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TWO LOGICS OF NETWORK AND THREE MODELS OF NETWORK SOCIETY*

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I. *Professor Han's Problem-Setting*

In the paper which was presented at the symposium "The United States and the Asian Pacific in the 21st century: From Friction to Coexistence" held in Tokyo in autumn of 2000, Professor Sang-Jin Han raised the following very interesting points of argument (Han Sang-Jin, 2001, pp.194-214).

He examines the relationship between the Internet and culture. He thinks "we need to openly examine how East Asian cultures might respond to the coming age of an information society." He begins "by asking why Japan lags behind the U.S. in the area of information technology and the IT related industries." He "can wonder if the Japanese became intoxicated, at least, to some extent. They might tacitly have assumed that what they need to do in any situation is just to follow their own model of development with some, when needed, revisions." "In addition to this lack of political will, Japan has also made some technical misjudgment" like huge investment in ISDN. But he paid much more attentions to "the relationship between the Internet as open networks and social changes." In order "to deal with the effect of the IT revolution on the changing pattern of organization," he uses Masahiko Aoki's "distinction of three modes of organization, namely the 'water-fall' model, horizontal hierarchy, and the Silicon Valley phenomena." According to Aoki, thanks to horizontal hierarchy that "refers to a specific innovation aimed at overcoming the difficulties associated with" the hierarchically integrated mode of organization, Japanese firms have been able to maintain a "fine-coordination of their internal activities", because this innovation makes possible "information feed-back from lower levels to upper levels, as well as horizontal information sharing across different tasks unit." But Internet-based open unlimited competition has made "an once advantageous characteristic of the Japanese firms into somewhat disadvantageous." "Information sharing within an organization and emphasis on firm-specific expertise are becoming relatively more costly." Professor Han does not stop here. With Mr. Kokuryo, he has "taken up this perspective further to thematize a structural conflicts between a lean production system and modularity." "Integral design requires a high degree of communication among those involved." "By contrast, modular structure allows engineers to work autonomously by designing in redundant capacities." Here he finds "a different grammar of work between

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unlimited free competition based on the Internet as open networks and a fine system of coordination. Roughly speaking, the former sounds more like the neo-liberal orientation dominant in the West, whereas the latter represents something like the Asian value." But he does not forget to say that "we need to be aware of the limitations of the Japanese model in the age of the IT revolution."

In addition to these cultural and organizational factors, Professor Han notes development associated with a strong, and often, authoritarian state. Again, this model produced phenomenal results in many East Asian countries. But it is necessary and important to restructure this economic system "as a structural prerequisite of IT revolution." He reached a conclusion, that is, "we need a new paradigm adequate for an age of information society while at the same time firmly rooted in the soil of Asian traditions."

After examining the Internet race in East Asia, he "may cautiously advance a hypothesis that Korea stands ahead of Japan in terms of Internet penetration." Of course, "we can approach Internet penetration at two levels: technological and cultural." But he draws much attention to the relationship between the Internet and cultures. The basic question here is as follows. "Given the fact that the Japanese have responded to the IT revolution with more caution and slower than Koreans, does this have some relationship with peculiar characteristics of Japanese culture or its communication system?" It is more likely to find discord rather than accord between Japanese culture and Internet.

He finds three types of relationship between culture and Internet. The first one is the liberal project. In this project, people depend on their self-interests and pursue them by every means available through Internet. The second project is the Japanese style of communitarian project. "Japanese culture is well known for its high degree of sensibility and emphasis placed on the importance of people (personnel) and trust. "This means that the acculturation of Japan to the Internet will be done in a way that preserves the root characteristics of Japanese civilization, that is trusting collaborative relationships." He digs deeper into the problem and encounters Japan's network type of social system "based on sharing of information and knowledge with a considerable degree of self-sufficiency and autonomy." He can easily understand "a symbiotic relationship between this network-oriented Japanese culture and the Internet." But this type of network "presupposes boundaries not context-free universality." "Just as we need trust in our everyday lives, as a condition of interaction, so can one argue that building a cyber-community would also require a kind of trust without which only a zero-sum game may prevail." The Japanese-style network-oriented traditions may make a significant contribution to creating genuine e-trust. In order to materialize this positive contribution, he would like to draw attention to a problem involved. That is, he can say "that the traditional relationship of trust needs to be transformed into a more explicit and formalized one so that trust can be passed on from one organization to another and form the basis of new values."

The third project is the Confucian discursive project. According to him, "one of the unique potentialities of Korea seems to have been emerging from active civil society backed up by the tradition of various social movements and bottom-up popular cultures." "Historically speaking, the origin of the Korean civil society may be traced back to the 16th century when private academies began to be formed as moral centers where intellectuals and students studied Confucian teachings." This Confucian participatory tradition only as a meaningful stream within Confucianism is "more conspicuous in Korea than any other East Asian country." "Korean politics and social movements today are increasingly associated with the use of

Internet, not simply as an instrument of self-interest, but also as a public sphere where netizens freely meet and discuss matters critically."

