

<Understanding International Cooperation>

Technology and Globalization

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I. Introduction

In the past, development of roadway enlarged regional economy on a national scale. In this sense, roadway allowed easy access to each regions, dropped down transportation costs and brought information about business transaction. In the same manner, development of technology accelerated globalization. Information and communication technology takes down a world border in terms of economy and consequently causes death of distance. That is to say, information superhighway beyond borders was built; NII (National Information Infrastructure) and GII (Global Information Infrastructure) in America, AII (Asia information Infrastructure) proclaimed by Japan, APII (Asia-Pacific Information Infrastructure) in Korea and European network driven by EU, development of network business technology such as EDI (Electronic Data Interchange), Electronic Commerce.

As a result, global village is made by technology. It provides world with quick and accurate up- dated information and risk of global business management has been reduced. The cost of information and communication technology also has been decreased. Specifically, fax and telephone are taken over by time-saving emails.

When it comes to the discourse of globalization on a technology basis, most importantly the pervasive use of Internet and growing power of media over global village get involved. Thus this paper will critically examine the contributions of the development of the Internet and media, and its implications. Despite the fact that development of technology accelerated globalization, there are clear side effects to use technology. Consequently, it will be argued that, although it is certainly advantageous to globalize world through technology, this does not allow all of global people to be basked in those advantages.

Along with this rapid technology development, knowledge-based economy came to emerge. Since knowledge and idea are main factors to lead advancement of technology, intellectual property, IP for short, has drawn worldwide attention in that IP works as a power

tool for economic development and wealth creation in each nation. Nevertheless this IP panned strong anti-movement and skirmishes across borders. In this sense, following chapters analyze controversial issues around IP based on actual cases and point out its implications in international relations.

II-1. Consideration on technology: Media

1. Myth & Reality of Globalization

An unending series of technical advances has transformed the production and distribution of news in developed countries. Through extensive use of computers and satellite, multiplexing and fiber optics, and digitalization and data compression, information providers can offer more news daily in text, sound, pictures than before and it can be done quickly and cheaply and delivered to more users. The universal flow of information, bringing people closer together, would necessarily make the conduct of foreign policy more open and more responsive to the desire of the common people.

However, vast realm of our world either cannot or will not be covered by news collectors because of the high costs involved in news gathering and because many repressive regime will not let them in. In Africa, Asia, and Middle East, news within countries is severely controlled and news from the outside hardly penetrates at all. Even a well-informed citizen in an open country like US is largely unaware of living conditions in many other countries.

So we can find, contrary to the myth of global communication, that the world is not fully wired, and our knowledge of it is spotty at best. The change in the techniques of mass communication enhanced the public's capacity to pay attention to the outside world. However, with some political, social and psychological factor, this change also seems to contribute to the decrease in demand for foreign news.

1. More Information, Less Demand

The end of the Cold War is the turning point in the consumption of foreign news in US. Due to the US's leading role in world affair, the number and length of foreign topics in the news declined for below the Cold war level.

The interest of the US public in foreign news declined, the only international events that still meet with relatively high attention are those in which US force or major US economic interests are involved. In US, as in many other countries, the new horizon is tending to draw closer form international to the national, from national to the local.

Among the enormous offering of cable and satellite television, news programs in general and foreign news in particular are disappearing in the flood of entertainment and niche-oriented channels.

As more information and less demand on the developing electronic network, two main characteristics, interactivity and virtuality, can have strongly negative effect on an individuals' knowledge and concern for the rest of the world.

For example, the interactive communication caters to the primal yearning to be heard and to reinforce one's biases by sharing them with like-minded folk. Internet is the haven for a many of one issue chapels estranged from the rest of the world. On-line customized newspaper does not hold much promise for the circulation of the international news and building of a global village.

In the prevailing climate of declining attentiveness to the outside world, media curtailed their foreign coverage and more inclined to allocate their resources according to the customer's demand.

1. Foreign Policy in an Age of Globalization

As the mass media and the general public become less interested in international affairs, only a small group of specialized journalist, academic researchers, and educated readers taking part in the foreign policy debate with politician and diplomats. This "establishment approach" had some validity, and is not likely to be overturned by the new formational technologies.

