997)'s Machine Learning (Mitchell, 1997, p.1-414), Kohavi & Provost's "Glossary of terms & Machine Learning (Kohavi & Provost, 1998, p.271-274),The changing science of machine learning (Langley, 2011, p.275-275), Progress of artificial intelligence, Alpaydın (2016)*'s Machine Learning (Alpaydın, 2016, p.1-230),* Sutton & Barto (2018)'s Reinforcement Learning (Sutton & Barto, 2018, p.1-526), Alpaydin (2021)'s Introduction to Machine Learning (Alpaydın, 2021*, p.1-280),* Korteling's (2021) Human-versus Artificial Intelligence (Korteling, et al., 2021, p.1-13), Lin & Yu (2023)'s A bibliometric analysis of artificial intelligence chatbots in educational contexts and Performance Management and Artificial Intelligence: A Futuristic Conceptual Framework (Bankar & Kasturi, 2023, p. 341-361).

3. Findings and Discussion

Information Technologies (IT)

Information technologies are defined as the products of scientific technology that became evident with the Industrial Revolution and emerged in post-industrial societies (Bensghir, 1996, p.7-8). The computer and internet (informatics) technology, which started to develop in the 1990s, brought about a radical change and transformation in the individual and social structure in the 2000s and beyond. Information technology is an ecosystem that develops as the science of communication (informatics) in which technology and multiple components that support it interact, and hardware and software interact together in a network-supported computer environment depending on the developments of positive science. In this process, there have been many revolutionary changes and transformations such as states, commercial organizations, educational institutions, security / personal data security, country defenses and war technologies, and e-commerce structures. In this process in which IT plays a role, the management of these technologies has become essential. In this governance process, data and information security of the individual/society and the state and other institutions has come to the forefront. In this process, which developed depending on needs and requirements, digital information, e-government, e-commerce and other e-organizations, e-schools, e-libraries, e-NGOs, and an electronic/digital world based on open source and crypto-secure software were created. This digital world, which affects every moment of human life, and the structures and systems with which it

interacts have entered into a pocket tablet, and the development processes have evolved towards big data-supported augmented reality/metaverse and artificial intelligence platforms. In this process, the use and management of IT and artificial intelligence has become important.

Digital Information Centers

Digital information centers are "an old friend in new clothes" (Medeiros, 2014, p. 218-219). A digital information center is a digital/organizational structure in which a large percentage or all of the library operations are carried out with the support of an IT-supported network/internet/www and artificial intelligence. The historical journey of information, which started with stone and clay tablets, was followed by papyrus, parchment, and paper forms, and finally the transformation into digital form with industry 4.0 & 5.0 information technologies (IT), the information age. The developments in IT have opened the doors of the new world of computer and network/internet/www.

Based on these developments, the transformation of information and information resources into digital form, their inclusion in computers and networks, their movement at the global level (www), and making them visible and accessible have revolutionized the world of information. These developments in IT are transforming or have transformed traditional information centers and information resources into digital/wall-less information centers. Digital information and transformation (Saarikko et al., 2020, p.825-839) centers are not only places to digitize their materials, but also to build collections and support the promotion of these efforts across the country. Strategy, not technology, drives digital transformation (Kane et al., 2015, p.12). This indicates that libraries also need to develop competencies in leveraging digital technology for business purposes (Figure 1).

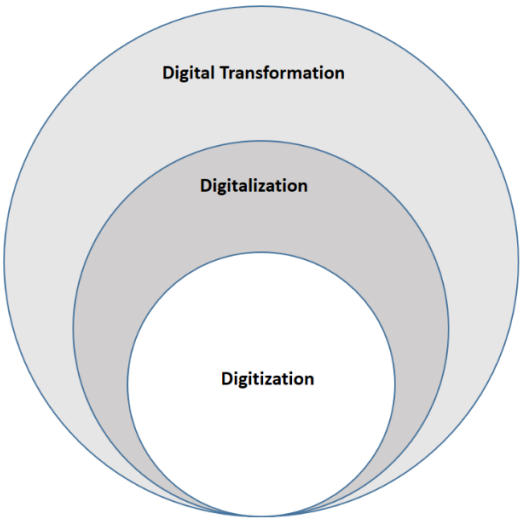

Figure 1. Digitization, digitalization, and digital transformation (Saarikko et al., 2020)

Digital Information Resources

Digital information resources are information resources transformed into digital/digital forms. Digital resources include e-books, electronic journals / e-databases, DVDs, video, audio, pictures, web platforms, server/cloud, magnetic archive storage, etc. Today, there are a large number of electronic (e-formatted) documents/information within digital information resources. Digital information resources (e-data) are data in electronic form that are made available on the network/internet/www with licensed or open source software. The role of libraries However, another explanation for the use of information resources may be the link once more to the university library, which is seen by scholars as a vital digital resource in its right (Warwick et al., 2008, p.23).

