비접촉 데이터 사회와 아카이브 재영토화*

Contactless Data Society and Reterritorialization of the Archive

조민지(Jo, Min-ji)**

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^{*} 본 논문의 일부 내용은 2023년 11월 29일 중국 선전에서 개최된 제16회 EASTICA 컨 퍼런스·세미나의 저자의 발표 내용 중 일부를 포함하고 있음(Some of the contents of this paper include part of the author's presentation at the 16th EASTICA General Conference & Seminar held in Shenzhen, China on November 29, 2023).

^{**} 한국외국어대학교 대학원 정보기록학과 초빙교수(Visiting Professor, Department of Information and Archival Science, Graduate School, Hankuk University of Foreign Studies)(jemzeno@daum.net).

[■]투고일: 2023년 12월 31일 ■최초심사일: 2024년 01월 20일 ■최종확정일: 2024년 01월 27일.

[■]기록학연구 79, 5-32, 2024, https://doi.org/10.20923/kjas.2024.79.005

〈초록〉

한국 정부가 UN의 2022년 전자정부 발전 지수에서 UN가입 193개국 중 3위에 랭크됐다. 그동안 꾸준히 상위국으로 평가된 한국은 분명 세 계 전자정부의 선도국이라 할 수 있다. 전자정부의 윤활유는 데이터 다. 데이터는 그 자체로 정보가 아니고 기록도 아니지만 정보와 기록 의 원천이며 지식의 자원이다. 전자적 시스템을 통한 행정 행위가 보 편화된 이후 당연히 데이터에 기반한 기록의 생산과 기술이 확대되고 진화하고 있다. 기술은 가치중립적인 듯 보이지만 사실 그 자체로 특 정 세계관을 반영하고 있다. 더구나 비물질적 유통을 기반으로 하는 디지털 세계, 온라인 네트워크의 또 다른 아이러니는 반드시 물리적 도구를 통해서만 접속하고 접촉할 수 있다는 점이다. 디지털 정보는 논리적 대상이지만 반드시 어떤 유형이든 그것을 중계할 장치 없이는 디지털 자원을 읽어 내거나 활용할 수 없다.

초연결, 초지능을 무기로 하는 새로운 기술의 디지털 질서는 전통적 인 권력 구조에 깊은 영향력을 끼칠 뿐만 아니라 기존의 정보 및 지식 전달 매개체에도 마찬가지의 영향을 미치고 있다. 더구나 데이터에 기 반한 생성형 인공지능을 비롯해 새로운 기술과 매개가 단연 화두다. 디지털 기술의 전방위적 성장과 확산이 인간 역능의 증강과 사유의 외 주화 상황까지 왔다고 볼 수 있을 것이다. 여기에는 딥 페이크를 비롯 한 가짜 이미지, 오토 프로파일링, 사실처럼 생성해 내는 AI 거짓말 (hallucination), 기계 학습데이터의 저작권 침해에 이르기까지 다양한 문제점 또한 내포하고 있다. 더구나 급진적 연결 능력은 방대한 데이 터의 즉각적 공유를 가능하게 하고 인지 없이 행위를 발생시키는 기술 적 무의식에 의존하게 된다.

그런 점에서 지금의 기술 사회의 기계는 단순 보조의 수준을 넘어 서고 있으며 기계의 인간 사회 진입은 고도의 기술 발전에 따른 자연 적인 변화 양상이라고 하기에는 간단하지 않은 지점이 존재한다. 시간 이 지나며 기계에 대한 관점이 변화하게 될 것이기 때문이다. 따라서 중요한 것은 기계를 통한 커뮤니케이션, 행위의 결과로서의 기록이 생 산되고 사용되는 방식의 변화가 의미하는 사회문화적 함의에 있다.

아카이브 영역에서도 초지능, 초연결사회를 향한 기술의 변화로 인

해 데이터 기반 아카이브 사회는 어떤 문제에 직면하게 될 것인지, 그 리고 그 속에서 누가 어떻게 기록과 데이터의 지속적 활동성을 입증하 고 매체 변화의 주요 동인이 될 것인가에 대한 연구가 필요한 시점이 다. 본 연구는 아카이브가 행위의 결과인 기록뿐만 아니라 데이터를 전략적 자산으로 인식할 필요성에서 시작했다. 이를 통해 전통적 경계 를 확장하고 데이터 중심 사회에서 어떻게 재영토화를 이룰 수 있을지 를 알아보았다.

주제어: 기록, 데이터, 정보, 기록정보, 정보서비스, 아카이브, 디지털 전 환, 데이터 서비스, 디지털플랫폼

(Abstract)

The Korean government ranked 3rd among 193 UN member countries in the UN's 2022 e-Government Development Index. Korea, which has consistently been evaluated as a top country, can clearly be said to be a leading country in the world of e-government. The lubricant of e-government is data. Data itself is neither information nor a record, but it is a source of information and records and a resource of knowledge. Since administrative actions through electronic systems have become widespread, the production and technology of data-based records have naturally expanded and evolved. Technology may seem value-neutral, but in fact, technology itself reflects a specific worldview.

