

Role and Function of the Information Public Law

Il Hwan Kim¹, KyungLyul Lee², Jaehyou Kim^{3*}

¹School of Law, Sungkyunkwan University
[e-mail: ilhwan@skku.edu]

² School of Law, Sungkyunkwan University
[e-mail: klee04@skku.edu]

³Department of Computer Education, Sungkyunkwan University
[e-mail: jaekim@skku.edu]

*Corresponding author: Jaehyou Kim

Received July 27, 2016; accepted October 5, 2016; published January 31, 2017

Abstract

As a ‘network of networks,’ the Internet globally connects a huge number of regional and individual networks and provides us with new hopes and possibilities. However, a nation-state as well as the legal order of the ‘state’(constitution) has limitations that are all too clear in order to regulate this new world formed by the Internet. It will soon be impossible for a single state to control these global information networks, and they will not be consistently and vertically operated and managed by anyone. As a result, ideologies or jurisdictions that support the legal order of a nation-state are no longer sufficient to control information delivery beyond borders. Furthermore, the development of the Internet and emergence of cyber space in the information society has led to the idea of ‘extinction’ of nation-states. Nevertheless, the conclusion that the state will be extinct due to the development of the information society is still nothing more than a hasty assumption. In other words, the information society does not indicate the end of the state. Rather, we must now clearly perceive that the object of our research and discussions must be the role and function of the nation-state in the newly emerged information society in the global aspect and international aspect, as well as in relationships with individuals or organizations that now have unimaginably strong information power. It is clear at this point that nation-states will lose the function and authority they have enjoyed or exercised to a certain degree, but this certainly does not indicate that nation-states are, and will be, unnecessary or useless. Rather, it is necessary to focus on the list of tasks that must be accepted by nation-states in the changed information society, as well as responsibilities and means to perform those tasks.

Keywords: Information Society, Information Order, Cyber space, Constitution, Criminal Law

1. Introduction

As many are already well aware, the information society is a society in which the importance of information itself grows tremendously and, based on that the production, distribution along with use of information brings about changes differing from that of the previous society. Of course, information was important in the past as well. People with the means to obtain or produce weapons could increase their power and wealth by obtaining necessary information. However, while people in the past made certain decisions based on their own individual experiences, people today make important decisions based on more specific and accurate information rather than their own experiences. In other words, things that were physical and tangible were more important than the intangible information in the past. However, in the information society, information is the only or the most important source of wealth and additionally serves as the center of power. Of course, there have been many discussions on what information specifically is, but there is no generally accepted concept. In this light, the concept of information can be generally defined as signals with semantic content through which rational decisions can be made and problems can be solved. Recently, knowledge regarding information society is receiving attention as a developed form of information society. In other words, based on the ‘informatization of knowledge’ and ‘intellectualization of information’, “knowledge information society” that integrates “information-based knowledge society” and “knowledge-based information society” are mentioned in discussions. The true ‘knowledge information society’ is a society in which ‘knowledge and information’ are implemented in all fields of society such as politics, economy, culture, national defense and education in procedures of ‘informatization of knowledge’ and ‘intellectualization of information’. Ultimately, knowledge information society is a society in which knowledge is produced and created based on ICT, where knowledge and information leads individuals and organizations to make major decisions. In other words, knowledge information society is a society in which information is interconnected and thus becomes knowledge. In this respect, knowledge becomes the driving force of wealth and value creation. [1]

2. Various trends about the development and progress of information order

1. Significance of information order

We must think about the concept of ‘information order’ that forms (knowledge) information society. Here, the concept of information order is not generally and specifically confirmed. Rather, it is a model concept that provides principles and standards in its own way with regard to information survey or processing within a society, much like economic order. [2] Ultimately, we cannot figure out the detailed content of all regulations specifically related to information processing or delivery through information order. However, we can obtain the principles or standards that lead the entire Impossible, if this discussion in principle and prior understanding about information order are preceded, to properly examine how these principles and standards must be applied in individual fields. Therefore, figuring specifically what results must be produced in discussions or individual fields of information order is a justifiable issue which we must make decisions according to the normative principles and

standards, and not a realistic and practical issue according to the application of ICT. When all is said and done, judgment on availability, risk and efficiency of information procession is not obtained by applying new ICT, but is rather made according to organizational, legal and social preconditions. [3]

2. Argument about 'international political information order'

All games using computer programs serve as very convenient means of entertainment in that they can be enjoyed indoors without restriction by the external environment and they require but simple operation. As games are considered to be successful when they stimulate continued interest, offline and online games are characterized by easy access and immersion. Yet, in the case of online games, players can meet one to one or in group and build a community available 24/7 in the virtual space, even if they have never personally seen each other offline. Under these conditions, they can continue to cooperate and compete with each other to achieve a common goal and exchange their ideas and information while playing games. And also, game users can create a second self in a new world filled with a sense of tension, which keeps unfolding in the environment being provided in real time through online, not a given program. In particular, Massive Multi-player Online Role Playing Games (MMORPG) allow to gamers create random story by themselves and evolve a virtual community, instead of following a story created by game developers. In addition, since the structure of games requires users to reach a certain level before allowing their character to engage in the game actively, gamers must invest an enormous amount of time in nurturing a character and securing various items. Although games themselves have the property of leading to a certain level of immersion by stimulating interest, online games with the above characteristics are especially addictive. In particular, internet games pose a fatal temptation to adolescents who face various behavioral restrictions in the real world compared to adults, want to belong to a peer group, are relatively more afraid of being shunned by the group and can hardly be expected to make rational decisions and actions by clearly separating the real world from the virtual world.