Interface between public opinion and the management of international relations will happen at two levels.

First, day to day conduct of most of a country's international relations will remain the preserve of a small, informed establishment with the tactic consent of public.

Second, in circumstance that public have on foreign policy that rasion d'etre of nation is at stake, public will react on the basis of collective emotions aroused by mass media.

4. Monopoly of Mass Media Globalization

Perhaps the most significant development of the last two decades in international communication is the increasing concentration of mass media ownership within and across national borders. This has been facilitated by a worldwide trend toward deregulation and privatization of the mass media.

Media mogul	Ownership
News Corp.	Owner of or significant partner in newspapers, television stations, and satellite broadcasting system (including STAR TV and Sky TV) around the world
Disney/Cap Cities	ABC
Time Warner	Turner broadcasting which created and owns CNN
General Electronic	NBC
Westinghouse	CBS

This monopoly has had two significant implications for the ways news (and other cultural products) is assembled and disseminated globally:

First, concentration of ownership and privatization of mass media has been accompanied by commercialization of news and other cultural products, a trend that characterized by aesthetic, technical, and professional standardization at the global level.

And second, alliance between the international “media moguls” such as Rupert Murdoch and forces of political conservatism has led to increasingly “soft” media content. These phenomena are part of the process of globalization.

What consumers of mainstream mass media often are left with is generic news content that emphasized titillation, sensational events, and politically safe topics. Critical discussions of social and economic trends, deep analysis of the human condition, and material that provides genuinely useful information for mass media consumers is often disappeared

As commercialized mass media need large audiences to survive financially, they may respond by eliminating political news deemed by the owners to have the potential to displease certain segments of their audience.

As a result, the range of issues discussed in the news is reduced, and when an issue or problem deemed acceptable is discussed, the range of acceptable perspectives on the issue also is relatively small. Consumers of this kind of artificially narrow and perhaps irrelevant information may begin to feel increasingly alienated and disconnected from the civic life of their communities. They may be powerless to control the course of their own lives.

II-2. Consideration on Technology: Internet

1. Internet Revolution

When people knew about and used the Internet in 1990s, people thought that Internet could change our life totally, leading to upheavals such as Agricultural Revolution and Industrial Revolution. Thus, people used the word “Internet Revolution.”

Actually, Internet has a lot of surprising functions. First, it can remove the concept of distance, time, and space between countries through the Internet networking and cyber trade. In other words, it can make borderless global village through facilitating movement of goods, services and capital among countries. Especially international capital movement like mutual fund and hedge fund is promoted by internet-based financial telecommunication network.

Second, Internet helps us to make interactive or two-way communication. In the past, we had to just listen to someone’s voice, and we didn’t have many opportunities to speak out our opinion. What is worse, it was so hard to get information we wanted. However, Internet changed this situation. It makes us interact with people easily, and it also provides us with many opportunities to deliver our own voices. So we can have more chance to speak up about our social or political opinion much freely, and we can get a myriad of information more easily through the Internet. In this sense we can say our freedom of speech and expression has improved, which leads us to take our rights seriously in a democratic society

and opens the way for us to exercise those rights. Internet contributed to realization of the fundamental spirit of our democratic society and practice of our right.

Third, the Internet plays the basic role of building up new economy: the knowledge-based economy. As the Internet dropped down the communication costs largely, more people can access to, or get the information much more freely and easily. In other words, Internet made a great contribution in terms of knowledge diffusion.

2. Think again – global village?

1) Inequality

However, we cannot be certain that the Internet is open to everyone, giving equal opportunities to everyone in the world. We need to consider inequality, which the Internet brought out, from a global perspective.

At first, we have to think about the opportunity of using Internet globally. According to the following table, most of the Internet users are incomparably concentrated in advanced countries, like those in Europe and North America. In contrast, people in African, South American, and Asian countries except Korea and Japan don't have much chance to use Internet. One reason is that construction of Internet infrastructure such as communication facilities, computer and software must be preceded ahead of using Internet. Enough money to afford the infrastructure is a pre-requisite to use Internet. Therefore, we can see the ratio of Internet user is directly related to a country's economic power.