The digital order of new technologies, armed with hyper-connectivity and super-intelligence, not only has a profound influence on traditional power structures, but also has an a similar influence on existing information and knowledge transmission media. Moreover, new technologies and media, including data-based generative artificial intelligence, are by far the hot topic. It can be seen that the all-round growth and spread of digital technology has led to the augmentation of human capabilities and the outsourcing of thinking. This also involves a

variety of problems, ranging from deep fakes and other fake images, auto profiling, AI lies hallucination that creates them as if they were real, and copyright infringement of machine learning data. Moreover, radical connectivity capabilities enable the instantaneous sharing of vast amounts of data and rely on the technological unconscious to generate actions without awareness. Another irony of the digital world and online network, which is based on immaterial distribution and logical existence, is that access and contact can only be made through physical tools. Digital information is a logical object, but digital resources cannot be read or utilized without some type of device to relay it.

In that respect, machines in today's technological society have gone beyond the level of simple assistance, and there are points at which it is difficult to say that the entry of machines into human society is a natural change pattern due to advanced technological development. This is because perspectives on machines will change over time. Important is the social and cultural implications of changes in the way records are produced as a result of communication and actions through machines.

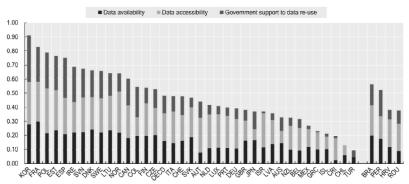
Even in the archive field, what problems will a data-based archive society face due to technological changes toward a hyper-intelligence and hyper-connected society, and who will prove the continuous activity of records and data and what will be the main drivers of media change? It is time to research whether this will happen. This study began with the need to recognize that archives are not only records that are the result of actions, but also data as strategic assets. Through this, author considered how to expand traditional boundaries and achieves reterritorialization in a data-driven society.

Keywords: records, data, information, record information, information services, archive, digital conversion, data services, digital platform

I. Introduction

Another irony of the digital world and online network, which is based on immaterial distribution and logical existence, is that access and contact can only be made through physical tools. In other words, the prerequisites for radical connection are a computer, mobile phone, and the Internet. In that respect, it can be said that the technical prerequisites have already been met.

In particular, Korea ranked first in the 2023 "OECD Open, useful, and re-usable data index"¹⁾ The OECD public data evaluation evaluates OECD surveyed countries based on the International Open Data Charter, showing that Korea is a world leader not only in e-government but also in the usefulness of public data.



[Table 1] 2023 OURdata Index, results by country

Source: 2023 OECD Open, Useful and Re-usable data (OURdata) Index: Results and Key Findings, OECD Public Governance Policy Papers, No. 43, OECD Publishing, Paris, p.12

OECD (2023), "2023 OECD Open, Useful and Re-usable data (OURdata) Index: Results and Key Findings", OECD Public Governance Policy Papers, No. 43, OECD Publishing, Paris, p.12 https://doi.org/10.1787/a37f51c3-en.

Despite the advantages of data-based technology, including generative AI, for society, many problems have been raised. It is also true that not only false images and hallucinations, but also the deepening of global monopoly, anthropomorphism, and relationship distortion have threatened human social networks. Moreover, the process of powering through data and the monopoly of information production and distribution also come from the process of processing and meaning-making data, and the ability of radical connectivity makes it possible to immediately share vast amounts of data. Deliberative discourse is required to confront the rapid growth-driven technology surge in a mature and calm manner.

Therefore, this study has the character of a kind of starting discussion to redefine archives and their services targets. The research purpose of this study in accordance with the above research needs is as follows.

First, to understand data as a resource of records that archives must focus on in a technology-driven society. The inherent public nature of records produced and preserved in an electronic environment comes from the public nature of data.

Second, it is to understand from what perspective data services in the public sector, including administrative information datasets, should be viewed. The purpose of this is to look back on the scope and target of record information services in the archive area so far and redesign the boundaries

Lastly, in a reality where contactless communication is widespread, the aim is to find out what aspects the community will have in the contactless data society and how archives should strive to restore publicness.

According to the above research purpose, the main vocabulary used in this paper is defined and limited as follows.

First of all, "records" in the digital environment are inherently predicated on acquisition from a production system and refer to records or archives with unique properties. However, considering various types of information and digital communication culture, this paper seeks to approach the meaning of records beyond legal regulations. Therefore, "records" used in this paper refer to all objects left behind by someone at various levels to remember something.

"information services" is an activity that collects, systematically organizes, and provides information that people need from archives. It refers to all activities that connect users with records and information in response to their needs, including archive information services. In this paper, "information services" is used in a broad sense regardless of medium or subject, and refers to activities that connect various types of information, including data.

The structure of this paper is as follows. First, the meaning of data-based archiving was examined focusing on the contactless network aspect. Next, checked at the areas of archive services that will encompass and exceed traditional boundaries and information provision services according to media changes.