Artificial Intelligence

In the literature, artificial intelligence (AI) is the ability of a digital computer or a computer-controlled robot to perform tasks usually associated with intelligent beings "Artificial intelligence-AI" (Brittanica Encylopedia, 2024) and (Alav, 2023b, p.211-213). Artificial intelligence is a (digital) field focused on

programming machines that can analyze and make decisions by defining the human brain and decision-making behaviors (Erbaş, 2023, p.187). In other words, artificial intelligence is the copying of the human brain in inorganic form with a complex structure. Rather than a direct brain perception, artificial intelligence provides access to information by directly interacting with big data (Gartner Online Dictionary, 2024, p.1) and other information platform components, and can infer and act on the information obtained. Artificial intelligence is genetic algorithms that analyze data based on neural networks and learning-based machine computing capabilities and open research data (Dhamija & Bag, 2020, p.870) (Figure 2).

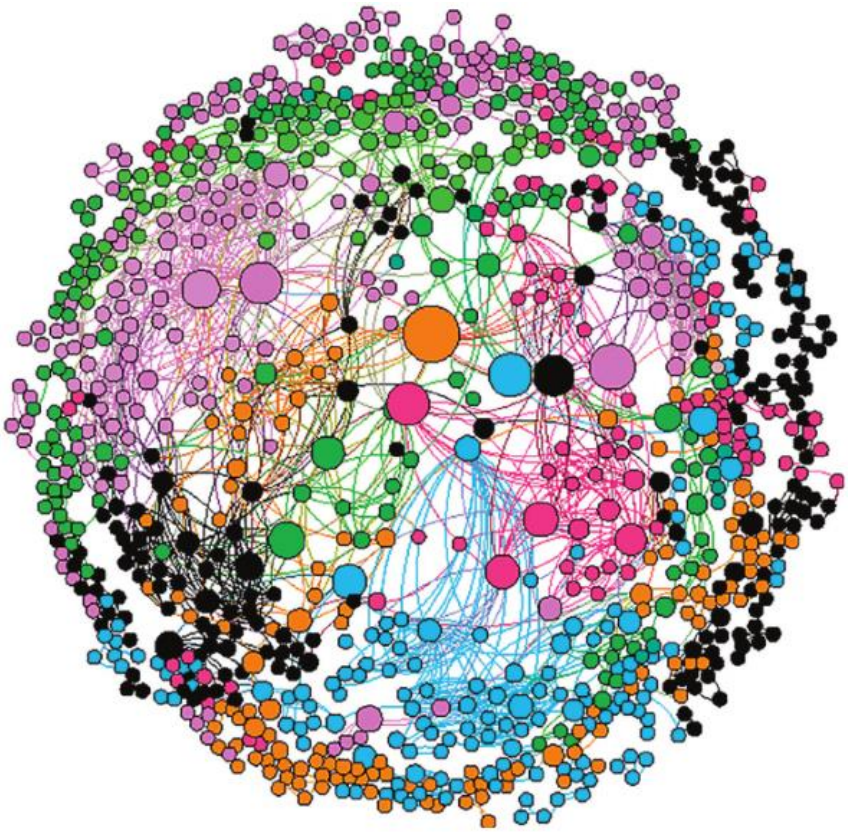

Figure 2. Artificial intelligence (Dhamija & Bag, 2020, p.884)