"Confronted with a new global challenge, Korea may seem to have better chance this time to come to terms with the liberal project since it has more vibrant individual competition and civil society than in Japan." This is his closing remark.

II. *Two Research Currents: Methodology*

The argument of Professor Han is, in the end, closely akin to the single factor theory which tries to explain the problem of knowledge-computerization by the cultural factor, although possibly he did not have any intention to do so. First of all, I would like to locate his argument in the ongoing researches of this field.

In his *The Rise of Network Society* which is becoming a classic of theories of information and network society, Manuel Castells gives us his recognition that the informational economy is characterized by its specific culture and institutions. But he does not forget to tell us that "the diversity of cultural contexts where the informational economy emerges and evolves does not preclude the existence of a common matrix of organizational forms in the processes of production, consumption, and distribution." (Castells, M., 1996, p.151)

When we pay attention to the cultural context, the research current which proposes a "theory of cultural economics to account for a new development process on the basis of philosophies and mentalities" appears. It has also the scrutiny of empirical research. However, Castells emphasizes a common matrix of organizational forms. It is because technological change, and state policies, and firm's strategy would not be able to come together in a new economic system without a common systematic matrix of organizational forms in the process of production, consumption, and distribution. In this position, cultures are regarded as what expresses themselves fundamentally through their "embeddedness" in institutions and organizations. Here, Castells defines organizations as "the specific systems of means oriented to the performance of specific goals." By institutions he understands "organizations invested with the necessary authority to perform some specific tasks on behalf of society as a whole." He also understands that "the culture that matters for the constitution and development of a given economic system is the one that materializes in organizational logics," namely, "the ideational bases for institutionalized authority relations." Therefore, Castells who takes the latter seriously, analyzes the convergence and interaction between a new technological paradigm and a new organizational logic first and tries to understand that this organizational logic manifests itself under different forms in various cultural and institutional contexts later.

III. *Two Logics of Organizations*

New economy, new informational global economy emerged from the convergence and interaction between a new technological paradigm and a new organizational logic. Informationalization, informatization and digitalization penetrated immediately into "financial markets, international trade, transnational production, science and technology, and specialty labor," which are the strategic components of the economy. It is through these components of

the economy that the global informational economy and network enterprise emerged. Network enterprise is "neither a network of enterprises nor an intra-firm, networked organization. Rather, it is a lean agency of economic activity, built around specific business projects, which are enacted by networks of various composition and origin: the network is the enterprise." (Castells, M., 2001, p.67) Therefore, a new organizational form of the informational global economy is the network enterprise. Informationalization, informatization and digitalization do not only produce the network enterprise but also make a big influence to community and family. As a result of informationalization, informatization and digitalization of community and family, we have the "networked individualism," (Wellman, B. 1999, p.23-37) "the destruction of patriarchy and the networked family or social family. Nowadays, even the state which is the most difficult institution to be networked is going to be networked. And we are seeing the emergence of the networked states. The war against terrorism seems to strengthen this trend. In the nutshell, all things are going to be networked. The social morphology and social forms are going to be networked.

In the process of informationalization, informatization and digitalization in the United States, the forms of organizations and the logic of organization have been changing. It is a change from the logic of modern bureaucracy to the logic of networking. This change had a big meaning for the United States. Generally speaking, American organizations conventionally lack in the communication and the horizontal communication from the lower part of an organization to the upper part, based on the logic of modern bureaucracy. Then, expansion of communication between the inside of an organization and the exterior supported by the new information technology will improve greatly to carrying out U.S. organizational activities (Castells, M., 1996, pp.159-160).

Now, it is a well-known fact that quite various business networks have been existed from before in East Asia. There are horizontal networks based on intermarket linkages among large firms (kigyo shudan) and vertical networks like Keiretsu. The Korean networks (chaebol) which were inspired by the Japanese Zaibatsu, are far more hierarchical than their Japanese counterparts. "All firms in the network are controlled by a central holding company owned by an individual and his family. In addition, the central holding company is backed by government banks and by government-controlled trading companies." (Castells, M., 1996, p.176) In the case of the Chinese business organization, it "is based on family firms, and cross-sectoral, business networks, often controlled by one family."

The Japanese, Korean and Chinese culture intermixed over centuries, and deeply permeated by "philosophical/religious values of Confucianism and Buddhism." "The basic unit is the family, not the individual. Loyalty is due to the family, and contractual obligations to other individuals are subordinated to familistic 'natural law.' Education is of central value…. Trust and reputation, within a given network of obligation, are the most valued qualities…." (Castells, M., 1996, pp.179-180) It would seem that commonality of network forms in East Asia can be related to these common cultural trends.