3. Recent discussions on establishment of new information order in the 21st century

In 2013, former CIA agent Edward Snowden exposed the fact that the U.S. National Security Agency (NSA) had been monitoring all Internet and communications in the world. Accordingly, the issue of 'Internet governance' is quickly emerging, and much more attention is now being paid to the International Telecommunication Union (ITU) Plenipotentiary Conference, set to be held in Korea in October 2014. Opinions that cite US-led Internet governance as not trustworthy have been spreading all over the world for the past decade or so. Ultimately, this March the U.S. announced that the government will hand over all authorities to the Internet Corporation for Assigned Names and Numbers (ICANN), which is a private organization that has been dealing with Internet governance, and proclaimed that the U.S. government will no longer interfere with the world Internet order. Accordingly, questions of who exactly will control Internet governance and how it shall be done have emerged as the new global concerns. At the 'NETmundial' (global network) conference held in Brazil in April 2014, over 2,000 people working in the Internet industry gathered together to intensively discuss these issues. There was especially a wide variety of opinions concerning whether states or other actors will take initiative regarding Internet order. China, Russia and India emphasized that governments must be responsible for leading

the order. On the contrary, European countries as well as the U.S. argued that the Internet community must be led by various stake-holders such as civic groups and the academic circles and not governments.

3. Information order that must be pursued in the knowledge information society: Establishment of 'constitution-friendly and human-oriented information order'

Information order that we must ultimately aim for shall be human-oriented information order. In other words, it must be a human-friendly information system that can be controlled by people. To build such a system, it is necessary to protect individual rights ex post facto and invite comprehensive participation and cooperation of those involved from the process of planning and building this system. Therefore, one must remember that controlling IT is not hindering development of new ICT. We can conduct in-depth examination of how the principles and standards of information order must be specified in individual fields by undergoing review and analysis of new ICT. In enactment and application of law, this discussion and analysis enable the law to adjust to academic and technological development, while also providing the opportunity for the society and state that are to introduce new IT to rethink before making a decision.[4] Then, in the end, the information order we must pursue in the situation in which there is uncertainty over the dynamics and direction of information society development must be open and future-oriented. Moreover, it must take into account technological, social, cultural and economic diversity rather than pursuing one-way and unilinear development.[5] Accordingly, legally formed information order must reflect realistic social structures and also provide 'guidelines and standards' they must pursue.

4. Re-examination of the role and function of the constitution in the knowledge information society

1. 'Constitutional information order' as an 'outline (frame)': Extinction of the state in the information society?

The word that most apparently tells us that we live in the information society today may be the Internet. The Internet is technically a 'network of networks' and socially a community (cyber space) of people who use and develop such networks.[6] As a 'network of networks,' the Internet globally connects a huge number of regional and individual networks and provides us with new hopes and possibilities. However, a nation-state as well as the legal order of the 'state'(constitution) has limitations that are all too clear in order to regulate this new world formed by the Internet.[7] It will soon be impossible for a single state to control these global information networks, and they will not be consistently and vertically operated and managed by anyone. As a result, ideologies or jurisdictions that support the legal order of a nation-state are no longer sufficient to control information delivery beyond borders, Furthermore, the development of the Internet and emergence of cyber space in the information society has led to the idea of 'extinction' of nation-states. Nevertheless, the conclusion that the state will be extinct due to the development of the information society is still nothing more than a hasty assumption. In other words, the information society does not indicate the end of the state.[8] Rather, we must now clearly perceive that the object of our research and discussions must be the role and function of the nation-state in the newly

emerged information society in the global aspect and international aspect, as well as in relationships with individuals or organizations that now have unimaginably strong information power.[9] It is clear at this point that nation-states will lose the function and authority they have enjoyed or exercised to a certain degree, but this certainly does not indicate that nation-states are, and will be, unnecessary or useless. Rather, it is necessary to focus on the list of tasks that must be accepted by nation-states in the changed information society, as well as responsibilities and means to perform those tasks.[10]

2. Need to reestablish the role of the state in the information society

(1) Emergence and significance of the ensuring state theory [11] in the information society

Constant attempts have been made to seek the suitable guiding ideologies of the state according to the times. Today, the reactions of literatures in various countries in facing the changes of transition into the global information society are represented by ensuring state as well as conciliating state and regulatory state.[12] These ideas are generally based on the fact that there would be functional changes of the state through the development of IT. However, with the diversification of legal means to input in order to solve problems, there is rather an increase in national interference in economy. In the end, it is forecasted that the legal liability of the state will not disappear but will only be fulfilled in a new means and method. This prospect can be characterized by the fact that the fulfilling responsibility in the productive state of the past is switched to the ensuring responsibility, and that responsibility for conciliation or infrastructure is emphasized as a new form of burden sharing between the state and market.[13] Here, the development of the concept of ensuring state is closely connected to the context of discussions by the jurists who have made efforts to reform the administrative law since the early 1990s. In the effort to make the private sector promote public interest, the ensuring state places most emphasis on providing institutional guarantee in advance in the legal aspect[14] while demanding the establishment of a normative structure that distributes the responsibilities between the state and the private sector. Moreover, the ensuring responsibility of the state is specified within such normative structure.

