The Information Age and Discipline of Korean History*

Yi Tae-jin**

1. Introduction

It is not an overstatement to say that our daily lives are flooded by information, and the term, the "information age." Many discursive approaches about the information age have already been forthcoming in the fields of linguistics, sociology, philosophy, and economics, and more scholarly investigations will be engaged in the future. Although "history" is a study of the past, because the information age has become the focal point of contemporary society, the relationship between the two cannot be avoided much longer.

The historians' response to the rise of the information age has been

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** Professor of Korean History, Seoul National University

quite slow. Though the theme of the information age and historiography was selected for the International Congress of Historical Science in Oslo, August 2000, under the title of "The Media Revolution (multimedia and internet) and Historical Research," this constituted only one of 88 panels presented at the conference. It is difficult to find related articles in renowned historical journals, and finding monographs on the topic, written by historians, is even more difficult. Even in the West, where the information age first emerged, historical examination of information has yet to occur. In comparison, our treatment of the information age as the main theme for the Korean National Historical Conference shows the active engagement with the issue in Korean academia.

There are those who reject the use of computers and new media, claiming that the information age is threatening humanism and the humanities. However, this certainly is not the attitude a historian, who should be familiar with the relationship between technological development and human society, should take. Socrates' response to the development of writing, an example most often used in the information age discourse, is worth mentioning here: According to *Phaedrus* (274-77) and *Seventh Letter*, Socrates showed strong objection to the development of writing, using the argument that writing is an attempt to bring out, externally, the [thoughts] of the mind thus rendering it inhumane and a human construct. Socrates, who was immersed in the tradition of oral debates, argued that writing destroys the human memory, weakens the human spirit, and that the written text does not have the ability to answer or to defend itself, unlike the oral arguments.¹ Not much difference exists between Socrates' reaction to the written texts and the contemporary rejection
of computers and new media. Even the great mind of the Western civilization, being wedded to old customs, could not accept the historical transformation, from oral culture to written culture.

If we were to emphasize only the downsides of computer use at this age of "computer revolution," then it would be the same as following past misconceptions about writing. Though the main themes of modern historical investigation have been industrial capitalism and imperialism thus far, new discursive terminologies, such as neurocapitalism and cyber capitalism, are emerging rapidly. Even in the realms of social sciences, there are active discourses on the rise of the information age and the development of cyber space, calling it the "electrical network neighborhoods," the new social unit of the 21st century. In philosophy, under the assumption that technology, language, and reality are the three components of the information age, new phrases such as "digital revolution as ontological revolution" are being produced. Although it may be difficult to engage with all the above discourses, there are many issues that historians must grapple with. Because of the speed of transformations in the information age, if historians rely on the old mentality of counting 30 years as a generation, then they may fall behind the other academic disciplines.


2. History and Significance of the Information Age and the Information Society

1) Definitions: Information Age and Information Society

As the main theme of this paper is the discipline of history and the information age, we need to first examine the definitions of the term, the "information age." Numerous facts arise and exist in our daily lives. Facts exist in disorderly fashion without being examined by others, hence they cannot be information in themselves. In order for facts to transform themselves into information, they need to go through the process of becoming data via examination, experimentation, record keeping, and analysis. Only then, does it attain value as information.

"Information" is differentiated from "knowledge" in that it does not have a complete structure. Knowledge, as a higher conceptual unit than information, has been organized and theorized. Therefore, based on various information, it is an organized and constructed entity with specific purpose and objectives. If knowledge requires systematic organization, then information is the unorganized entity.

"Information society" is a society where the majority of people contributing to the daily functions of society rely on information and data. If the majority of people spend a significant amount of time collecting, producing, treating, and deconstructing information, then we can call their society an information society. When information

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4 The following summaries of the term, "information age," are based on Kim Chaehwan's *Digital gun Media* (Digital and the Media), (Seoul Yujin Publishing, 2000), and a few other texts.
becomes more important than energy as a resource, and the people involved in information-related industries increase to be considered a major sector in society, then this particular society can be labeled as an information society in relation to the previous "industrial society."