II. Archiving in the data-driven technology era

1. Records from data based society

Historically, the storage and movement of information through letters was a reflection of the changes in our civilization and also a medium representing the complexity of the society. The current digitalization and diversification of text implementation formats will mean that solving complex society and its attendant problems is not simple.

Of course, technology will not solve all of society's problems. No matter how much one denies the current digital preservation power and information delivery power due to lightness, instability, and vulnerability, it cannot be denied that machines and technologies are the most common and occupy the most priority position in the user delivery of information, including records

Network connections run on data, the new source of the information economy. Data feeds the many applications we use across a variety of platforms, flowing from users and devices to services and platforms, creating connections and expanding user bases at an unprecedented rate. Datafication, which converts everything into data format and quantifies it, is the core of the networked world. Just as electricity transformed industrial processes and practices in the 19th century, data-driven paradigms will form the core of 21st century processes and practices. 2) Data is also the central point of media practices in our daily lives and society. Regarding data-centric daily life, the Kakao data center fire in 2022 will be an impressive example.

On October 15, 2022, Kakao's main services were interrupted due to a fire at the SK Pangyo data center. The fire was extinguished in about 8 hours, but service disruptions continued into the next day, making KakaoTalk and other related economic activities impossible. This fire incident made me realize that our society is currently dependent on a single private

²⁾ Mirko Tobias Schäfer & Karin van Es (edited), The Datafield Society, Amsterdam University Press, 2017.

company for the data-based structure of our daily lives and even major public services that have become deeply embedded in us.

It was a shocking fact that Kakao was almost a national-level infrastructure, to the extent that it would be correct to say, "I knew but I didn't know," as the fact that various public services had been linked to private companies' KakaoTalk notifications to the extent that it could not be said to be simply a platform issue.³⁾

John Urry once defined "network capital". It is based on mobility, that is, which was not addressed in Pierre Bourdieu's "analysis of capital behavior such as cultural, social, and symbolic capital." The product of the behavior-inducing relationships between each individual and others, and between each individual and the environment, was viewed as network capital.⁴⁾ In the modern mobility society, networks enable differentiation from media capital or disaster capitalism and are used as major capital.⁵⁾

When revising ISO 15489 in 2016, records were newly defined as "any set of information, regardless of its structure of form, can be managed as a record." This means that (public) records management so far has focused on managing completed documents and needs to expand and evolve its perspective. In other words, there is a need to focus on data in that in the digital age, the production context and interrelationships that

³⁾ Afterwards, Kakao completed its own data center equipped with a disaster preparedness system for natural disasters such as fire, earthquake, and flood on September 26, 2023. https://www.ajunews.com/view/20230926093023257

John Urry, Mobilities, 2007, Polity, translated by Kang Hyun-soo and Lee Hee-sang, Mobility, Arcanet, 2014, pp.358~360.

⁵⁾ For example, in disaster situations such as hurricanes, inequality in network access resulted in people with low network capital being extremely neglected, and the gap in network influence between governments was also serious. Sheri Fink, Kirsten Potter "Five days at Memorial", Random House Audio Publishing Group, 2013.

⁶⁾ ICA(International Council on Archives), ISO 15489, 2016.

records can show are made into information through data.

Digital information resources are a broad concept that includes information, systems, technology, and human resources. What is important is that these IT technologies are interconnected. After the vast amount of data is collected and stored, it becomes re-purposed data that can be used for other purposes.

Therefore, at a time when the boundaries of where information originates and how it flows are unclear, it has become important not only to create information, but also to quickly find or help find appropriate information through long-term, high-quality data management.

Not all data comes from government administrative actions, but high-quality data often comes from information produced and managed by the government. The way ordinary citizens meet and use government is through records. The records are produced and managed electronically, and its essence is a structure made up of data. It is time for a change in thinking that puts citizens and users first. The next part is about automatic administrative actions that have the ultimate goal of convenience for citizens but also carry risks.

2. Digital representation and myth of data

The concept and definition of records differed from time to time, but as electronic production of records has become widespread, it has expanded to include paper-based traditions and objects that were not considered records in the past. Documentation results that are not properly captured during the production process cannot continuously express the results of the original activity. Therefore, if we cannot properly keep up with the

pace of technological change that leads to environmental changes in record production, we will inevitably end up with an irreversible disconnection from the context during the recording process. Therefore, in today's superintelligence society brought about by major changes in technology, there is a need to focus more on what to keep as records.

Now that records are produced electronically and digital resources are common, digital records are no different. Based on the time when thinking and management centered on physical records, records ultimately mean storing and showing a certain expression. In other words, logically existing electronic records and information resources need to continuously reveal and protect their expression. Ultimately, as continuous transfers and multiple layers arise, not only the value of the records but also how the expressions can be fully realized will need to be considered and organized in advance,

In this way, through technological evolution, methods to understand records have changed, and perspectives on objects and media have also continued to evolve socially. From a functional perspective, administration can be seen as a type of large information processing system within the category of national community. An additional point to note here is that administrative actions are carried out through data. There has been a lot of discussion regarding risk of data and e-government, but there is not much discussion about automation of administrative functions.