(2) Changing role of the state as a ensuring state

Following the aforementioned explanations, a new responsibility emerges to the constitution and state in the information society, a responsibility that is qualitatively different from the past. Unlike the past, the state and the constitution in the information society are more strongly required to form and maintain preconditions to establish and exercise freedom and rights of individuals. Accordingly, the role and function of the state in the information society shift from the state's direct 'fulfilling responsibility' and 'consequential responsibility' to the 'ensuring responsibility' that enables the function and effect of information order. Now the state must ensure conditions on the 'frame (outline)' of the information society, in which it must establish structures to enable free actions of individuals.[15]

3. Protecting the fundamental rights of individuals and ensuring transparency of the state

Next, there is a need to protect the fundamental rights of individuals and ensure transparency of the state in the knowledge information society. First, in order for individuals to avoid being degraded to an object or a means of the state in the backdrop of knowledge information society, privacy of individuals must be actively protected. Furthermore, 'transparency of the state' must be ensured through various fundamental rights that ensure both the autonomy and freedom of individuals.[16] Here, the relationship between information disclosure and personal information must be examined. First, no effort to mediate, guide, or control the state through democratic formation of opinions will be meaningful without the active participation of the people. Ultimately, in order for the people to actively exercise the political freedoms given to them, they must be guaranteed the freedom of speech and publication through political parties, media, and civic groups while also being well aware of the things currently done or will be done by the state. The goal is to enable the people to make independent judgments on actual problems by disclosing administration measures and enhancing transparency, thereby encouraging citizens to actively participate in political activities responsibly. In the end, the basic purpose of the Freedom of Information Act is to realize the true meaning of popular sovereignty and let democracy flourish by ensuring the transparency of the national administration. Accordingly, the people's freedom of information disclosure is their right to generally have access to information owned by state agencies. Thus, it may seem contradictory to ensure both individual rights of informational self-determination as well as freedom of information disclosure at the same time. However, personal information protection and information disclosure are not separated or in conflict; rather, both are necessary to promote communication skills of the people and the function of the democratic society.[17] Therefore, if a conflict arises between the two, both rights must be respected, specifically considered, and mediated instead of making hasty decisions to choose either one.[18] This strained relation will not be resolved through the ideological argument over which of personal information protection or information disclosure shall be given priority. Instead, it is necessary to make efforts to resolve the issue by clearly dividing the relevant fields and making specific attempts for solution. In other words, it is undeniable that there are conflicts among approaches to informational self-determination, freedom of information, freedom of investigation, and environmental information. Nonetheless, there is a need to reveal the effects of both rights, and additionally prevent one right from being completely blocked by the other.[19] In other words, informational self-determination and the right of access to information in a few fundamental rights demand disclosure and transparency of administration, and thus one is based on the premise of the other and both rights supplement each other. Therefore, both rights are preconditions that cannot be given up for individual communication in the democratic social order.[20] Therefore, it is preferentially the task of lawmakers to mediate such strained relation between the two rights. Moreover, if lawmakers faithfully perform this task, it is necessary to determine specifically which is more specifically valued between personal information protection and information disclosure in each case. As a result, the legal order that will enable actual implementation of freedom and rights guaranteed for individuals by the constitution must be formed.[21]

4. Responsibility of the state to build information infrastructures

The state, grounded on the aforementioned principles and responsibilities, is obliged to enable free communication procedures of the people in the information society and resolve the 'digital divide' that occurs due to information inequality among individuals.[22] With regard to the issue of the digital divide, the state must assume the responsibility for the information substructure.[23] Of course, the state cannot specifically and directly ensure or be responsible for the people's access or use of the information infrastructure or content; and yet the state can still be free from the duty of having to establish an information network for the people to access and use information without inconvenience and build various information substructure accordingly.[24]