If capital and labor were the main elements of the industrial society, then information and knowledge are the most important elements in the information society. Rather than the Marxist labor theory of value, which was often used to analyze an industrial society, the knowledge theory of value is more applicable to the information society. Numerous labels have been placed on the information society, as follows: knowledge society (F. Machlup), Technocratic era (Z. Brezezenski), High technology society (J. Naisbitt), Post-industrial society (D. Bell), Post-civilization era (K. Boulding), and New Industrial society (J. Galbraith).

The development of the information age has been gaining speed through the micro-electronic revolution of the 1970's, combination of computer and communication in the 1980's, and the development of new high-speed cable infrastructure in the 1990's. These have not only influenced changes in the industrial structures, but they have also contributed to the changes in lifestyle, fashion, and "culture" in general, thus rendering the term "information age" indispensable. The development of computer and communication is often compared to the development of transportation and telecommunication after the industrial revolution, and the rise of virtual communities in cyberspace has fostered a new forum for exchanging ideas, information, and knowledge. This is not only a communication conduit, but also a commercialization of information and knowledge, which has changed a large part of today's industrial sector.
2) Development of Computers and the Information Society

Because today's information revolution started with the development of computers, we must examine the history of the computer in order to fully understand the information society.5

The first step toward the development of the computer was Blaise Pascal's calculator, which he created in attempts to help his father's business in 1642.6 This calculator had gears with 8 digits and one could add and subtract using the machine. The fact that this machine began to do calculations mechanically makes it the precursor of computers. A German mathematician, Gottfried Wilhelm Leibniz, further developed this machine and created the Stepped Reckoner, which had the capability to divide and multiply, and was first introduced in London in 1673. These two scientists and their creations attest to the claim that modern computing technology has its roots in the development of Western mathematics. Europeans in the 16th and 17th centuries developed symbolic languages to cope with the influx of information and knowledge via printing technology, and this can be considered the basis of modern computers.7

The first automatic digital computer was conceived in the 1830's by the British inventor, Charles Babbage. Quite similar to modern computers, this machine had a difference engine and an analytical engine enabling it to have a memory function, a calculation function, and an

5 Following discussion on the history of computers is based on The Encyclopedia Britannica vol 16 Macropaedia, Knowledge in Depth, 1992, Computers. For more in depth discussion, see Michael E. Hobart and Zachary S. Schuffman, Information Ages Literacy, Numeracy, and the Computer Revolution (Baltimore: Johns Hopkins Press, 1998)

6 Some consider J. Napier's calculator in 1617 as the first step

7 Michael E. Hobart and Zachary S. Schuffman, ibid., 113-114
input and output medium. Due to the insufficient development of metal components, however, this machine never reached fruition, and was not well known until his plans were rediscovered in 1937. British mathematician, George Boole (1815-1864), invented a machine, which had the binary logic operator (AND, OR, and NOT), which is considered an important precursor to modern computers.\footnote{Ibid., 251-252.}

Another major development in computing history was the introduction of punched cards. Though it was first invented by Babbage in 1830, it was not used until Herman Hollerith applied it to computing the national income tax of the United States in 1880. The contributions made by these two scientists cannot be over emphasized. If Babbage organized the conceptual tools of modern computing, then Hollerith's use of the punch card corresponds to the data input abilities of today.

In the 20th century, computers finally developed into a breadboard prototype of an electro-mechanical digital computer, and electronic vacuum tubes were used for the first time on the 1880 census returns. In 1939, Howard Aiken of Harvard University, in cooperation with the IBM Corporation, began work on a fully automatic large-scale calculator using standard business machine components. In 1944, they completed the Automatic Sequence Controlled Calculator, commonly known as the Harvard Mark I, which was approximately 50 (15 meters) feet long and 8 feet (2.4 meters) high.

Since the development of the Mark I, the digital computer has evolved at an extremely rapid pace. Each 10-year sequence following Harvard Mark I has come to be known as a generation.
The first generation refers to the time when computers were made using vacuum tubes and relays. The University of Pennsylvania’s ENIAC (Electronic Numerical Integrator and Calculator) is an example. This computer was originally intended for the U.S. military, and it was completed in 1946 as the first modern computer. Previous to the ENIAC, a mechanical calculator called the Colossus was developed in Bletchley Park, north of London. The Colossus was intended to decode German secret codes made with a numerical calculator. Two other models were developed during World War II, both of which used vacuum tubes and relays, thus increasing calculation speed. These, however, had to rely on people to provide commands, using manual switches.