First, it concerns automatic administrative actions. Decisions made through automated administrative procedures, in which the entire decision process from data processing to final decision is automated, are automatic administrative acts or computer administrative acts. Examples include computer-based assignment of students to schools, determination of public facility usage fees such as parking fees. The cases will increase in line with

the progress of informatization. There are still problematic or flawed automatic administrative decisions This is because in the case of automatic administrative decisions, the direct participation of public officials in key stages of law enforcement is fundamentally excluded.

Therefore, the main causes of defects are when the original data is incorrectly examined, related data is entered incorrectly, or administrative actions are issued by a computer, which creates a new type of defect. It is difficult for judges as well as national secrets to know about flaws in computer programs. The automatic administrative decision itself gives the public the impression that it is very accurate, reliable and legal. Therefore, in relation to illegal automatic administrative decisions, there may even be hidden actual data that the reviewing entity cannot review at all.⁷⁾

Second, even if communication between the administration and citizens is carried out electronically, its legal effect and results are no different from those in the case of using conventional records, etc. There is a clear distinction between electronic administrative actions and automatic actions for disciplinary and practical reasons. It is naturally far from an automatic administrative act that focuses on the method of confirming a decision by a computer rather than the method of transmitting the decision. Despite their essential differences, in practice they always intersect.

The limitation of administrative actions by artificial intelligence lies in the fact that it takes responsibility for the results through control. In the case of administrative actions by artificial intelligence, this possibility of control

⁷⁾ Reference: Kim Jung-kwon, "Public law problems of introducing artificial intelligence systems in public administration, reflections on algorithmic behavior manipulation and hypothetical administrative actions in the age of artificial intelligence", Public Law Research, 2022.

is lacking, and in the final stage of decision discovery, the person in charge consciously entrusts the decision to the computer. To protect people, the administration has a duty to do everything to avoid illegal decisions at the initial level. If the fundamental decision-making part is left to artificial intelligence, the existing topological relationship between humans and machines will be jeopardized.

In summary, it is difficult for the public as well as the relevant subject to know about flaws in a computer program. Moreover, there is a risk that the automatic administrative decision itself may lead the general public to have a mythical belief that it is very accurate and legal. In other words, this means that in situations where we cannot directly recognize it as a human intellectual act, we have no choice but to believe in data in a mythical and mechanical way. However, what is important here is that it is necessary to record not only the results of automatic administrative actions, but also the process. In other words, the extent to which data can be completely trusted is largely due to automated algorithms. Therefore, it should be understood that automated algorithms also need to be included in the recording target. In that sense, the process of changing the context of the algorithm itself should also be recorded.

■ From data to public archival services

1. Digital platform services

As mentioned earlier, the Korean government ranked 3rd in the 2022 UN e-Government development index, and although it ranked 23rd in human resources, it was 9th overall e-participation index in the world. As such, the Korean government is ranked at the top every year in terms of electronic distribution of administrative work.⁸⁾

[Table 2] Korea E-Government and Participation index

											-	lighcharts.cor
E-Government Development In	dex	2022	2020	2018	2016	2014	2012	2010	2008	200	5 2004	2003
Republic of Korea (Rank)		3	2	3	3	1	1	1	6	5	5	13
Republic of Korea (Value)		0.95290	0.95600	0.90100	0.89149	0.94623	0.92832	0.878	354 0.831	70 0.87	273 0.8574	0.74413
											Н	igncharts.com
E-Participation Index	2022	2020	2018	2016	2014	2012	2 20	010	2008	2005	2004	2003
Republic of Korea (Rank)	9	1	1	4	1	1	1		2	4	6	16
Republic of Korea (Value)	0.94320	1.00000	1.00000	0.9661	0 1.000	00 1.000	200 1	00000	0.97727	0.87301	0.77049	0.48280

Source: UN E-Government Survey 2022 report9)

In Korea, which has great interest in and practices electronic administrative activities, there was a time when the Fourth Industrial Revolution, which was full of crude slogans, seemed like a kind of fear. After the 4th Industrial Revolution Committee was established in 2017, it was changed to the Digital Platform Information Committee in 2022 with the inauguration of a new president. Although the name has changed, the meaning appears to remain the same. The source of digital platform government and the 4th industrial revolution comes from data, and that data ultimately remains as a record. Bias in data ultimately refers to bias in records.

In January 2018, the Davos Forum announced that the global average cost of data crimes had recently increased by more than 60% to \$11.7 million in 2017 compared to 2013. 10) As technology advances, previously

⁸⁾ https://www.index.go.kr/unity/potal/main/EachDtlPageDetail.do?idx_cd=1027

⁹⁾ https://publicadministration.un.org/egovkb/en-us/About/Overview/-E-Government-Develop ment-Index

unimaginable types of risks are simultaneously expanding their influence.