John McCarthy, one of the first/pioneering scientists to put forward the concept of artificial intelligence, likens the concept of artificial intelligence to a computer that "simulates human beings" (Skinner, 2012, p.125-126). According to McCarthy "A proposal for the Dartmouth summer conference on artificial intelligence refers to it as "machines that can think like humans and make decisions on their own, as well as having the ability to do the tasks that humans focus on and to solve the problems they try to solve". The term "Artificial Intelligence" and ALGOL language structure studies (McCarthy, J., et al., 1995, p.1-13). Transmitter ed. by Enes Sivri (Sivri, 2023, p.177). Today, AI is often the key to achieving convincing operational transformations (Dhamija & Bag, 2020, p.869-870). Managing AI in organizations is the processual act of managing IT, people, knowledge, competitiveness/advantage, and value-generation components together. Since libraries are non-profit organizations, they can manage AI in a more comfortable environment than other organizations."The use of artificial intelligence in libraries can facilitate the work of both library staff and users and further improve library services " (Sivri, 2023, p.176). The use and management of AI in library organizations can be managed according to strategic and multi-component planning (Alav, 2023b, p.203). In this context, AI governance components can be expressed as follows: Strategic planning (goals and objectives, visions and missions of the organization), data management and privacy/data security, information resources and budget/financial support, training of personnel for the use of AI, support and funding of AI product projects, business and external partner collaborations (human/artificial intelligence-inter-organizational collaborations), process management monitoring and metrics, ethics/legal compliance, improvement and environmental sustainability, value generation. In this context, AI governance in

library organizations includes the above-mentioned components as well as the process of managing accredited information and artificially generated information according to ethically and legally determined copyright, licensing, and other criteria. The management of artificial intelligence in libraries will provide great contribution and saving support in terms of time and labor in the execution of technical operations of libraries. To illustrate, strategic planning, resource management; purchasing, provisioning, cataloging/classification, data entry, preventing multiple copy access, language processing, and meaning generation, chat bots and virtual assistant support, managing web interfaces online and offline, metrics and model development for recycling, access and governance of digital collections, data mining/data processing and value creation, data security, support to user services, staff training, operational management of libraries, user services, interlibrary networked (open access) collaborations and AI-enabled joint project governance will be provided. Managing AI in library organizations needs to be based on rational and robust planning and dynamic strategies based on interactive components and the interaction of dynamic strategies on applications, IT, target audience, environment, and other multiple components. Trust, accredited accurate information, human substitutability concerns, and autonomous/independent decision-making are still question marks in the management of AI. We believe that the aforementioned questions and problem areas of artificial intelligence will find answers in the near future. Artificial intelligence interacts with multiple components based on data in the evolving IT/network/internet/w3/IA ecosystem (Figure 3).

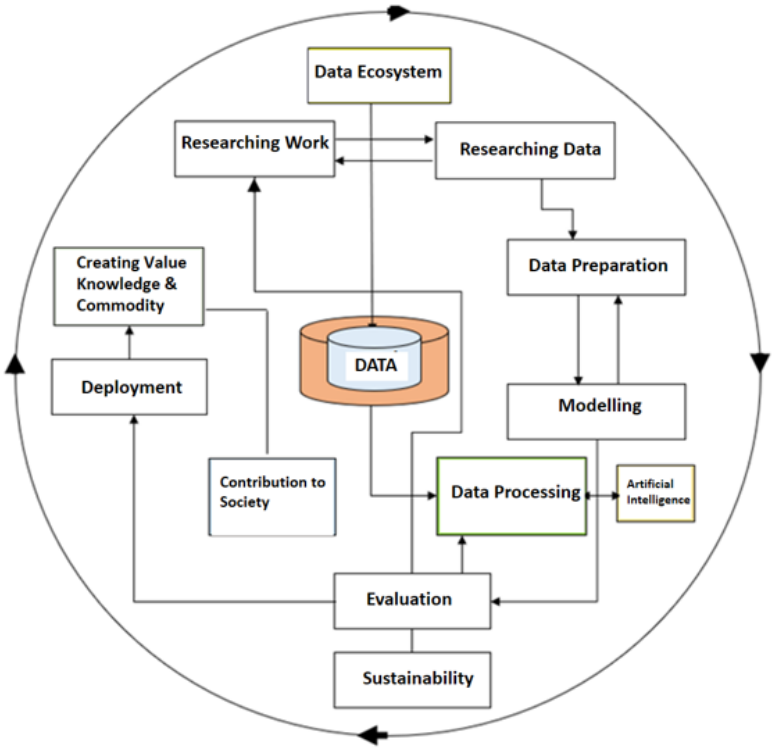

Figure 3. The data ecosystem cycle (This figure, which is Inspired by Kelleher & Brendan (2019), was developed by Orhan Alav).