Region	World	North America	Europe	Asia/Oceania	South America	Africa
Number of Internet User	160M	94.2M	36.1M	26.6M	4.9M	1.1M
Ratio	100%	58.1%	22.1%	16.3%	2.8%	0.7%

Source: IBM Research 2000 –

Second, when we ask the question of which language is most frequently used, we can easily find the answer "It is English." Since English is the dominant language in the world, it is natural to use English as a common language on the web. However, if we think inversely, we can realize that since most of important information is expressed in English, those who do not know English are restricted in opportunity of accessing to information. This also reflects the phenomenon of inequality in global world in the aspect of Internet. The following table shows us population of each Internet languages.

English	Chinese	Japanese	Spanish	German	Korean	French	Others
35.6%	12.2%	9.5%	8.0%	7.0%	4.0%	2.7%	10.2%

Total: 680M (Sep, 2003), Source: HKLNA Project Earth

Third, it is necessary to consider the ratio between male and female in using Internet. Let's take a look at two tables below. First table shows us that the ratio of female using Internet in advanced countries and some developed Asian countries is about half as many as male. It means female in more advanced countries have relatively equal opportunities in terms of using Internet, receiving computer education and possessing economic power to buy hardware or software. What does the second table illustrate? It shows that female relatively have less opportunities to use Internet in the world as a whole. The reason would be concerned with the education opportunities and social activities.

<Table 1: The ratio of female in Internet User>

(Source: Source: Nielsen / Net Ratings (2001.5))

Nation	U.S.	Canada	Australia	New Zealand	Finland	Korea	Sweden	Denmark
%	52	51	48	46	46	45	45	45
Nation	Ireland	Hong Kong	Norway	Singapore	Brazil	Taiwan	U.K	France
%	45	44	43	43	42	41	41	39

<Table 2: Ratio of Internet User between Male and Female>

Research Institution	GVU	U.K Red square	Monthly Internet	KNP	Internet Matrix
Male	66.4%	64%	81.2%	70.7%	66.3%
Female	33.6%	36%	18.8%	29.3%	33.7%
Time	98.10	99.2	98.10	99.10	99.11

In sum, everyone do not have equal opportunities to use Internet in world, and Internet worsens the gap between the haves and have-nots because the people who cannot access Internet have less opportunity to improve their life condition than the people who can. That is, the Internet alienates the have-nots.

2) Monopolization

We also need to take a consideration in another aspect of Internet. In the first place we acknowledge that Internet makes information exchange more convenient. However the internet induces the users to focus only on one's own problems, and to adhere to public opinions. Moreover, it can lead us to exacerbate the prejudice about other people. Internet does not help maintaining impartial opinion.

Secondly, it is true that politicians try to accept general public's suggestion through internet in establishing policy, but they just pretend to listen and in reality, they accept only a few of elites'. There is no evidence to say that policies now reflect various people's opinions.

Thirdly, we think we have freedom of speech and Internet is helpful in achieving democratic process. However, government still doesn't like opposite movement, and officials want to control or constrain people's right to strengthen their power and regime. Moreover, the belief that Internet can guarantee our anonymity is false because government officials can easily find out the author of the article or essay whenever they need. Invasion of privacy by 'big brother' is a mere piece of a cake when seen from the whole detrimental outcomes, which the Internet has brought out.

Finally, in Internet general people can get only general information that some people even call garbage. Just a few people who have power, authority, and money can have important and high-level information. As we live in world that knowledge or information is power, people who don't have high-quality information cannot help falling behind and never make a progress. As a result, just some people and countries monopolize information and lead the world.

In sum, we need to break our fantasy about Internet. Sometimes, it can increase openness to information and improve the level of our liberty, but simultaneously it sustains or solidifies the existing world's hierarchy.

III. Knowledge Based Economy

The term 'knowledge-based economy' results from a fuller recognition of the role of knowledge and technology, usually in economic growth. Knowledge, as embodied in human beings and in technology, has always been central to economic development. But only over the last few years has its relative importance been recognized. Traditional production functions focus on labor, capital, materials, and energy, whereas knowledge and technology are external influences on production. Investments in knowledge can increase the productivity capacity of the other factors of production as well as transform them into new products and processes. And since these knowledge investments are characterized by increasing returns, they are the key to long-economic growth.