This shortcoming was solved by applying John von Neuman’s stored-program idea to the IAS (Institute of Advanced Study at Princeton) computer and Cambridge University’s EDSAC (Electronic Delay Storage Automatic Calculator) in 1946, and University of Pennsylvania’s EDVAC (Electronic Discrete Variable Automatic Computer) in 1950. In 1951, J. Persper Eckert, John W. Mauchly, and others invented the UNIVAC (Universal Automatic Computer) using this theory, which became the first commercialized computer. Through the next 2-3 years, computers slowly became a part of companies and businesses.

Because first generation computers used electronic vacuum tubes, their size was quite large and they were mostly intended for use at the national level. Even the commercialized computers of the 1950’s were large and were not yet ready to become popular in society. In order for commercial popularity, computers had to be smaller and less expensive.
Downsizing the computer was enabled by the use of semiconductors in place of vacuum tubes. Computers using semiconductors are known as the second generation computers. Although semiconductor was invented in 1947, its first use in a computer was not until 1959, after more than ten years of research and development. The semiconductor was much smaller than the vacuum tube, and also much more precise and cheaper to produce, thus increasing the marketability of computers.

IBM's S/360 model in 1964 marked the beginning of the third generation computers. Using IC (integrated circuits), these computers were smaller but had larger memory capacity. The fourth generation of computers began in 1971, with the use of LSI (large-scale integration), resulting in smaller size and larger memory capacity. LSI connected thousands of semiconductors into one circuit, and its appearance was also known as the micro-electronic revolution.

The information age began with the fourth generation of computers, when personal computers became affordable enough to begin the spread of information via computers. The computers of the 1980's used VLSI (very large-scale integration) to increase the circuit density of microprocessors, memory, and support chips.

Through this development, the price of computers decreased dramatically, and commercialization began to take place at a rapid speed. With the development of multimedia functions during the 1990's, including digital transmission, communication, and broadcasting, in addition to the computer itself, the development of the information society was able to take place at warp speed.
3. Examination of Cultural Historical Discourses

Active discourse on the information age began to take place since the 1970's. To be precise, discourses on new information had already begun in the 1960's prior to commercialization of computers, and more active and significant discursive engagements began to take place in the 1980's. Discourses about society in the Information Age from the viewpoint of cultural history is an attempt to analyze the social transformations using cultural historical perspectives.

Early discourses focused on the issue of whether the information society brought on by the computer revolution was a continuation of the industrial society. Those arguing for the continuation theory claimed that the information age was only a developmental stage of the industrial society, where the wealth disparity between the rich and the poor still existed, and therefore the information age discourse was only a part of the hegemonic discourse. F. Schiller's neo-Marxism regulation theory and Jurgen Habermas' public sphere theory are two examples. On the other hand, those arguing for the discontinuation theory maintained that the information society and the industrial society were different in quality, and that there were hopes of social change. Marshall MacLuhan's media theory, Daniel Bell's post-industrialism theory, J. Baudrillard's postmodernism, J. Beniger's control revolution theory, and Niklas Luhmann's systematic theory are some examples of this school.

Although Habermas' public sphere theory, and hence the continuation theory, showed strong followings in the early discourses, the discontinuation theory seems to have the upper hand now with the rapid progression of the information age. The followers of the
discontinuation theory examine not only the tangible transformations, but are also looking at history from the perspective of the information age and offering new ideas, which historians do not have at the moment.

MacLuhan’s media theory first introduced a characteristic of the discontinuation theory in claiming that "media is massage." Under that title, his theory attempted to illustrate how information is manipulated before it reaches the public through the media. He then claimed that the communication process is more important than the information itself. If books appeared through the development of printing techniques thus changing modern civilization, then the power does not exist in the book itself or the contents but rather in the way a book forces the information through its printed self. In other words, the technological model called a book makes an imposition on the human psyche, and therefore through transforming that model at the level of the human conceptual psyche, a major transformation occurred, changing civilization. In a similar manner, the introduction of railroads transformed not just the quality of materials transported on the trains, but it introduced new mentalities and an understanding of the power position of the city as well as the industrial factories in relation to the train.