Within this structure, there are multiple components such as IT/network/internet/w3/IA, data, research data, big data, data preparation, evaluation, data processing, data modeling, artificial intelligence, IT/network/internet/w3/IA, value creation and sustainability, and their interactions. However, Cahit Arf was able to evaluate the idea and applicability of artificial intelligence on the axis of mathematics-oriented algorithms and probability/logic in his article "Can the machine think and how will it think?" in 1958 (Arf, 1959, p.91-103). However, in today's Industry 4.0 & 5.0 digital age, the dream of Arf and the few scientists who think like him has been realized today.

Artificial Intelligence Powered Information Centers

Today, information centers run their content and information resources in a hybrid structure with human and machine support. However, based on a futuristic prediction, in the near future, knowledge centers may transform into centers that are almost entirely digital in terms of information sources and function, and that are run with the support of artificial intelligence.

Even today, artificial intelligence can think autonomously, access big data, synthesize information, and develop actionable behaviors that produce value and results. These capabilities of artificial intelligence will transform knowledge centers into digital forms over time. Thus, people and machines, which are information users, will be able to provide uninterrupted information access 24/7. This will eliminate access restrictions/barriers to information resources. In this process, strong IT infrastructures and digital resources, big data access, and artificial intelligence will constitute important components (Figure 4).

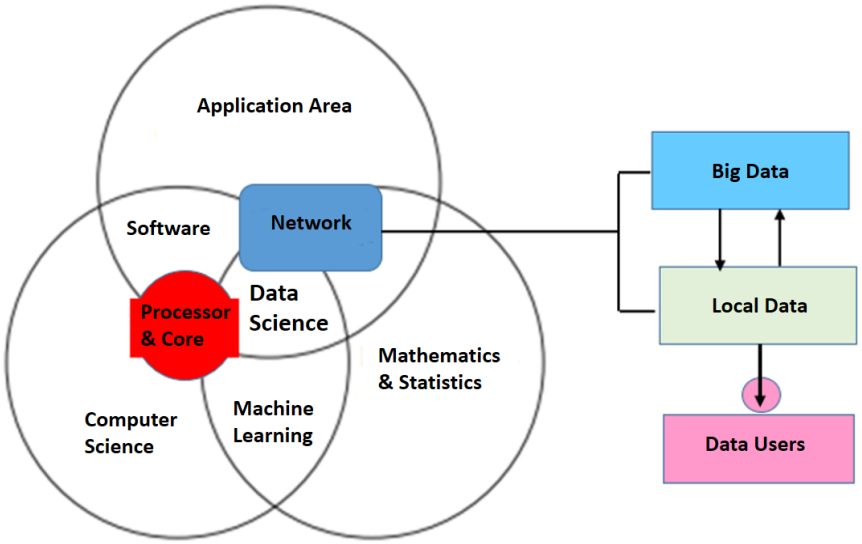

Figure 4. Data components supporting artificial intelligence & data governance (This figure, which is Inspired by Mike & Hazzan, 2023). What Is Data Science? was developed by Orhan Alav).

Today, science can transform imaginable abstract virtual realities into reality. This is not magic. In this context, in the near future, digital libraries without walls (information databanks) will take their place in the social structure, and new generation machines will be able to exchange information by talking among themselves according to certain languages and protocols. This process will redefine people, information resources, information centers, artificial intelligence, and information users. Today, information centers are hybrid, consisting of human and machine components. In libraries, which are the new generation of academic research information centers, IT/Network/Internet/W3/AI are used interactively together. Digitized libraries can articulate accredited information resources and research data into big data with Python, Java C+, C/MPI integrated software, and open-source software support in the High-Performance Computing (HPC) application process (Nowicki et al., 2021, p.2). And so, libraries evolve into inorganic information centers that can access data, read data, process data, and present data/develop solutions by going beyond the data in their archives through "Network / W3 / AI" components by transforming into digital form and joining the big data pattern. Informatics is an interdisciplinary science. IT/Network/Internet/W3/AI, which has developed based on informatics, has developed artificial intelligence technologies. All organizations and social structures have been radically affected by this development and change process. In this interaction, the transformation of traditional libraries into digital content and the generation of technical support and innovative values for deep learning and natural language processing, automated text comprehension research developed in partnership with human, network/internet/artificial intelligence/AI (Zhongyi et al., 2023, p.306-307) have further increased the importance of library organizations.