5. Need to present a new principle of separation of powers in the knowledge information society

(1) Emergence of potential failure of the principle of separation of powers

The reason why privacy is more likely to be violated in the scientifically and technologically advanced society, also referenced as the information society, can be understood based on the discussion of risks such technological development has toward human beings. In the past, the state could exercise its power by exerting exclusive physical violence or imposing the possibility that it could exert such violence. However, the state today prefers new methodologies over physical violence, such as offering provisions, as well as investigating and processing information. This is why there are risks in the newly developing sciences and ICT. This is because unlike in cases of physical violence, individuals cannot easily or ever perceive that they are being monitored or controlled when using this technology.[25] As a result, since the emergence of computers, there have been increasing fears over the fact that the state can obtain all personal information by modes of ① automatic information processing as well as ② endless data connections. These days it has realistically become possible to capture and collect data through computers. This technological development enables information processing anytime and anywhere. Thus, this surveyed data has created new data that is qualitatively different from that in the past, facilitated information exchange among various organizations, and also enabled one organization to directly load another organization's data. Moreover, all input data could be used simultaneously by countless organizations. When its all said and done, with the help of electronic data processing, data can be entered and connected limitlessly, which then enables the state to easily and extensively identify individuals.[26] Accordingly, citizens may no longer freely participate in the public decision making process, degenerated as a mere information object. Democratic opinions may be distorted or difficult to be formed. Moreover, with the introduction of electronic data processing, the traditional structure of public administration may fundamentally change. In other words, the reason why there is the large concern about individuals becoming national objects in the scientifically and technologically advanced society or the information society is because it is technically possible to build a central data bank that can contain information about all individuals. Then, the one who deals with and controls this central data bank will be at the center of power in the information society; thus, the principle of democratic constitutional state based on separation of powers into legislative, judicial and administrative branches may be degenerated into a mere artifact exhibited in a museum.[27] In the end, under the newly changed conditions provided by information and

communication systems, there are serious issues of separation of state (information) powers, relationship between the legislative and administrative branches, along with issues of reinforcement and movement of new powers. In particular, many people point out the possibility that the balance of power between the legislative and administrative branches may be severely threatened. This is why we are in urgent need for additional relevant research.[28]

(2) Reinforcement of the role and function of the legislative branch in the knowledge information society

A. Application and development of the theory of legal reserve in the democratic constitutional state

In the U.S., Germany, and Korea, which are all democratic constitutional states with established constitutional supremacy, a legal reserve indicates the areas and objects that are legally reserved and away from the autonomous regulations of administration.[29] Thus, the concept of legal reserve includes regulations that are reserved only by the parliament and that must be, thus, carried out in a perfunctory legal form.[30] Arguments about legal reserve that existed in Germany in the past divided legal reserves into the cases in which the administrative branch could act according to its own unique authority and the cases in which the administrative branch required formal authorization for its activities. Arguments today about legal reserves deal with what regulations the parliament must make itself and what actions cannot be delegated to the administrative branch as a result. Therefore, legal reserve is a broad concept that delegates the power of legislation, whereas parliamentary reservation is a narrow concept that excludes the delegation of the power of legislation.[31] Thus, constitutionalism, which is one of the principles of the constitution, considers legal reserve as one of its key contents, which state that the formal and legal grounds enacted by the parliament are required for administrative actions to take place. However, it is not enough for today's principle of legal reserve to just have the administrative actions grounded on law. Rather, it must be understood as a concept that implies the need for lawmakers, who represent the people, make their own decisions about the fundamental matters of territories that have fundamental and important significance to the national community and its members, especially the ones related to fulfilling the fundamental rights of the people, rather than delegating the decision-making to the administration (so-called principle of parliamentary reservation). Considering the fact that the scope of administrative actions is extensively expanding and has additionally become an aspect of modern administration of which related actions are becoming more complicated and diverse, merely demanding the need for formal and legal grounds will result in the administration making all decisions. This is the case even within the fundamental and important elements of state actions and national life. The result is contrary to the principle of parliamentary democracy in which the fundamental decision-making authority of the will of state lies in the parliament that represents the people. What matters must be regulated by lawmakers as formal law cannot be determined uniformly. Such provisions should be decided individually considering the importance of benefits or values related to specific cases, and the degree and method of regulation or violation. But when limiting the freedom or rights of the people that are guaranteed by the constitution, lawmakers must regulate the fundamental matters of the limitations by law.

B. Role and function of lawmakers in the knowledge information society

(A) Role and function of law in the knowledge information society^[32]

The ensuring state in the information society leads and encourages autonomous establishment of norms to regulate certain areas through individuals, especially economic organizations or expert associations, and other similar organizations. This encouragement is preferred instead of enacting all laws and regulations by itself. Moreover, the ensuring state mediates these autonomous regulations with various forms and degrees of scrutiny.^[33] Law in the ensuring state delegates individuals with tasks or give them the authority to establish norms in specific fields, determining the goals and limitations of autonomous regulations, or acknowledges the standard of behavior created by individuals under specific conditions as a binding standard. The state also enacts specific norms occasionally if autonomous regulations do not go the desired way, and imposes actual threats. Therefore, the state legislates accordingly even though the ensuring state still has a central meaning as a mediating resource on autonomous regulations and enactment of norms through the traditional sense of state agencies. The state becomes the supervisor of social legislation only in certain territories, and in this case the state adjusts and sets limits to social legislation through legislation. Ultimately, the state still remains as a being that contributes to mediating development in cooperation with individuals in various forms according to different fields through legislation.^[34]