MacLuhann’s theory resembles Thomas Kuhn’s paradigm and it illustrates the historicities of industrialized European society from the late 18th century, as well as the modern European civilization, which

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started in the late 16th century. He organized his theory under the assumption that mass media, including television, transforms human perceptions and the human social organization such as family and other social groups. On a larger scale, however, these transformations signify the changes in the meanings of their existence so that there are possibilities of things and events becoming mere "spectacles." Under this organization, he claimed that all things and their meanings are entirely placed under the control of 'Ausstellungen' (exhibition value).11

MacLuhann’s theory is a product of the 1960’s, and it is difficult to apply it to the changes and transformations that have occurred since then. It is, however, meaningful that it emphasized the importance of "systematic organization" principles in different times based on the development of mass media. Let us examine more discourses on mass media to further aid our historical analysis of mass media development.

Linguistic anthropologist Walter J. Ong divided human modes of communication into primary oral culture, chirographic culture, printing culture, and electronic culture.12 He claimed that electronic culture is a new junction in communication as it is composed of secondary orality, or television, telephone, and radio, but still relies on writing and printing.

Oral culture signifies an oral tradition including stories, myths, phrases, prayers, official sayings, and other orally transmitted signifiers.

11 Ibid, 54
Ong argued that highly artistic and humanistic works ornamented by beautiful language are often produced in oral culture, examples of which are Homer’s *Iliad* and *Odyssey*. According to the scholarship on the poet, Homer was considered a "genius," but because he repeatedly used certain phrases in regularized organized forms, he is often compared to a laborer working in an assembly line, which only uses a limited number of set phrases.\(^{13}\)

Although the Greek alphabet was created circa 720 - 700 B.C., writing did not gain much practicality until the time of Plato (427? - 347 B.C.). It is only at this time that people began to use writing to record their knowledge and gain freedom from oral culture to express their thoughts in a more abstract manner.\(^{14}\) Oral culture did not, however, disappear with the proliferation of writing culture. According to Ong, essay writings from the Middle Ages were most often dictations, and oral culture was maintained through the training of monks in monasteries.\(^{15}\) Writing during this time were often records of orally delivered sermons or orations, but writing developed as a generally written text, which transmits its meanings by being read by the eye. Through the years, the appearance of the text and its proliferation through printing techniques in the 16\(^{th}\) century opened a new era for linguistic signification.

One of characteristics of oral culture is the heavy reliance on the listening aspect when thoughts are expressed, so much so that it continued even after the expressions were written down. Printing, however, changed this emphasis on listening to the aspect of sight.

\(^{13}\) *Ibid.*, 33, 37, 39.

\(^{14}\) *Ibid.*, 42.

\(^{15}\) *Ibid.*, 45-46.
and gaze in transmitting thoughts.\textsuperscript{16} Printed texts were much easier to read than hand copied texts, so speed-reading as well as silent reading became possible, and in the process of making the printed texts, many people's input as well as the author's editing are included. Precision of information delivery through printed materials contributed to modern technology, in which the precision is the most important element, as well as the importance of optical elements in relaying information.\textsuperscript{17}

Ong's detailed explanation of the impact printing techniques had on social and cultural transformations will be beneficial in hypothesizing the impact of the information age in the future. Ong argues that printing contributed to the idea of privacy, which is one of the key elements of modern society. Being able to read a book, which was much smaller than hand copied texts, by oneself in a corner, fostered the concept of privacy. Printing also added to the notion of private ownership in that the issues of plagiarism and commercialization of words arose from printing culture. By compartmentalizing and dividing the oral culture into one's own private spheres, printing culture apparently fostered individualism.\textsuperscript{18}

Walter Ong described electrical manifestation of linguistic expression as "later printing." This implies that electronic culture is not entirely new but rather that it has its foundation on writing and printing. His special emphasis is on what he calls the "secondary orality" of electronic culture. Telephone, radio, television, and various recording tapes have their own secondary orality in that it attracts

\textsuperscript{16} Ibid., 84
\textsuperscript{17} Ibid., 192-193
\textsuperscript{18} Ibid., 198-199
people to get involved, increase educational sensibilities, and make people recognize the present. He argues that it is surprisingly similar to the original oral culture where the orator has been substituted by radio, telephone, and television.\textsuperscript{19} When we take into consideration the fact that today's youths do not read books, this may be a valid observation.