According to the neo-classical production function, returns diminish as more capital is added to the economy, an effect which may be offset by the flow of new technology. Knowledge can raise the returns on investment, which can in turn contribute to the accumulation of knowledge. It does this by stimulating more efficient methods of production

organization as well as new and improved products and services. There is thus the possibility of sustained increases in investment that can lead to continuous rises in a country's growth rate.

Knowledge has gained a high status as a form of assets in the marketplace in most of the developed and developing countries. What's important now is thinking up things instead of making things. Knowledge-based economy could be defined as an economy that recognizes knowledge as assets, and where many firms earn their profits not as just manufacturers, but as knowledge holders.

However as we will observe from several cases below, the knowledge has worked globally to provoke the gap between the haves and have-nots, and between the elite and public. It is invoked by monopolization of knowledge, justified with intellectual property law and patents. And we should not forget the economies that seem to have evolved into the stage of knowledge based make up only a small portion when considering the whole world. There are more countries still on the brink of absolute hunger, or on the runaway of industrial development. We need to pay attention to the dark side of a coin at the same time.

IV. Intellectual Property Right

1. The concept of IP

1) Needs of IP

Imagine that you made an invention after spending countless nights in your lab. A couple of months later, your rival produced comparatively inexpensive knockoff. Your discouragement would be unspeakable. This is the most basic sense of IP law: rewarding your efforts and ideas by giving exclusive right. Transition into knowledge-based economy fanned strong needs to protect value of "ideas" and its originality. "Capital, labor and mineral resources", claimed by Adam Smith in 18th century as the wealth of nation, came to be displaced by "patent, copyrights and trademark" in the 19th century.

IP law supporters believed most importantly that robust IP law would increase productivity by providing powerful incentives to innovate. As World Intellectual Property Organization, WIPO in short, insists that IP is a power tool or economic development and wealth creation of nations. Secondly IP is believed to solve free-rider problems and achieve equity. Citizens in 20th century may have learned since they are little, that to copy others' work and pass it on as if they were mine should be punished. We call them plagiarism or piracy, in a more economic term, free-rider problem: using result of other's hard work and being benefited without any efforts and loss. In this era of globalization, IP cannot be discussed within a domestic boundary since the realm of IP comes to be mixed across borders. With this backdrop, WIPO, which has 179 member states currently, has been formulated in 1970 with structural and administrative reforms of its predecessor, United International Bureaux for the Protection of Intellectual Property, BIRPI whose member states were merely 7.

The WIPO is an international organization dedicated to helping to ensure that the rights of creators and owners of intellectual property are protected worldwide and that inventors and authors are,

thus, recognized and rewarded for their ingenuity. This international protection acts as a spur to human creativity, pushing forward the boundaries of science and technology and enriching the world of literature and the arts. By providing a stable environment for the marketing of intellectual property products, it also oils the wheels of international trade.¹

WIPO established several significant treaties such as *Patent Cooperation Treaty* (1970), *Copyright Treaty* (1996), *Patent Law Treaty* (2000), and in 2001 those treaties entered into force. WIPO has set up an *Advisory Committee on Enforcement of Industrial Property Rights*, which has initiated a new approach to enforcement. Thus, international cooperation encompassing IP has been emerged a hot issue in global village.

Likewise since worldwide IP movement is pervasive and those rationales for tough IP law sounds plausible, loopholes of IP law have been somewhat neglected. In fact, innate problems of IP law, patent law in particular, have come to bring about endless litigations both inside and outside borders. *Owning the Future* by Seth Shulman, examines these worldwide lawsuits, 'knowledge war' as he names it, and warns that freely shared knowledge is fast becoming the endangered species. As knowledge becomes a valuable commodity, we face impending threats to innovation and new monopolies that concentrate vital information in the hands of the few.

2. Knowledge War

1) Problems of current IP law: Encroaching Value of Shared Knowledge

Owning the future chronicles the battles for control over the intangible new assets- genes, software, databases, and technological information- that make up the lifeblood of the new economy. Sulman extends his argument amazingly widely from computers to pharmaceuticals, genetic engineering and university research practice and gets to the point that few aspects of our social and economic future come to be remained untouched as privatization. In this paper two eye-opening examples are introduced to clarify his main argument.