But "if culture fosters the commonality of network business pattern," institutions especially states seem to account for their substantial differences "while, at the same time, reinforcing their networking logic." (Castells, M. 1996, p.178) We need a lot of discussion on the developmental states. In Korea, connection of a state and a company was stronger than Japan. It is more persuasive to explain a Korean miracle during 70's and 80's by a developmental state rather than by Confucianism. However, Korea was fallen into a deep crisis. Korea

tackled structural reform and democratization, in order to conquer the crisis. And the new information technology was introduced in the process. Like the United States, since the existing network was, the improvement of communication by introduction of the Internet was evaluated as a big result in Korea.

Based on the traditional network, Japan was able to accomplish favorable development until the 80s. However, we have to pay attention to the fact that this development was supported by the developmental state. We also have to pay much attention to the fact that the Japanese system and the developmental state did not succeed in bringing an idea of information society into reality since late 60's. Therefore, the Japanese system and the developmental states reached the limit. In the process of globalization, Japan has been fallen into a deep crisis. But Japan's economic success was so great that we were late to tackle with radical structural reforms. Furthermore, horizontal communication was abundantly performed rather than the United States and Korea, it was impossible for us to evaluate the positive effect of internet.

To be sure, an organization principle of Japan is a community type. Then, we must open up this community and still build up trust. The community project is advancing in Japan now. In short, in the network society, both classic individualism and a traditional groupism end. Networked individualism gains power. In another word, it will be convergence of East and West. The point of convergence can be expressed as "spirit of informationalism."

IV. *The Spirit of Informationalism*

According to Manuel Castells' recent observation of history of IT Revolution and Internet, we need multi-layer of active participants in developing Internet. Internet culture or culture of new information technology is not one-dimensional of structure at all but multi-layer, multidimensional phenomena. (Castells, M. 2001, pp.39-63) The first, we need techno-elites to discover and develop new scientific and technological knowledge. This is the key of IT Revolution.

And the second, we need hackers who bridged new technological knowledge with the spin-offs which diffuse Internet in society at large. Without hackers it was impossible for us to bridge new technological knowledge with spin-offs or diffusion of Internet in society at large.

Of course I am not talking about criminal kind of hackers. The concept of the hacker is very important to diffuse technological knowledge to society at large.

And third, we need virtual communities of early users of computer networks, who mainly came from counter culture movements in 1960s. This is also quite important to understand Internet cultures. Without counter culture movements or experiment of making of virtual communities or new way of life or way of living, it's impossible for us to get Internet and cultures of information technology.

And fourth, we need business entrepreneurs who diffused Internet from the inner circles of technologists and communal living of counter cultural movements to society at large. Without entrepreneurs who had the spirit of creative destruction, again, it's impossible for us to get new information technology and we couldn't get very good relationship between new information technology, economy and society. Therefore the Internet culture of producer-users is complex and multi-layer. And we need a very dynamic articulations of all these four layers and four dimensions. Or I would rather say we need the systematization of four

dimensions or layers of Internet culture or culture of new information technology. Without these four dimensions or layers it is impossible for us to create cultures of Internet or new information technology.

From this historical analysis, Manuel Castells pointed out core values of culture of Internet. Scientific-techno elites believe in scientific technological development as a key component of the progress of humankind. They take rationalization and demystification by science quite seriously. In a sense, they are members of Enlightenment Movement in 21st century.

Hackers took free technological creativity seriously by creating open source movement and free software movement. To be free is important for them. They are a kind of anarchist. They believe total freedom.

And people in counter culture movement participated in virtual community and tried to create a new society and a new way of living since 1960s.

And lastly entrepreneurs, who took new information technology seriously, also took free market quite seriously. Without free market it was impossible for them to get capitals and people's participation in socioeconomic field.

Therefore, the core values of new information technology are rationalization by science, total freedom, alternative living and free market.

However, the object of above discussion is the spirit or culture of the producer = user of new information technology, and not on the spirit or culture of the consumer of new information technology. Castells does not discuss it. Neither Himanen who deals with the spirit of imformationalism, does discuss about the spirit of consumer of new information technology. If the spirit or culture of new information technology in the network society should be discussed, it will be highly problematic that there is no argument on the spirit or culture of consumer of new information technology.

There is a big gap between the spirit or culture of producer = early user of new information technology and that of consumer of new information technology. Therefore we cannot find the same thing in the culture of consumer. We better find the counterpart of the spirit of producer = early user in the spirit or culture of consumer of new information technology. In this context, I would like to take the hacker culture seriously as a medium between two cultures. According to Manuel Castells, "the hacker culture is, in essence, a culture of convergence between humans and their machines in a process of unfettered interaction." (Castells, M., 2001, p.50) We can find this culture in a lifestyle of ordinary technologists and technologists in various gilds.