Of course, the Davos Forum does not replace all forecasts, but it can be accepted as an indicator of how to balance regulation of new technologies, strengthen cybersecurity, expand new technological capabilities, and plan for the future.

First of all, the Industrial Revolution means "defining for future generations changes that occurred not only in industry but also in politics, society, and culture." However, the agreed definition of the 4th Industrial Revolution is unclear, and furthermore, opinions are divided on when it started or whether it can be said to have already begun.¹¹⁾

Korea's Ministry of Government Administration and Home Affairs has been implementing the "e-Government 2020 Basic Plan" since 2016. ¹²⁾ They were planning to change the administrative paradigm through the Digital New Deal and advanced administration based on intelligent information. After diagnosing the possibility of administrative innovation based on artificial intelligence and big data, the Ministry of Public Administration and Security announced the "Intelligent Government Basic Plan" in March 2017. ¹³⁾ Here, the people-centered intelligent government was aiming for a new digital government toward a society of coexistence, and was planning to realize a trust society through public-private analysis, sharing system, and blockchain administrative platform through the intelligent data conversion process.

¹⁰⁾ Hyundai Research Institute, "Main contents and implications of the 2018 Davos Forum", Economic Review, 2018, pp. 4-6.

¹¹⁾ In particular, the United States calls it "digital transformation" instead of the 4th Industrial Revolution. Hyemin Park et al., "Experiential Future - 4th Industrial Revolution 2018., Bookoreum, 2018, pp. 14-18.

¹²⁾ Ministry of the Interior and Safety, Fe-Government 2020 Basic Plan, April 2016.

¹³⁾ Ministry of the Interior and Safety, Government Basic Plan, March 2017.

This is again the 2019 "Digital Government Innovation Promotion Plan" jointly conducted by related ministries, "Digital Government Innovation Promotion Plan". Through this, a digital transformation roadmap was established to enhance the platform for citizen participation and establish an open data and services ecosystem.

This includes a blockchain-based real estate transaction platform and also included plans to competitively develop an artificial intelligence identification and tracking system. In the following year, 2020, in accordance with the spread of non-face-to-face culture throughout society due to COVID-19, the "Digital Government Innovation Development Plan in the Post-Corona Era" was jointly held by related ministries, "Digital Government Innovation Development Plan in the Post-Corona Era", June 2020, and announced that the relocation plan would be implemented early with the goal of "full digital transformation." Here, various tasks related to record management were presented, such as public sector my data and electronic certificate issuance

So far, the point of concern is the National Archives of Korea, the central records management agency, appears to be passive in its data services. Checking at the organization and division of work, it is understood that the Ministry of Government Administration and Home Affairs has hegemony and implements policies. 14)

In summary, it can be said that the Korean government has an institutional, policy, and technological foundation for electronic administrative activities. Through ultra-technology, the way e-government meets citizens is usually in a contactless form. In the following part, checked at contactless aspects

¹⁴⁾ Reference: Digital Government Office, Ministry of Government Administration and Home Affairs https://contents.archives.go.kr/next/viewMainNew.do

in the hyper-connected era.

2. Paradox of modern hyper-connected society: Contactless

A weekday edition of The New York Times contains more information than the average person was likely to come across in a lifetime in seventeenth-century England...15)

This is one of the classic propositions about the degree of information overload in modern society that was already raised in the late 1980s. Of course, exchanging information is a necessary process for living in society, but modern information supply has long outpaced demand, and the excessive amount of information is making it difficult to access the information you want when you want it.

Moreover, the records management paradigm has shifted from information management and preservation to utilization and machine dependence. Information services that enable efficient use of data and information management power overwhelmed by overproduction are emerging as a major business area. Among these, technologies expected to have a broad impact on records management are blockchain, big data, and artificial intelligence. The National Archives of Korea, which currently serves as a central records management agency, also sought to reform records management laws and systems as well as redesign the standard model of the records system in preparation for the era of the Fourth Industrial Revolution. In

15) Richard Saul Wurman, Information Anxiety, Doubleday, 1989, Jo Minji, quoted in "Rethinking Archival Positions: Records and Archiving in the Era of the 4th Industrial Revolution", "Journal of Archival, Information and Cultural Studies, 2020, no.11, pp. 77-113

particular, a cloud-based modular records system and artificial intelligence services model were presented as the next-generation records management model, ¹⁶⁾

In particular, Cloud computing refers to a model that allows computing resources to be accessed from anywhere on demand, and is characterized by flexibility, economy, efficiency, and speed. The Korean government has been accelerating the transition to G-Cloud since 2014, and Korea's public records production infrastructure and work processes are already moving to a cloud computing environment. ¹⁷⁾ In terms of big data analysis and utilization, a major example is the big data common-based platform "Hye-an" of the National Information Resources Agency of the Ministry of Public Administration and Security, which includes social analysis services such as data search and keyword analysis, civil complaint analysis, and location-based analysis services and provide analysis services, etc. ¹⁸⁾

Therefore, when looking at data as a standard in the production and management of public records, it will expand to private data, and in the selection and evaluation of records, it seems that actions should be taken with an emphasis on the future or future reuse value rather than the past. In the full-fledged digital age and the era of the Fourth Industrial Revolution, it is necessary to consider the meaning of data and the conceptualization of records, as well as the expertise and uniqueness of records management

¹⁶⁾ National Archives of Korea, Next Generation Records Management Model Redesign Research and Development Result Report, 2017.