• *Compton vs. Silicon Valley*

First battle of *Compton vs. Silicon Valley* takes us to the software industry, which is the basic building block of computer code to develop new program. Compton established one of the earliest and most successful CD Rom, *Compton's interactive encyclopedia*, that is multimedia reference disk that combined sound, graphic and text.

At the time of early 1990s, many companies in Silicon Valley were working for the multimedia encyclopedia CD-ROM. To those who were working for this field what Compton did in 1993 was a big disaster and to Silicon Valley as a whole: Compton filed for a patent covering all multimedia software, not the specific programming language.

In its 41 claims, US patent office gave the company exclusive ownership rights over any multimedia database software that allowed users to search simultaneously for text, graphics,

¹ From World Intellectual Property Organization site: www.wipo.org

and sounds. According to this law, other multimedia CD-ROM manufacturers would have to either pay between 1-3% of their revenues to Compton or negotiate a joint venture. During those times there was a growing software patents, as a watershed of this waves Compton's patent indeed panned strong resistance throughout Silicon Valley. Recognizing this, the commissioner of the patent and trademark office, held the hearing in Silicon Valley to hear the industry's view on what to do about proliferating software patents to settle this crisis. What was being discussed during the hearing was much more serious that the commissioner had thought before.

Their main points are since software is the basic building block of computer codes to lead any further development of new program. There should be the total revision of current patent system. To distinguish particular innovation with broad concept related. They argue that fundamental concept like multimedia should be remained in the public domain. One scientist put, patenting multimedia is like patenting English. Within a year of Silicon Valley hearing, the US patent office reexamined 41 claims and finally rejected all. Hence now we can share freely fundamental multimedia software.

• ***Loren Miller vs. Grefa: across borders***

Second battle leads us outside national boundary. June 1996 in Ecuador. There was fight between Loren Miller, owner of America biopiracy company and Grefa, the head of COICA, an organization representing some 400 indigenous groups throughout nine nations of he Amazon Basin. Grefa blamed America citizens for obtaining private ownership ingredient of sacred drink used for religious ceremony.

At the outset of 20th century, in the pharmaceutical market, increasing numbers of big companies are turning their eyes toward the natural resources in South American wild plants and animals to claim rights to the medically interesting substance. One put this, global gold rush. Patenting plants is radically different from that patenting other kind of product. Every cell within a plant holds valuable information and an exclusive ownership claim on that threatens to prevent this knowledge asset, which is supposed to be investigated freely by others and therefore spreading new understanding.

Most importantly this cross-border litigation takes on new meaning-inequality of North and South tension. Current IP protection guarantees that all profits add directly to the titleholders- not even a penny to the native tribes who have used them for hundreds years. Consequently sentiment has begun to swell in opposition to the uncompensated this usurpation of indigenous knowledge that has been passed down and freely shared over many generations.

These endless litigation is taking place not only in the field of software and pharmacy, but also other science fields, most importantly medical science. Diminishing public domain will prevent future creation or innovation because they won't be able to afford the raw materials they need at the first place.

2) Owning the Future

While admitting some contributions IP made, Sulman attacks all those rationales for IP law with raising critical questions: does it really increase productivity and help to achieve equity

and democracy? The answer would be “negative”.

System of IP protection and patent system is widely justified as a tool for spurring innovation. But it remains highly debatable, especially in certain high-tech sectors, whether the present system does spur innovation. Sulman insists that few observers can see anything positive. IP protection will ultimately waste resources, lower productivity, and often stifle new development. Fading time-honored ethic of sharing knowledge in science field will choke off future invention. Moreover any funds, which are supposed to be used for R&D, are being wasted on endless litigations. This is also a significant factor of hindering further innovation and development.