(B) Role and function of lawmakers

If the constitution is to fit within the normative frame for development of specific state order and social and political process, being constitution-friendly indicates that the changes in the society through the development of ICT must be harmonized with the goals regulated by the constitution. Therefore, rather than hastily applying unproven scientific technologies, it is necessary to pursue a careful review of these options through social, research, and state based organizations to pursue technological development. Above all, the application of ICT must be democratically coordinated according to the principle of constitutional supremacy. Then, the primary tasks of creating legal preconditions and weighing various interests lie in the hands of the lawmakers. The lawmakers primarily must decide what risks are inevitable and whether the people can accept them by taking into consideration all legal, technical, economic, and environmental contexts. This is in addition to also confirming the safety standards. Therefore, forming constitution-friendly technology through lawmakers must aim for establishing outlining conditions for the development and use of ICT. This indicates that such technology must be used in order to expand the territory of individual freedom, increase opportunities of democratic participation, and streamline the process of limiting and controlling state and social powers. Therefore, if the application of new ICT threatens the fulfillment of the people's fundamental rights, the state must not allow it, and interfere and control the threat accordingly.^[35]

5. Roles and Functions of Criminal Law in Knowledge Information Society

1. Functions of the Assignments of Criminal Law - Harmonizing the Protecting and Guaranteeing Functions

Traditionally, state society utilizes criminal law as a means to maintain domestic law and order. Criminal law serves the role of protecting individuals and society from crimes by imposing punishments for behaviors that violated an order or infringed upon the foundation of peaceful coexistence between members of a particular community. However, criminal law also can serve as a restriction that imposes on the essential rights and freedom of individuals even after using elaborate and copacetic language. After elucidating the essence of criminal law; citizens have established their own fundamental principles, aptly named 'the principle of legality', in order to stay free from abuse of power from national administrative justice. These concepts constitute the modern version of citizen-led criminal law. Since this juncture, criminal law has become a cause of restriction as well as a ground for authorizing national administrative justice at the same time. Criminal law currently serves to not only protect citizens from the arms of national administrative justice but also to guarantee that criminals are not charged with excessive penalties. These protecting and guaranteeing functions of criminal law will most likely remain the same for purposes related to maintaining constitutional order in today's knowledge information society. However, it is necessary to pay attention to changes in the roles and functions of criminal law so as to overcome and resolve urgent issues in this knowledge information society, or namely the ever prevalent risks present within our society. As the technologies and capabilities of our knowledge information society advance, information becomes exponentially more relevant within the bounds of criminal law. Changes in the traditional theories of criminal law are required to corroborate with the reality of increasing usage of the information or information technology concepts.

2. Progress of Knowledge Information Society and Emergence of Information Risk

In modern society, marked risks along with developments of scientific technology are seemingly everywhere. This emergence has led to the moniker of the "risk society" (Risikogesellschaft), since subjective anxiety has become a part of society's daily routine.^[36] Previous versions of criminal law properly controlled such risks according to 'a principle of law with allowed risk' in the area of criminal negligence. In other words, these versions of criminal law suggested a criterion of caution to members for maintaining their social lives in order to control routine anxiety as well as the co-existence of objective risk and, hence, re-constructed the cornerstone of citizen-oriented freedom as we know it today. Recent progressions within the knowledge information society have established and expanded integrated information networks, which contribute to both the concentrated consolidation of information as well as the increase of distribution. As a result, conflicts and imbalances between nations or between classes in society that surround the distribution and re-distribution of the value of information have been further exacerbated. The risks in question as well as the integration of a social system in individual areas have led to a growing concern for how such elements might be extended in a greater scale in knowledge information society that transcends time and space as a tool of information. In addition, these

concerns concern have significantly altered the degrees of objective risk and subjective anxiety that coexist in our society. [37] Furthermore, it is established that the risks borne by knowledge information society can be realized at any time. In short, if criminal law is unable to either properly protect information of which a critical source of creating value in today's knowledge information society or righteously solve issues of appropriate distribution for conflicting values in the name of usage and protection of information, it is obvious that we will witness great levels of social deviation and disorder. Seen in this perspective, criminal law should protect the rights and interests of information held by information providers as well as those within the knowledge information society and perform a function and role that maintains an order for information society as much as it did in previous industrial societies.

3. The Validity of Application for Criminal Law and Changes in the Concept of Benefit and Protection of Law

As stated above, criminal law has maintained constitutionally acceptable order as far as information is concerned. In particular, it is especially important to identify the roles that criminal law is capable of serving, in terms of preventing adverse effects, and see whether measures are ultimately required to perform that specific role. For example, issues to be discussed include protection of information as a source of creating values, order for the distribution of information in terms of the survival and maintenance of information society, and distribution networks to ensure a seamless flow of information resources.

First of all, criminal legislation policies have detected changes in both the concept and system regarding the benefit and protection of law to transfer information resources of new products (gut) in information society into a scope of targets for protection according to criminal law. In other words, topics of discussion; including how well-reputed information has been in the field of individual freedom or previous benefit and protection of law or whether information shall be evolved into benefits and protections of criminal law to suggest cogent grounds for applying criminal law in aforementioned infringement; have been identified in kernel criminal law (Kernstrafrecht).[38]

Furthermore, progression of the knowledge information society has given protection and usage of information economic value as an important issue in society by making it feasible to rapidly and accurately preserve, process, and distribute mass amounts of information. In addition, this has led to the enactment of integrated Personal Information Protection Act. On the other hand, policies related to the penalties within the Information Communications Network Act have been prepared to both guarantee a seamless flow of information of new value (Wert) in information society as well as to prevent information and networks from being invaded. In the area of Nebenstrafrecht, (if assuming that an issue of using or protecting the 'existence' of information as a field of former application within the Personal Information Protection Act regardless of realistic features or virtual worlds) the invasion of 'flow' of information through network or protection of 'distribution network' has been regarded as an area applied within the Information Communications Network Act.