According to Po Bronson who wrote a bestseller book on Silicon Valley, a common lifestyle of technologists and programmers is to "blur the distinction between indoors and outdoors, between building and forest, between work and rest." (Po Bronson, 1999, p.xviii) In another word, it is to blur the line between work and leisure and to assert their personal values on the job.

Technologists and programmers in Silicon Valley inject fun into the workplace. Work today has to be half work and half play. Bronson asks why they inject fun into the workplace. The answer is that "the force of order will win over creativity, if they do not inject fun into the workplace." (p.xxxiv) After all, he concludes that "the real work of Silicon Valley occurs in mind-the minds of workers sitting in the cubicles, staring at screens, pondering their challenges. That is where innovation occurs." (p.xxxiv)

In his interviews with various people working in Silicon Valley, he finds the similarity with F. Kafka. Kafka says. "You do not need to leave your room. Remain sitting at your table and listen. Do not even listen, simply wait. Do not even wait, be quite still and solitary. The world will freely offer itself to you to be unmasked, it has no choice, it will roll in ecstacy at your feet." (p.xxxv) He says that "for me, writing is a form of pray." Like a form of pray, sitting in front of computer screen, committing to development of science and technology is the essence of the spirit of informationalism which is against capitalist power of making order.

I hope we can find the conterpart of this essence in network of consumer of new information technology.

V. *Three Models of Network Society*

Until now, we have three models of network society. The first one is Silicon Valley model. The second model is developmental state model. The best example of this model is Singapore. The third model is welfare network society model. The representative of this model is Finland.

In *The Finnish Model of the Information Society* which was written by M. Castells and P. Himanen, they defined the characteristics of the Finnish information society by comparing with Silicon Valley model and Singapore model. (Castells, M. and Pekka Himanen, 2001, p. 114)

"First, Finland shows that a fully fledged welfare state is not incompatible with technological innovation, with the development of the information society, and with a dynamic, competitive new economy." Therefore, Finland stands in sharp contrast to the Silicon Valley model.

"Second, the welfare state and co-operation between business and labor, mediated by the government, allow the development of work flexibility within a stable system of industrial relations."

"Third, the state has played, continues to play, a major role in guiding economic growth and building the information society in Finland.⋯ The Finnish state has used incentives and strategic planning to complement market mechanism, rather than substituting for them. It has also relied on participatory mechanisms, and has operated within the framework of a democratic and legitimate state.⋯ Moreover, the combination of deregulation and an effective state role in providing and facilitating the public infrastructure has stimulated growth and avoided the gradual deterioration of this infrastructure." The first part of this characteristic is in contrast to the experience of Asian developmental states, "characterized by authoritarianism in society and by a hierarchical relationship to business." The latter part of this characteristic is contrary to situation in California.

"Fourth, Finland has an explicit policy to include the whole of population in the information society. In so doing, it is developing a wide range of public uses for information technology, which ultimately result in new products and new markets." This is quite important, "since many of the supply driven technological gadgets developed by American and Japanese companies seem to be reaching the point of market saturation." (p.115)

"Fifth, spatial clustering and organizational networking of knowledge-based industries have been critical sources of productivity and competitiveness in Finland.⋯ But local and regional governments in Finland have also undertaken important initiatives in diffusing

technology in local societies, and in mobilizing local economies into the new techno-economic paradigm." This is in contrast to the American experience.

"Sixth, hackerism has been in Finland, as in the United States, a major source of technological innovation." (p.116)

"And, seventh, (Finland's) ability to leapfrog in about half a century from the depths of economic backwardness to the forefront of informational development shows that is not historical fate but human effort that counts in the way societies and people improve their lives and projects."

Finally Castells and Himanen give us an important concluding remark as follows. "Cultural identity and strong national sentiment appear to be essential components of the Finnish model of the informational society. They are sources of legitimacy for the active role of government." (p.116) This is a parallel experience to the developmental states in Asia.

VI. *Conclusion*

The last point which Castells and Himanen raised is one of the most important points for the Finnish informational society. It is because, "national and cultural identity are important sources of meaning and value, but only on the condition of engaging people and countries in a multicultural dialogue based on multi-ethnic coexistence." It is same to East Asia. How to solve the contradiction between cultural identity, strong national sentiment and multi-cultural dialogue based on multi-ethnic coexistence?

Professor Han's problem-setting is very important, But his discussion should be situated in complex institutional contexts. In the process of destroying dictatorship and creating new civil society, internet was introduced into Korea. This historical and organizational context was the counterpart of spirit of informationalism. Therefore how to find the force of making disorder in consumers of new information technology is the most important task in Korea today.

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