With regard to 'equity', IP brought out even more detrimental outcome besides the free-rider problem. IP widens the gap between have and have-nots both nationally and internationally. Hosts of companies have been told that they just gave up their rights over IP just because they cannot afford the mounting fee for litigation against major big companies. Thus, most patents and IP protection is sweepingly given to hands of few. For one year of 1997, IBM is said to get patents of 1724. Considering the fact that Thomas Edison got patents of 1093 during his whole life, that figure is huge for one company, one year. When it comes to international disparity between developed and developing nations, IP worsens this inequality. Developing nations are now facing double barriers. On the one hand, most fundamental material for development is privatized by few corporations of advanced countries. Not only its own indigenous knowledge is being owned by foreigners, but also their fledging industries are getting harder and harder to compete in a global market. On the other hand, weak IP protection prevents them to trade with advanced nations. TRIPs, Trade Related Aspects of Intellectual Property, allow trade sanctions if developing nations fail to adopt a certain level of IP law.

In fact, capitalism takes its root of a “free-for-all” when anybody with a good idea had a chance to succeed. In this sense, it is called 'free market'. But the expansion of patents, copyright, and trademarks are encroaching the most precious value of sharing knowledge and is eroding public education and public access that are the bedrock of our democratic society. As the title implies, Sulman criticized broad IP protection, which even let our future be owned by minority.

3. Anti-movement

Against the broad IP protection, there have been various efforts to save our future from being privatized by only a number of people. Recently, even the U.S government brought a related case to the court.

1. Antitrust: *United States v. Microsoft*

The clear example of anti-movement against IP monopolization can be seen in the antitrust case the U.S government has built against Microsoft. At the heart of the legal case is the fact that Microsoft's operating system, Windows controls 86 percent of the market. By running this software alone, nearly 90% of computers in operation make use of Microsoft's intellectual property. At issue is the way the company has leveraged this enormous base of

customers to build a similar kind of dominance on related areas. In 1994, The U.S government charged that Microsoft had unlawfully tied the product, Internet Explorer, to the purchase of its operating system, Windows 95. A U.S district court issued an injunction in December 1997 barring Microsoft from forcing computer makers to accept Internet Explorer as a bundled part of Windows. Since then, related cases concerning Microsoft has been going on till today, 2003.

The predominant view of mainstream economists in 1960s held that free markets work best with a minimum of governmental intervention. Today, however a growing number of both economists and legal specialists believe that in the knowledge-based economy, markets don't necessarily self-correct but rather require intervention to protect the public's interest.

1. Copyleft: GNU-Linux

GNU-Linux is a recursive acronym of GNU's not Unix. Linux is an operating system developed by Richard Stallman. He started working in a lab at MIT and was opposed to the idea of proprietary computer operating systems. He had maintained the notion of software sharing and when he developed his new operating system, he let it be shared as a free software. He criticized an assumption that software companies have an unquestionable natural right to own software and thus have power over all its users.

'Free software' means that the users can get it for free, and moreover run, copy, modify, and redistribute the program. Now GNU-Linux has turned into a worldwide movement against copyright and monopoly of computer systems and software. It adopted 'copyleft', a general method for making a program free software and requiring all modified and extended versions of the program to be free software as well. Copyleft uses copyright law, but flips it over to give each user a freedom. To copyleft a program, they first state it is copyrighted. Then they add distribution terms, which are a legal instrument that gives everyone the rights to use, modify, and redistribute the program's code or any programs derived from it. Ironically, although it didn't depend on patent or copyright, Linux could improve its program quickly though repeated modifications by all users and programmers worldwide. This movement of copyleft has required Microsoft to open its program sources and put an end to its long-time monopoly.

1. Alternatives

2. Non-government sector: Creative Common

Creative Common is a non-profit corporation founded on the notion that some people may not want to exercise all of the IP rights the law affords them. It was established by several cyberlaw and IP experts. It supplements the extremes that the debate over IP control tends. Usually, at one pole is a vision of total control where in which every last use of a work is regulated and 'all rights reserved' is a norm. At the other end is a vision of anarchy, where in which creators enjoy a wide range of freedom but are left vulnerable to exploitation. Taking inspiration from the GNU General Public License movement mentioned in the section above, Creative Commons has developed a web application that helps people dedicate their creative works to public domain, or retain their copyright

while licensing them as free for certain conditions.

Its first project was to offer the public a set of copyright licenses free of charge. These licenses help people tell the world that their copyrighted works are free for sharing, but only on certain conditions. It provides licensing tools that creators can mix and match for his preferences. There are several options.