In spite of the aforementioned classification, information still remains a general but abstract benefit and protection the law affords. In addition, visualizing or materializing invasions or risks is still rather difficult. As a result, attempts have been made to change aspects of the benefit and protection of law through a new construction of the value-oriented concept of law benefit and protection. This construction notably does not include information in criminal law as a recognizable object for protection. Such a perspective is all about analyzing how protections under criminal law in industrial society constitute a form of property.

Additionally, the benefit and protection of the law is a right of individuals for possession or occupation of properties. Thus, these beliefs have served as a method for the conceptualization of particular interests from individuals. Specifically, these beliefs have solidified general notions that benefit and protection of law should be preserved with aforementioned means instead of having (kernel) criminal law protect information or information network.[39]

As mentioned above, human-oriented concepts of the benefits and protections of law are still valid and certainly required in information society.[40] Furthermore, the same roles and functions of criminal law are still applied in this context so as to maintain order. On the other hand, what is important in the knowledge information society is to corroborate these concepts with the Constitution, to regulate which behaviors are to be regarded as crime, and to decipher how much criminal law is to be applied in order to effectively cope with invasions or risks associated with the human-oriented order of information.

4. Necessity and Limitations of Criminalization in Early Stages of Information Risk

Citizens are more than ready to relinquish parts of their rights in order to maintain peace and ensure safety from risks that are inherent of knowledge information society. Hereupon, criminal law has been generously applied in the field of information-based criminal law enough to make principles, including the ultima ratio or supplementation of criminal law, as insignificant. In other words, a focus has been made on prevention, thus, making early stages prior to invading the benefit or protection of law a crime. This is in order for criminal legislation in the nation to safely manage and disperse the potential risk inherent in social system. However, this type of action in criminal law only emphasizes the preventive function of warning but neglects the essence of criminal law. If placing priority on the essence of criminal law, it is beneficial to cope with direct causes over indirect conditions of the crime.

In spite of the numerous regulations in criminal law that serve to penalize behaviors which form potential circumstances of risk in individual laws, there are potential situations where there may be no penalties for disobeying regulations if such policies are not properly implemented in reality. In addition, the diminished recognition of norm observance might lead to potential circumstances of further risk. The large scope of application and diversification of norms in penalizing violations of "safety-first" regulations for coping with information risk coupled with the failure of such norms both tend to weaken the effectiveness of regulations. Therefore, such a trend could desensitize citizens'senses of responsibility.

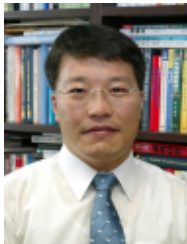
There are still many unanswered issues as far as whether it is valid or even appropriate for criminal law to be applied in advance so as to effectively fight crime with the least amount of cost and all by achieving the goals of prevention from information risks present in knowledge information society. Such issues might be answered by the self-restrictive permanent value in the name of ultimate means and supplementation, all based on the essence of criminal law. This is because values of constitutionalism or principles of responsibility as a basis for survival of modern criminal law are permanent and, thus, cannot be changed within knowledge information society.