Walter Ong's discourse on electrical culture was based on the realities of the 1960's, so it is not entirely applicable to the past two decades. A German social philosopher, Norbert Bolz, considers the transformation through the information age so fundamental as to argue that this era is at the edge of what MacLuhan called "Guttenberg's Milky Way."\textsuperscript{20} As mentioned earlier, he had argued that the organic neighborhood induced by the electronic network has become a new form of community, from the sharp increase in users of cyberspace.

Bolz, unlike Ong, emphasized that the bourgeois public opinion, centered on book culture, is disappearing in the abstract reality of the media neighborhood. Politics, church, economy, and media, which were the main public opinion makers in the industrial society, are no longer effective in creating opinions. On the other hand, various multimedia industries have filled the gap by providing service to the public. World communication no longer relies on the traditional method of "broadcasting" but rather relies on multi-channeled and specialized mass media "narrowcasting" so that the consumers have been transformed into readers or audience in the mean time. The bourgeois society solved itself into the individual with its own

\textsuperscript{19} Ibid., 204-205.
\textsuperscript{20} Cf footnote 2
significance, and then reunited itself again into the optional community.\textsuperscript{21} This optional community builds up the postmodern genealogy in the virtual reality of media.\textsuperscript{22}

Although Ong placed print culture as the precursor to electronic media, it is difficult to find connections between print culture and electronic media in Bolzman's arguments. On the contrary, he introduced the intoxicated situation that "the Internet and also old media like television present information as a fetish, and even communication as the cult." About television talk shows and chatting on the Internet, he argued, here the thing is not what is said, but the fact that something is said. He emphasized the discontinuity from the past by commenting that "the information out of your finger is by no means the program of enlightenment, but the magic under the new media."\textsuperscript{23}

These discourses on human communication and expression forces us to look back on the modern preoccupation with the books. Book-centered ideology and habits are only "modern" of the past, and this can change at any time. As we cannot discount oral culture prior to the onset of written culture, we also cannot reject the electronic culture and the consequent transformations. Rather, we need to consider how we should receive this new form of communication.

4. Future Path for Korean Historical Scholarship

There are not too many people who will deny that we are cur-
rently at a cultural crossroads. If historians are to be less than proactive to these changes, then it will be quite unfortunate. Despite the lack of historians' participation in the information age discourse, non-historians have applied historical perspectives to their enterprises to silence the historians' excuses in their non-participation. If historians are occupying the same position as Socrates on writing, then this must be addressed and resolved quickly.

History as a discipline is also heavily influenced by the modernization theory, like other disciplines in the humanities and social sciences. Information age discourse, on the other hand, is based on the assumption that the information society is formed by deconstructing various totalizing "modern" ideologies of the industrial society. If we are to show little interest on information society or reject it altogether, then we are in fact defending the old ideologies, consciously or not.

Responses to the information society can be divided into three parts. Firstly, the opinion is of that a "new renaissance" is taking place.\(^24\) As Plato dreamt about an ideal state with philosopher-citizens ruled by a philosopher-king, the people of this opinion are claiming, under the assumption that human intellectual capacity in the 21st century will increase exponentially, the possibility of leaving labor to "mechanical servant class" of robots so that human beings will be free to only do the thinking. In this truly "cultural society," computer programmers controlling the robots will increase, and the people's main concern will be not the politics or economy, but rather

the endless possibilities of the universe and mathematics and sciences. They believe that these creative inventions and development will be significant components of a new civilization.25

Baudrillard is one of the leading critics of information age. His main interests are the way ideologies and belief systems of the past get deconstructed and destroyed in the midst of information society, existential issue arising from the disparity between the "hyper real" of the cyber space and the reality, and the role of mass media in clarifying the organizations of the world. He, however, argues that mass media destroys people's communication rather than encouraging public opinion exchanges. He is quite pessimistic about the impossi-

bility of hiding one's own secrets in the age of open cyber space, where indiscriminant discussions of sex and people's secrets take place. He has yet to escape from looking at "the atomization" from nihilistic perspective.26