¹⁷⁾ National Archives of Korea, Overseas National Archives Electronic Records Management Strategy Data Collection』, 2018; Dae-jin Ahn and Jin-hee Lim, 「Records Management Application Plan for the 4th Industrial Revolution Technology」, 「Archival Studies』 54, 2017 pp. 218-220.

¹⁸⁾ For more information, please refer to the Ministry of Public Administration and Security's National Information Resources Agency website, http://nirs.go.kr/index.jsp

professionals and records management institutions.

The basic premise of new technology is superintelligence and hyperconnectivity. The paradox of the hyper-connected society in this era is contactless. The non-face-to-face, non-contact method that we think we have inevitably become accustomed to as we go through the unfamiliar COVID-19 period of 2020 actually has a long history. 19)

Today's communication technologies are designed to facilitate the creation of new online groups that can challenge existing powers. The Internet is not just a place where people gather in a virtual space. It is a place where anyone can create their own group without anyone's approval.

In a situation where everything is constantly connected to the network, the implications of contactless will not be simple. The hyper-connected society is a network that relies on contactless methods, there will of course be fatigue due to constant connection. 20) However, is it necessary in terms of whether it is a suitable method or phenomenon to solve the problem at hand. It should be able to ask, that is possible to replace the previous method. This is because technical feasibility varies depending on the level of social acceptance, and depending on technology and social infrastructure, it can be installed in a social way rather than a temporary phenomenon. In that respect, contactless method can be seen as the result of being accepted as the most useful form in the digital transformation period of super-intelligence and hyper-connectivity.

In summary, it can be said that it is based on the irony that the new

¹⁹⁾ The situation seen in the classic drama called Myeongju-sil Jinmaek was the same non-face-to-face, non-contact method.

²⁰⁾ Recently, cosmetics stores have taken into account the "hon-show" culture by allowing users to select signs such as "I want to shop alone" when entering the store.

hyper-connected era is formed by a contactless manner. Approaching a new object always involves fear. The source of fear is ignorance about the object, and this ignorance is the fear of being harmed by the thought that one cannot independently control the object. Current new technologies, new methods, and new subjects such as artificial intelligence may also be such targets. It can be said that an appropriate and detailed understanding of the new target is necessary. In the following section, it is proposed to start with a new method of archives services and a new object through "reterritorialization."

3. Re-boundaries of public data services

As explained so far, the concept and definition of records have differed from period to period, but as of now that electronic production of records has become common, it has expanded to include the paper-based tradition and objects that were not considered records in the past. Therefore, in today's super-intelligence society brought about by major changes in technology, it will be important to know what to keep as records. In that respect, it is time to reterritorialize archive objects and services methods.²¹⁾

First, there is a need to expand the concept of records and expand the scope of services accordingly. Records results that are not properly captured during the production process cannot continuously express the

²¹⁾ By Jacques Derrida, "territory" refers to the environment where production takes place. Territory is an indispensable condition for production, but the flow of desire tends to constantly extend toward new connections and new environments. Deterritorialization is the movement that always seeks to escape the boundaries of a given territory, which on the other hand prepares for the formation of a new territory, that is, reterritorialization. So, Therefore, in this paper, used the term re-territorialization in the sense of breaking the boundaries of the archive and expanding the new structure and scope.

results of the original activity. Therefore, if we cannot properly keep up with the pace of technological change that leads to environmental changes in record creation, we will inevitably end up with an irreversible disconnection from the context during the recording process. It is important to leave and preserve complete records as a result of actions, but now we must accept "how" records are created and understand datacreated, and centered records.

The same goes for what the country or government does. The skills needed to conquer the Age of Exploration in the 17th century were shipbuilding skills, compasses, and navigation skills. In order to lead the current era of hyper-connectivity, it will be necessary to pursue technological innovation based on high-speed communication networks and at the same time pursue new values of trust, transformation, and transparency of the data that supports this.

As shown in Figure 1 below, Korea ranks 31st out of 180 countries in the International Transparency Index. This is also evidence that transparent administration is not taking place as much as the attention paid to e-government. Transparency and reliability begin not only with the disclosure of transparent administrative actions, but also with the disclosure and sharing of data that is the basis of those actions, and direct services. ²²⁾ When someone's intellectual capital is combined with the intellectual capital of others, both inside and outside the organization, new forms of value can be created and unprecedented opportunities emerge.