References

- [1] Kim Min-ho and Kim Jeong-joon, "A research on the new paradigm of administrative law in the knowledge-information society," *Public Law Journal*, Vol.8 No.3, p.444. [Article \(CrossRef Link\)](#)
- [2] Michael Kloepfer, Informationsrecht, C. H. Beck, p.23, 2002. [Article \(CrossRef Link\)](#)
- [3] Kim Il-hwan, "Die Untersuchung über das Neue Paradigm für die verfassungsrechtliche Informationsordnung," *Constitutional Law*, Vol. 7. No. 1, p. 207, 2001. [Article \(CrossRef Link\)](#)
- [4] Kim Il-Hwan, "A Study on the contents and the direction of the Constitutional Amendment in the Knowledge-Information Society," *World Constitutional Law Review*, Vol. 15 No. 2, p. 267, 2009. [Article \(CrossRef Link\)](#)
- [5] Kim Il-Hwan, "Die Untersuchung über die Rolle und Funktion des Verfassungsrechts in der hoch entwickelten technologischen Gesellschaft," *Public Land Law Review*, Vol. 37 No. 2, p. 290, 2007. [Article \(CrossRef Link\)](#)
- [6] Castell/Translated by Park Haeng-woong, The Internet Galaxy, Hanul Academy, 2004 ; Vogelsang, Compaine/Translated by Hyeon Kyeong-bo, Lee Seung-seon, Cho Young-shin, The Internet Upeaval, Hanul Academy, 2003. [Article \(CrossRef Link\)](#)
- [7] Jack Goldsmith, Tim Wu/Translated by Song Yeon-seok, Who Controls the Internet? NEWRUN, 2006. [Article \(CrossRef Link\)](#)
- [8] Kim Il-hwan, "Die Untersuchung über das Neue Paradigm für die verfassungsrechtliche Informationsordnung," *Constitutional Law*, Vol. 7. No. 1, p. 227, 2001. [Article \(CrossRef Link\)](#)
- [9] Robert B. Reich/Translated by Nam Kyeong-woo et al., The Work of Nations, Kachi, p.265, 1994. [Article \(CrossRef Link\)](#)
- [10] Jörg Ennuschat, "Aufgabe und Funktion des Verfassungsrechts in der hoch entwickelten Technologiegesellschaft," *SUNGKYUNKWAN JOURNAL OF SCIENCE & TECHNOLOGY LAW*, Vo l. 1, p. 3, Spring 2007. [Article \(CrossRef Link\)](#)
- [11] Hong Seok-han, "A Study on the Regulated Self-Regulation responding to the Changing Roles of a State," *Sungkyunkwan University Doctoral Dissertation*, p.73, 2008. [Article \(CrossRef Link\)](#)
- [12] Claudio Franzius, "Der Gewährleistungsstaat -Ein neues Leitbild für den sich wandelnden Staat?," *Der Staat, Duncker & Humblot*, p. 504, 2003, Christof Gramm, Privatisierung und notwendige Staatsaufgaben, Duncker & Humblot, p. 29, 2001. [Article \(CrossRef Link\)](#)
- [13] Bushman, B. J. & Anderson, C. A., "Media violence and the American public: Scientific facts versus media misinformation," *American Psychologist*, vol.56, p.477-489, 2001. [Article \(CrossRef Link\)](#)
- [14] Anderson, C. A. & Dill, K. E., "Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life," *Journal of Personality and Social Psychology*, vol.78, p.772-790, 2000. [Article \(CrossRef Link\)](#)
- [15] Claudio Franzius, "Der Gewährleistungsstaat –Ein neues Leitbild für den sich wandelnden Staat?," *Der Staat Bd. 42 Heft. 4*, p.515, 2003. [Article \(CrossRef Link\)](#)
- [16] Kim Il-Hwan, "A Study on the contents and the direction of the Constitutional Amendment in the Knowledge-Information Society," *World Constitutional Law Review*, Vol. 15 No. 2, p. 272, 2009. [Article \(CrossRef Link\)](#)
- [17] Baek Soo Won, "A Study on the Constitutional Principle of Transparency," *Sungkyunkwan University Doctoral Dissertation*, p.62, 2011. [Article \(CrossRef Link\)](#)
- [18] Kim Il-Hwan, "A Study on the contents and the direction of the Constitutional Amendment in the Knowledge-Information Society," *World Constitutional Law Review*, Vol. 15 No. 2, p. 269, 2009. [Article \(CrossRef Link\)](#)
- [19] Kim Il-Hwan, "Die Untersuchung über die Rolle und Funktion des Verfassungsrechts in der hoch entwickelten technologischen Gesellschaft," *Public Land Law Review*, Vol. 37 No. 2, p. 298, 2007. [Article \(CrossRef Link\)](#)