Librarians Adapted to Artificial Intelligence

The question of the limits of libraries and librarians in the face of artificial intelligence and digital information is the focus of this study. Artificial intelligence is a challenging and cutting-edge direction for changing/digital libraries in governance planning (Bauer et al., 1998, p. 484-488), research policy development, strategic management practices, service delivery methods, scholarly communication and innovation measurement (Zhongyi et al., 2023, p.307). So, where will "librarians", the organic living beings called humans, fit into this? The question remains for now, but will there be "human librarians" in digital libraries in the near future? We are not sure of the answer to this question for now. Nowadays, machine learning, and learning/teaching processes that understand and automate autonomous decision-making about what to do based on reinforcement learning (Sutton et al., 2018, p.13) are improving the capacity of next-generation digital/networked libraries to do almost all their work unmanned. This capacity pits human organism librarians against artificial "robot librarians" in the functioning of library organizations. It is necessary to develop a rational way and method for solving this problem and in the functioning systems of libraries. At the moment, the most appropriate solution seems to be a partnership in which "human" and "artificial" intelligence can be harmonized together.

Developments in IT/Networking/Internet/W3/AI/BD (Big Data) have pushed libraries as information centers towards unmanned libraries that can autonomously think and act. If artificial intelligence goes beyond both its limits and human limits, the big question and the problem start there and then (Figure 5).

Figure 5. Artificial intelligence formed librarians (Onedio Artificial Intelligence-AI, 2023)

Frontiers in Artificial Intelligence

Recent advances in information technology and artificial intelligence may enable greater coordination and integration between people and technology. Therefore, a lot of attention has been paid to the development of human AI, aiming at AI that adapts to the cognitive possibilities and limitations of human team members as a "team member". Moreover, metaphors such as "friend", "partner", "other self", "Intelligent Collaborator", "buddy" and "mutual understanding" emphasize the high degree of collaboration, similarity, and equality in "hybrid teams". When human-conscious AI partners operate like "human collaborators", they must be able to sense, understand, and react to a wide range of complex human behavioral attributes such as attention, motivation, emotion, creativity, planning, or argumentation (Korteling et al., 2021, p.1-13). Therefore, these "AI partners" or "teammates" should be equipped with human-like (or humanoid) cognitive abilities (i.e. "human awareness") that enable mutual understanding and cooperation. However, no matter how intelligent and autonomous AI agents become in certain respects, at least for the foreseeable future, they are likely to remain unconscious machines or special-purpose devices that support humans in specific, complex tasks. As digital machines, they are equipped with a completely different operating system (digital vs biological) and correspondingly different cognitive qualities and abilities than biological creatures such as humans and other animals (Moravec, 2024, p.1) and (Korteling et al., 2021, p.1-13). In general, digital reasoning and problem-solving agents are only very superficially comparable to their biological counterparts with

this in mind, it becomes increasingly important for professionals working with advanced AI systems to develop an appropriate mental model of the different cognitive capacities of AI systems in relation to human cognition (Korteling & Alexander, 2020, p.1-9). This issue will be increasingly important as AI systems become more advanced and deployed with higher levels of autonomy. Therefore, this paper attempts to provide some more clarity and understanding of the main characteristics, differences, and idiosyncrasies of these types. And in the near future, the number of digital data will increase geometrically exponentially (Figure 6).