The third opinion is of that there are no needs to reject the information age and the consequent transformations in social systems—technological, economical, and administrative—as these changes provide convenience above all. They believe that many concerned aspects of information society will be resolved by the reclamation of public morals and religion. A leading sociologist of the United States, Daniel Bell, was of this opinion. He argued that a society is composed of three aspects, all of which are compelled by different power forces, including culture, political polity, and social structure. In other words, the technological-economical sphere is controlled by

functional rationalism and efficiency, political polity by equality and protection of rights, and cultural realm by self-realization, and, in its extremes, self-gratification. There is a possibility that they will counter one another.27

Among the above three opinions, the first is that technological advancement will have the same rosy outlook in the social and cultural realms in the future. The second shows the shortcomings of western rationalism in dealing with the problem of disparity between the real and the hyper in mass media. If the first opinion was extremely technology centered, then the second is too philosophical to incorporate the reality into their discursive engagement. The last opinion, mainly Bell’s, seems quite useful to us in considering the new path for history as a discipline, as it is based not only on sociological observations but also on realistic evidence.

Bell argued that a clear distinction between the modern and pre-modern is the power to change nature, and he summarized the western achievement of conquering nature in the following way. First he divided nature into two usages: the first which humans change at will for their own needs, what in German is called "Umwelt", the organic and inorganic realms of the earth which are changed by man. The second is what the Greeks called the "physis," or the order of things. The former has been transformed ever since the development of techne, whereas the latter has only been attained through the thing condensable by the word "method" in the modern

West. The nature has begun to be approached in a different light through the new method and the proponents of the physis can be divided into the following three. Galileo's observation of an object's velocity, force, and mass as the properties of bodies, measuring of the relations among these properties, and replacing concrete things as the units of research by the elements of analytical abstraction, Descartes' decision to discard all faith which has not been through the rational experiment, and his construction of analytic geometry through the combination of algebra and geometry, through which he has proved that the complete correspondence between a realm of abstraction and a realm of real world space; Newton's discovery of laws of gravity and his declaring that the universal order is not pre-established mysteriously, but accessible in mind, and could be constructed in exact, mathematical, deductive terms.

We are well aware of the desacralization and demystification of nature brought on by modern scientists' views. Thomas Aquinas' heavenly perspective, based on Aristotle's beliefs on the universe, was a religious one depicting any ascending hierarchy of the purposes. This universal view has changed by Newton's mathematical observations, so that the heaven is but a uniform, mathematical system on the single plane. The universe became a mechanistic world. Descartes claimed that he is in search of science and technique which would make men "the masters and possessors of nature." Bell introduced the way people's views on nature changed from

28 Ibid., 40-41
29 Ibid., 44-45
30 Ibid., 47
31 Ibid., 50.
the 16-17th centuries' technological one to one with over-confidence on the human capacity in the following way. Nothing is unknowable, Comte declared; Prometheus is my hero, Marx declared; man can make himself, modern humanist psychology declares. It is man's incorrigible tendency towards self-aggrandizement, self-infinitization, and self-idolization has resulted in putting the political religion (Bolshevik revolution, Nazism) as the absolute. Bell especially noted that these phenomena took place in context of secularization and profanation.

Enlightened thinkers of the 18th century sought human morality rather than the sacred, and the discord between the religion and sciences was the consequent result of their thinking. Most of these "Enlightened" thinkers of the 18th and 19th centuries expected that religion would disappear in the 20th century. Because they consider that religion arose out of the fears of nature, they saw no needs for religion in a time of rational thinking where people had full control over nature. The development of technology and sciences has caused people to lose their sensibilities for the sacred. Bell emphasizes the fact that religion has yet to disappear in the 20th century, on the contrary to the Enlightened thinkers' thoughts. He argues that religion has taken a stronger hold on people, depending on the geographic locale, and he argues that this illustrates the western misconception of "man". Therefore, the modern view of "man" takes

32 Ibid., 75
33 Ibid., 295-296
34. Im Sang-woo, "Rationalism" in Kim Young-han and Im Ji-hyun, eds "Sŏyang ŭi ch'ŏk unong (Western Intellectual Movement), Ch'ŏl'lok San'opsa Publishers, pp 351-352
35 Bell, 288
over only the aspect of freedom, not his finitude.\textsuperscript{36} He claims that people have misunderstood the role of religion based on their rational thoughts, even though religion is a realm of meanings, not something technological advancement can replace\textsuperscript{37}

Bell considered the attempts to look at society and history in the view of "Totalitaet" as the biggest downfall brought on by modern rationalism, and offered sharp critiques accordingly. He claimed that although the holistic argument looks to the social system to answer the religious transformation question, because religious sensibilities and changes of the faith are mainly based on the culture, it is not a question of the social system. The reason why religion is still intact at the 20th century when the technological advancement has reached its peak is that these two concepts - religion and technology - occupy different spheres.