- [20] Kim Il-hwan, "A constitutional analysis for legal protection and use of personal information," *Constitutional Law*, Vol. 17. No. 2, p. 363, 2011. [Article \(CrossRef Link\)](#)
- [21] Spiros Simitis, op. cit., p.145.
- [22] Jang Yeo-gyoung, "Information Communications Technology and Cyber Rights, Korea Human Rights Foundation," *Repression of Daily Life and Human Rights of Minority*, Saram Saenggak, p.625, 2000. [Article \(CrossRef Link\)](#)
- [23] Hong, Seok Han, "A Study on the PFI for Social Infrastructure and Fundamental Rights," *Study on The American Constitution Institution of American Constitution*, Vol.23 No.2, p. 272, 2012. [Article \(CrossRef Link\)](#)
- [24] Park Sangdon, "A Study on Constitutional State Responsibility for Infomation and Telecommunications Infrastructure," *Sungkyunkwan University Doctoral Dissertation*, p. 24, , 2011. [Article \(CrossRef Link\)](#)
- [25] Hong, Seok Han, "A Study on the PFI for Social Infrastructure and Fundamental Rights," *Study on The American Constitution Institution of American Constitution*, Vol.23 No.2, p. 280, 2012. [Article \(CrossRef Link\)](#)
- [26] Kim Il-hwan, *Study on Constitutional Grounds and Protection of Informational Self-determination Public Law*, Vol.29 No.3, p.87, 2001. [Article \(CrossRef Link\)](#)
- [27] Kim Il-hwan, "Research on Improvement of Protecting Personal Informations in National Education Information System(NEIS)," *Sungkyunkwan University legal Institute*, vol. 17, from p.25, 2005. [Article \(CrossRef Link\)](#)
- [28] Kim Il-hwan, "Das Verhältnis zwischen dem automatisierte Abrufverfahren und dem Recht auf informationelle Selbstbestimmung," *Public Law*, p.113, 2004, Kim Il-hwan, "Die Untersuchung über das Form und den Typus des automatisierten Abrufverfahrens im E-Government," *Sungkyunkwan University legal Institut,e* vol 19, 2007. [Article \(CrossRef Link\)](#)
- [29] Evangelia Mitrou, "Die Entwicklung der institutionellen Kontrolle des Datenschutzes," *Nomos*, p.20, 1993. [Article \(CrossRef Link\)](#)
- [30] Fritz Ossenbühl, Vorrang und Vorbehalt des Gesetzes, Isensee / Kirchhof (Hrsg.), *Handbuch des Staatsrechts Bd. III*, C. F. Müller, p.320, 1988. [Article \(CrossRef Link\)](#)
- [31] Carl-Eugen Eberle, Gesetzesvorbehalt und Parlamentsvorbehalt, *DÖV*, p.490, 1984. [Article \(CrossRef Link\)](#)
- [32] Michael Kloepfer, Der Vorbehalt des Gesetzes im Wandel, *JZ*, p.696, 1984. [Article \(CrossRef Link\)](#)
- [33] Hong Seok-han, op. cit., p.40.
- [34] Albrecht Langhart, "Rahmengesetz und Selbstregulierung, Schulthess Polygraphischer," *Verlag Zürich*, p.93, 1993. [Article \(CrossRef Link\)](#)
- [35] Georg Müller, "Rechtssetzung im Gewährleistungsstaat," *Max-Emanuel Geis • Dieter Lorenz (Hrsg.), Staat .Kirche .Verwaltung : Festschrift für Hartmut Maurer zum 70. Geburtstag*, C.H. Beck, pp.236~237, 2001. [Article \(CrossRef Link\)](#)
- [36] Kim Il-Hwan,, "Die Untersuchung über die Rolle und Funktion des Verfassungsrechts in der hoch entwickelten technologischen Gesellschaft," *Public Land Law Review*, Vol. 37 No. 2, p. 302, 2007. [Article \(CrossRef Link\)](#)
- [37] Risk society was first used when discussing the characteristics of modern society in comparison with previous societies from the paper titled Risikogesellschaft - Auf dem Weg in einer andere Moderne, Suhrkamp (1986.9) by Ulrich Beck [Article \(CrossRef Link\)](#)
- [38] Lee Duk-in, "Information Risk Society and Functional Change of Criminal Laws", *Criminal Policy*, Vol. 14, No. 2, The Korean Association of Criminology, pp.212-216, December, 2002. [Article \(CrossRef Link\)](#)
- [39] Lee Gyeong-ryeol, "Coping with Invasion of Personal Information in Criminal Law," *Korean Journal of Comparative Criminal Law*, Vol. 12, No.2, Korean Association of Comparative Criminal Law, p 583 – 588, December 2010 and as for the benefit and protection of the law, refer to "Critical Consideration of Changes in Roles of Criminal Law in Knowledge Information Society" by Park Gang-woo, *Criminal Policy*, Vol. 16, No. 1, The Korean Association of Criminology, pp. 89 – 94, June, 2004. [Article \(CrossRef Link\)](#)

- [40] Ha Tae-hun and Kang Dong-beom, "Duties of Criminal Laws and Measures in Information Society", *the study of general law for information society (I) Information and Communication Institute*, p. 271, June, 1997. [Article \(CrossRef Link\)](#)
- [41] Park Gang-woo, aforementioned paper, p. 94.



Professor Ilhwan Kim teaches Constitutional Law in Sungkyunkwan University Law School. He graduated from Sungkyunkwan University and studied at Mannheim University as a Ph.D. candidate. He is head of The Science & Technology law institute. And he was a member of Presidential Committee Personal Information Protection Commission (PIPC).



Professor Kyung Lyul Lee teaches Criminal Law at Sungkyunkwan University Law School. Prior to joining the law faculty in 2015, he was a professor at College of Law of Sookmyung Women's University from 2003 until 2014, including his career as the dean of the college. He also served as a chief editor of Korean Association of Comparative Criminal Law from 2013 until 2014. He received first Ph.D. degree of Criminal Law at Sungkyunkwan University in 1994 and second Dr. ius at University of Cologne in 2002. He is coauthor of *Organized Crime and Criminal Law* (2004). He received awards in recognition of his research papers including <The Current States of Financial Crime and Socio-Legal Countermeasures in Korea> in 2003, <Über bleibende Frage nach einer nachträglichen Strafenbildung und Vollstreckung bei Tatmehrheit> in 2007, <Irrtum über Tatumstände und Seine Abgrenzung im §15 I des KorStGB> in 2014.



Professor Jaehyoun Kim received his B.S. degree in mathematics from Sungkyunkwan University, Seoul, Korea, M.S. degree in computer science from Western Illinois University and Ph.D. degrees in computer science from Illinois Institute of Technology in U.S.A. He was a Chief Technology Officer at Kookmin Bank in Korea before he joined the Department of Computer Education at Sungkyunkwan University in March 2002. Currently he is a professor at Sungkyunkwan University. His research interests include software engineering & architecture, e-Learning, SNS & communication, internet business related policy and computer based learning.