Attribution	Permit others to copy, distribute, display, and perform the work and derivative works based upon it only if the users give a creator credit.
Noncommercial	Permit others to copy, distribute, display, and perform the work based upon it only for noncommercial use.
No Derivative Works	Permit others to copy, distribute, display, and perform only verbatim copies of the work, not derivative works based upon it.
Share Alike	Permit others to distribute derivative works only under a license identical to the license that governs your work.

1. Government Sector

The author of our main reference –Owning the Future- suggests some of works that can be done by governments to solve the problems of monopolizing IP. Setting sanctuaries, zoning, and regulating antitrust are the objectives the author suggests the government for its action.

Concepts	Meaning
Sanctuaries	Defining the range of public domains so these could be off-limits for individuals or private ownership.
Zoning	Allowing private ownership, but restricting certain specific use so as not to interfere with the rights of others, or erode agreed-upon desirable features of a given area.
Antitrust	Setting the democratic rules in the front to deal with the market failure.

1. Implications of IP in International Relations

As other international organization promotes the necessity of international cooperation, WIPO strongly argues that world wide cooperation has to be sought for the sake of achieving its rosy promises through protecting IP rights such as driving economic growth and wealth creation. Its main mid-term objective is following²:

(i) to promote the protection of intellectual property throughout the world through cooperation among States and, where appropriate, in collaboration with any other international organization,

(ii) to ensure administrative cooperation among the Unions

Thus, WIPO's objective for the new century is the promotion of the effective protection and use of IP throughout the world through cooperation with and among Member States and all other stakeholders. WIPO seeks to continually enhance its role as the leading international organization, and the UN specialized agency, responsible for initiatives in respect of effective international cooperation in the area of IP.

However since these IP movements are advanced mostly by developed nations for their own interests, developed nations actually have no choice but to follow this IP right international regime. Cases of genetic resources exemplify this well. The Biological Diversity Convention ratified by 169 countries, recognizes sovereign rights over their natural genetic resources, but it allows multinational corporations to freely patent genetic materials. Despite a passage encouraging "the equitable sharing of benefits arising from the utilization of such knowledge", it offers no specific guidance for compensating nations or indigenous people responsible for nurturing, using, and developing biodiversity worldwide. Global acceptance of a regime favoring private claims over natural genetic resources was further solidified in the GATT negotiations in the early 1990s. TRIPs agreement obligates all signatories including developing countries to adopt minimum IP standards allowing for the use and ownership of plants and microorganism. Moreover it is worth noting that the actor controlling IP law has been changed. Historically IP issue has been largely left up to individual government. Now, however, under the guise of "harmonizing " IP laws between nations, the agreement drives the developing world closer to the commercial view of genetic resources adopted by the US and other developed nations.

V. Conclusion

Development of technology is forming borderless world, establishing knowledge-based economy and helping the realization of people's rights in democratic society. Simultaneously development of technology caused monopolization, thus inequality widens between haves and have-nots. With the globalization of and by both media and the Internet, nations come to be assimilated to America and developed nations –oriented world. Additionally friction is

² www.wipo.org

being occurred around standardization or international law among nations.

In order to overcome these negative outcomes of globalization, nations should cooperate, and make rules coherent to public interest and enlarge free diffusion of the Internet education and technology equipment such as personal computer throughout nations. Non-governments ought to be active participants to government education policy. In addition it is important to insist on their rights against monopolization and inequality. It is often said: "If a fish is caught for a man, he can feed himself for one day; but if he is taught to catch a fish, he can feed himself for lifetime."

It spanned only a short time since McLuhan and Fiore asserted that global village would be formed by technology development in their book in 1967. Indeed technology enhances both the speed and amount of news reaching to people, and overwhelming information and knowledge are within people's reach. Having said that the disparity among countries in technology development, this trend is not only confined to the national level, but also spans the global village. Although this globalization promises its rosy future, it spawns various kinds of negative outcomes as other sections of globalization bore problems. Specifically IP stemming from the knowledge-based economy is being deployed in favor of rich and powerful countries, thus comes to be one of the most controversial issues in global issues. Nevertheless disenchantment at a civic level actually is leading the global movements to drive the right path of globalization, at the same time government's active participation are being required. International cooperation should precede above all.

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