In considering Bell's discourse on the construction of modernity and its missing way, I have two main thoughts. First is on the response to the modern information society, and the other is the role of historical scholarship in this information society. Although many people are benefiting from the convenience of tools provided by the information society, they worry about the loss of humanity in the process. Perhaps this worry itself falls into Bell's criticism of the holistic worldview. According to Bell's analysis, the usefulness of the information society's tools and the cultural response can be mutually

\textsuperscript{36} Ibid, 75

\textsuperscript{37} There are similar arguments in Korea (Kim Hyeun-mo, "History and Science" The Citizen's Forum on Korean History, vol. 8, 1991) where it is argued that technology can enrich human life but because not all human aspects can be fulfilled by technology, technology should not be the center of human life and academic scholarship
exclusive. It would be nonsense, according to his argument, to avoid technology in fear of losing humanity. The question of maintaining humanity is an issue, which should be dealt with in a cultural sphere.

Then, how can we prevent the risky phenomena, such as the loss of humanity, in the cultural sphere? The role of historical scholarship in information society is one of these questions. Under the assumption that the seed of human overconfidence inherent within 16th-17th century view of humanity grew during the Enlightenment and finally flowered after the 19th century into the mad, holistic view of society, Bell expects the return of the sacred, the resurgent religion, to overcome that madness. He predicts, in United States, that farmers, lower-middle classes, and small-town artisans, and the like, will seek "moralizing" religion in the face of fading modernism, and the intellectuals will seek religion as a reaction against modernism. He expects the private sector — family, church, neighborhood, and voluntary associations — to base their social reforms on the mass media and take away supremacy enjoyed by the holistic entities such as the central government, large-scale administrations, and mega-organizations. He anticipates that religion, more diffuse, will be a return to some mythic and mystical modes of thought. The world has become too scientific and drab. He suggests that men want a sense of wonder and mystery.

Bell's high expectation on religion is based on the premise of regaining self-recovering power to keep the humanity, which was lost

38 Daniel Bell, *The Winding Passage: Essays and Sociological Journey*, p 319
39 Ibid., 322-324
after the modern scientific revolution (Bell does not like to use this vocabulary). If today's information age is a result of mathematic and scientific advancement originated at the Western modern scientific revolution, then the return of the sacred, the basic humanity, which had been disappearing through the development of the information age, will enable it. His argument appears as the only possibility for the civilization to maintain its humanity. The return of the sacred has interesting implications for East Asian civilizations, including Korea. Traditional thoughts of East Asia maintain what Bell considers as the "sacred," so that Bell himself has mentioned the "Tao" of Chinese thoughts in relation to his argument.40

However, if we were to consider Eastern thoughts as a quick cure for the dangerous illness, then we will not gain much in the process. What we need is not a first aid treatment, but rather a reshaping of the body and the regaining of balance. Therefore we must consider specificities of Eastern and Western "bodies," and historians must examine the historical contexts at the time of Western modern scientific advancements.41

40. ibid., 325

41. I have argued on different occasions the possibility of a close relationship between the "Little Ice Age" of the 16-17th centuries, as seen in the Annals of the Chosön Dynasty, and the onset of technological advancement. The little Ice Age is a phenomena brought on by the falling of meteorites through the Earth's atmosphere causing numerous frightening unnatural phenomena, such as colored vapors, halo effects of the sun and Moon, and daytime appearances of Venus. This ultimately caused scientists to examine these phenomena in search of God's true meaning. Chosön Confucian scholars, on the contrary, believed that these astronomical phenomena were caused by misdeed on the part of human subjects, and this period experienced a rapid development of scholarship related to human nature. In this manner, my thesis will foster a better understanding of the difference between the Western and Eastern cultures. For more
It is a given that the information age will transform many of the social and cultural relationships fostered in the context of the industrial society. In a similar manner, the emphasis of historical scholarship will change as well. If the focus of change is the information age, then communication techniques in each period, discussed in Walter Ong’s discourse, will become a basis for analysis. These are the minimum necessities for the discipline of history to survive. Also, as Daniel Bell argued, if the social system and cultural development were different realms, then scholarship examining these will also be needed. More fundamentally, however, the question must be raised as to the role of historical scholarship in this age of post-modernist states. New Fields and theories on the same level of the holistic and teleological concepts and historicism, which dominated modern historical scholarship, must be newly developed. Thus discussion will become more active as the downfalls of modernity, which led to the construction of the information society, becomes more clarified in the future.