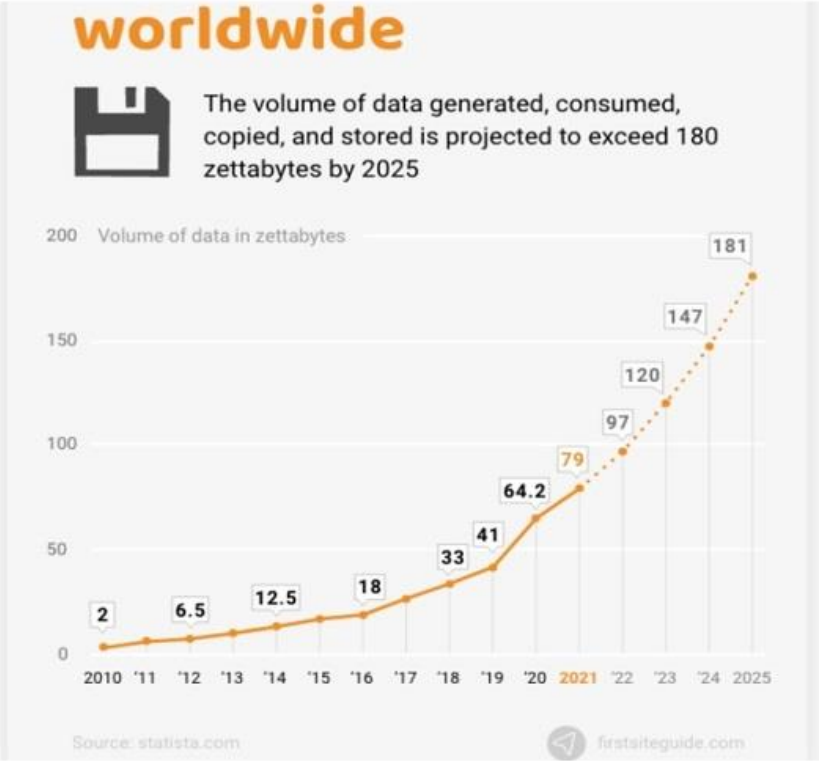

Figure 6. The volume of data/information created, captured, copied, and consumed worldwide from 2010 to 2025, with a forecast from 2021 to 2025 (Statistia, 2024)

4. Conclusion, Evaluation, and Recommendations

Among the most important discoveries of human civilization, "writing" and the "alphabet" have been the most powerful means of discovery and communication that have transformed the planet Earth we live on in terms of scientific and cultural structure. The adventure of writing, which started with stone and clay tablets, has evolved from the invention of papyrus, parchment, paper and printing press, and mass book printing to digital writing forms and digital tablets. In today's industry 4.0 & 5.0 digital communication era, civilization has evolved into a time of digital information resources, software, the internet of things, and artificial intelligence that can think and produce value within the IT/network/internet/w3/AI ecosystem. In this process, libraries as knowledge centers are moving beyond their traditional structures and transforming into action governance models with IT infrastructure, strong communication, and artificial intelligence based on the Internet of things. Today, where information has become a valuable commodity, Post 2 has evolved into a "digital" global world (Alav, 2023b, p.19).

In this process, digital information and autonomous thinking artificial intelligence's ability to produce content, speak, and show actionable behaviors have opened the doors of the new world. In this way, science and imaginable abstract virtual realities have been transformed into reality. New generation information centers will act in the future based on the combination of human profiles and artificial intelligence and will become centers where the use of data content and accredited data information for products is simulated rather than the visibility and access of information in digital form (Alav,

2023b, p.19). It is predicted that the volume of data produced, consumed, copied, and stored today will exceed 180 zettabytes by 2025 (Statistia, 2024) (Figure 6).

Based on our foresight, we can state the following conclusions:

- We believe that in the near future, the new generation of information centers will evolve into a different dimension that protects, processes, transforms, and simulates scientific knowledge based on hologram images, with autonomous function and control, and with networked, self-communicating, and plasma artificial intelligence.
- Today, although information exchange is carried out through artificial intelligence machines, the human factor is still the main determinant and influencing subject.
- It can be predicted that in the near future, the future form of information will be almost entirely in digital/digital form. In the future, librarians may be replaced by robot "artificial intelligence librarians" in digital information centers based on artificial intelligence.
- Artificial intelligence, and non-biological inorganic beings/human beings are now among us.
- "Artificial intelligence can be defined as machines that model human learning as a result of imitating human intelligence. Considering that learning processes in humans take place in the brain, it seems possible to create machines by examining the structure of the brain. Based on the fact that learning in humans takes place through the interaction in brain cells called neurons, artificial neural networks were created in computers, and learning was simulated." (Coşkun & Gülleroğlu, 2021, p.965) This is a magnificent technological revolution on the one hand, and a serious threat and danger to humanity on the other.
- Artificial intelligence's autonomous decision-making and integration with big data provide great advantages for libraries with digital forms and content in terms of time and access to information.
- The IT/network/internet/w3/AI ecosystem has created open science/open access and artificial intelligence. These developments have triggered the birth of unmanned digital libraries by affecting the change/transformation of libraries and the process of change in this direction has begun.
- In the future, machines may take humanity under their control, so humanity must always be careful. Human beings should always be the subject, they should not become objects.
- With the study, digital libraries, digital information resources, digital artificial intelligence robot/processor librarians, and digital transformation in the near future are evaluated with the support of literature.
- The IT/network/internet/w3/AI ecosystem has created open science/open access and artificial intelligence. These developments have triggered the birth of unmanned digital libraries by affecting the change/transformation of libraries and the process of change in this direction has begun.
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The article complies with national and international research and publication ethics.

Author Contribution and Conflict of Interest Declaration Information

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