²²⁾ Innovate Korea 2045, published by the Ministry of Science and Technology and Communication, also suggests that the future vision of our country is 'a safe and healthy society', 'an abundant and convenient society', 'a fair and non-discriminatory communication and trust society', and 'a Republic of Korea contributing to human society'. Source: "Innovate Korea 2045: Challenges and Changes for the Future", 2020.

CORRUPTION PERCEPTIONS INDEX Q Score Country Denmark 0 Finland New Zealand Score Score Norway **63**/100 **31**/180 change Singapore Sweden Switzerland

[Figure 1] 2022 International corruption index

Source: Transparency International https://www.transparency.org/en/cpi/2022²³)

In that respect, There is a need to broadly define the meaning of records and archives. Just as the meaning of records has expanded, archives should not be limited to only places or objects that handle government records. Through this, it is necessary to be able to fully utilize not only government or public data but also commercial data as an archives services. Government data from administrative records are refers to data derived from administrative data collected and produced by the government, such as demographic and tax information. Public data that can be used by everyone, like copyrighted works whose copyright has expired. Commercial data that is commercial but can be used for public purposes. What is important is not a lot of data or big data, but good data.²⁴⁾

²³⁾ Since its inception in 1995, the Corruption Perceptions Index, Transparency International's flagship research product, has become the leading global indicator of public sector corruption. The index offers an annual snapshot of the relative degree of corruption by ranking countries and territories from all over the globe.

²⁴⁾ Sam Gilbert, "Good Data: An Optimist's Guide to Our Digital Future", Welbeck Publishing, 2021

Second, it must be assumed that meeting users and providing services in the archives is a type of mutual communication. The archives's services are operated mainly through online platforms. Future development strategies are mostly based on an online "contactless" format. Since some time ago, we have been referring to the act of physically meeting and meeting face-to-face as "off-line." It is possible to guess where the emphasis is on media that focuses on communication not only with providers but also with recipients.

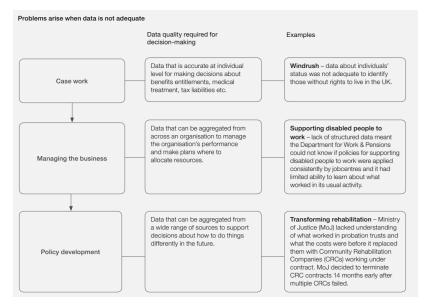
While physical and actual space refers to a space where the five human senses directly operate, digital space is a space composed of an ICT-based system where communication resources and social networks are distributed. Digital placeness is particularly meaningful in that respect. The key is to apply new methods by combining knowledge and data from various sources. When many people gather, a large space of convergence emerges where knowledge can be exchanged and shared.

In order for services to break away from provider-centered methods, strategies will need to be different depending on how much the recipient needs advantages other than space or time savings. Although we will assume a digital community in many cases from now on, there is a need to further expand the archive "boundaries."

One of the fundamental reasons for strengthening social relationships in a community and feeling a sense of belonging in relationships with others is sharing experiences, especially sharing similar experiences. People form likes and relationships based on similarities. Although the "contactless" form of archives services will be used more in the future, we must not forget that the archives is a place to discover the "value" of the past and preserve the "experience" of the past.

IV. Conclusion – Archival publicness and democratic response

Good public services come from quality data. Although it is a overseas example, there are many examples that prove that forming government policies is possible from high-quality data, as shown in the diagram below.



[Table 3] Decision-making and data quality²⁵⁾

It is true that there is the question of whether current archive management can encompass a variety of record types and whether data quality can be guaranteed through frequent transfers. Nevertheless, the government's high-quality data services can be said to be the beginning of

Source: National Audit Office(UK), "Challenges in using data across government", 2019, p.7.

democracy. Sometimes, various digital services are a type of electronic services for the convenience of public officials. And it is also undeniable that radical connections have a destructive impact on civics, communities, political movements, media reporting, and corporate strategy. However, the most democratic way for the government to meet citizens is through transparent disclosure through various data services.

Of course, there are many cases of data misuse or people not trusting data-driven information. For example, there is a study that shows that although the main values of journalism articles using data can be the usability of public data, expertise, self-directed information use, high quality information, and in-depth, the recipients (article users) do not actually accept it that way. 26) This was caused by the reporter (data user) collecting data with a specific intention, exaggerating or expanding the interpretation of data to support the topic of the article, or excessively distorting and expressing simple and gradual changes. Nevertheless, it is necessary to find policies and management alternatives, keeping in mind that the resulting services are also highly data-centered and digital platform-centered.

To meet citizens well, starting with the good administrative information services. They say the archives is the classroom of democracy, but in fact democracy begins here: data and policy. The majority of data comes from government data. Archives services require a data infrastructure as "civic data." What is more important is where the data is used rather than where it comes from. In that respect, civic data is possible with government data, public data, and private data all playing a certain role.²⁷⁾

²⁶⁾ Jeong Il-kwon, Yoo Kyeong-han, Jo Yun-kyung, The reality and improvement plan of reporting using data, Korea Press Foundation, 2016.