information, see Yi Tae-jin’s "Sŏnbongi ch’ŏnbyŏn’nae’t yŏnguwa chosŏnwangjosillok" (The research of Natural Catastrophes in the Little Ice Age and the Annals of Chosŏn Dynasty Korea -Prospectives as One Chapter of Global History-), Yoksa Hakbo 149, 1996, and “Wegye‘ch’unggyōk tejonāngwga illyuyōksa‘un seroun haesŏk” (New Interpretation of Mankind’s History Based on the Neo-Catastrophism), Yoksa Hakbo 164, 1999

42 The direction of cultural history as taken by French Annal historians, seen in Chu Myŏng-ch’ŏl’s "Sahwesa’esŏ munhwasaro" (From Social History to Cultural History) (The Citizens’ Forum and Korean History 8, 1991), proves the efforts to overcome modernity and totalitarianism within history.
5. Conclusion

In examining the history of the information age and the discourses on the present and the future of information society, I have a few comments from a historian's perspective.

First, although information age discourse is taking place in many different perspectives, its future remains unclear. Optimism and pessimism counter each other and a middle ground exists, and yet there are no analyses of the impact cyberspace has on "real space" to this date. Though it is possible to worry about the cyberspace invading the real, it is also possible to consider it as a continuation of the real. In this manner, historians could also rethink their works on the information age as the issue of continuation rather than invasion.

Secondly, although technology plays an active role in maintaining the information age, there are no needs for scholarship on humanities to decrease in the mean time. It is important to consider Daniel Bell’s theory that the social system, political entity, and culture occupy three different realms and are rooted in three different forces, as well as to recognize the importance of humanities in producing and developing the basic information used in cyberspace. If we were to tend only specific areas of the information age without fostering basic scholarship, and use only what is available right now, then the information age will end in an impoverished state. In order to maintain a truly sophisticated information society, it is necessary to support, both at the national and social levels, the development of basic scholarship. The fact that American universities are firmly rooted in the humanities and liberal arts, despite their active role in the creation of the information age, should not remain just as an
example. It might be possible for Daniel Bell's "the return of the sacred" to be enacted in the United States because of its preparation for the information age.

Thirdly, I had mentioned the possibility to discover the value of the Korean, or the Eastern, element in Bell's "the return of the sacred," but I cannot help confess that the social realities of Korea proves to be to the contrary. The suppression of its own tradition after Korea's "submission" to the Western modernism in the 19th and 20th century, half on its own accord and the other at the hands of others, is a sad reality. Rather than talk about the fast growth of the information society, we must face the realities of this shameful past. In order to rectify this reality, we must come up with systematic and pragmatic solutions, as there are no means to regain Korean tradition prior to the flooding of modernity.

Fourthly, there is a need for more active engagement with the creation of a new historical perspective in light of the information society. Historians must not be limited by geographical specialization, but rather cross national boundaries to exchange ideas. Because of the diversity of cultural manifestation of the information age, communication is necessary with other scholars of humanities and even engineering technologies. If Korean historical scholarship does not adopt a proactive stance, then even if modernity based on western experiences is deconstructed, it will still remain on the side.

Lastly, in order to safeguard the Korean information age from falling into nihilism, the fostering and the education of the humanities must be maintained. Only when humanists and historians have more tasks to perform, can we say that the information society is on its right track. Rather than worrying about the unclear future,
we must not neglect our duties, however small, at the present. Incorporating the information society's tools to historical sources should be the most fundamental task before us today. Creating Internet sites on history, as well as making international links between historical sites, must also be hastened to aid Internet users.

(Translated by Joy Sunghee Kim, Columbia University)