²⁷⁾ Brett Goldstein, "Beyond Transparency: Open Data and the Future of Civic Innovation", Code for America Press, 2013.

The same goes for generative artificial intelligence, which is emerging these days. The problem is that artificial intelligence predicts the past, not the future, and machines that pretend to be smart like this can also serve as machines that automate discrimination. What services and roles can archives play in a society of complex and secret discrimination involving machines? In conclusion, archives services should focus on reducing disparities or discrimination and increasing transparencies and opportunities for civic, through access and use of data. The reterritorialized archive should overcome the situation where unreliable data abounds in this space of convergence and function as a major "place" for genuine and reliable data distribution

In many cases, the maturity of democracy comes from its attitude toward the most vulnerable and underprivileged class members of society. What is important in today's data-based archives society is reducing alienation and increasing opportunities through data. This is a time when institutional and environmental foundations and efforts are urgently needed to enable easy access to and use of government public services through digital tools.

Future technologies are still difficult to predict, and it is difficult to accurately predict whether new technologies will only provide new convenience or to what extent they will deprive us. However, it is clear that new machines and technologies, including artificial intelligence and robots, are expanding their influence on records management-related fields and people at a tremendous speed. In that respect, archives re-territorialization would be start by making data a strategic asset, and possible by breaking down the boundaries of information resources and restructuring or redesigning the objects.

Technological determinists would say that introducing new technology is

the way to solve problems. However, the important thing in solving a problem is properly defining what the problem is. Before asking what is the problem, the most important question at this point is what problem needs to be solved and for whom.

(References)

- Ahn Dae-jin and LimJin-hee, 「Records Management Application Plan for the 4th Industrial Revolution Technology」, 「Archival Studies』 54, 2017.
- Aju Economy, "Kakao completes its first data center... Full-scale operation in the first quarter of next year", 2023. 09.26. Article.
- Digital Government Office, Ministry of Government Administration and Home Affairs https://contents.archives.go.kr/next/viewMainNew_do
- E-Nara Index: Government monitoring system https://www.index.go.kr/unity/potal/main/EachDtlPageDetail.do?idx_cd=1027
- Fink, Sheri, et Potter, Kirsten (2013) "Five days at Memorial", Random House Audio Publishing Group.
- Gilbert, Sam(2021), "Good Data: An Optimist's Guide to Our Digital Future", Welbeck Publishing.
- Goldstein, Brett(2013), "Beyond Transparency: Open Data and the Future of Civic Innovation", Code for America Press,
- Hyundai Research Institute(2018), "Main contents and implications of the 2018 Davos Forum", Economic Review,
- Hyemin Park et al. (2018), [®]Experiential Future 4th Industrial Revolution 2018₁, Bookoreum
- ICA(International Council on Archives), ISO 15489, 2016.
- Jeong Il-kwon, Yoo Kyeong-han, Jo Yun-kyung(2016), The reality and improvement plan of reporting using data, Korea Press Foundation.
- Jo Min-ji (2020), "Rethinking Archival Positions: Records and Archiving in the Era of the 4th Industrial Revolution", Journal of Archival, Information and Cultural Studies, No.11.

- Kim Jung-kwon (2022), Public law problems of introducing artificial intelligence systems in public administration, reflections on algorithmic behavior manipulation and hypothetical administrative actions in the age of artificial intelligence, Public law research, vol.50, no.3.
- Ministry of the Interior and Safety(2016), e-Government 2020 Basic Plan.
- Ministry of the Interior and Safety(2017), Government Basic Plan.
- Ministry of Public Administration and Security's National Information Resources Agency http://nirs.go.kr/index.jsp
- Ministry of Science and Technology and Communication (2020), Innovate Korea 2045: Challenges and Changes for the Future.
- National Archives of Korea (2017), Next Generation Records Management Model Redesign Research and Development Result Report.
- National Archives of Korea(2018), Overseas National Archives Electronic Records Management Strategy Data Collection.
- National Archives of Korea https://contents.archives.go.kr/next/viewMainNew.do
- National Audit Office, UK(2019), Challenges in using data across government.
- OECD (2023), "2023 OECD Open, Useful and Re-usable data (OURdata) Index: Results and Key Findings", OECD Public Governance Policy Papers, No. 43, OECD Publishing, Paris.
- Schäfer, Mirko Tobias & Karin van Es (edited)(2017), The Datafield Society, Amsterdam University Press.
- Transparency International https://www.transparency.org/en/cpi/2022
- UN E-Government Knwledgebase https://publicadministration.un.org/egovkb/en-us/About /Overview/-E-Government-Development-Index
- Urry, John (2007), Mobilities, Polity, translated by Kang Hyun-soo and Lee Hee-sang, Mobility, Arcanet, 2014.
- Wurman, Richard Sau 1(1989), Information Anxiety, Doubleday.