

Emergence of the Network Society: Trends, New Challenges, and an Implication for Network Capitalism

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I. Introduction

Decentralization is the key concept of futurology, the study of predicting a future trend (Naisbitt and Aburdene 1990). The term “decentralization” involves aspects of political, economic and social phenomena such as power, organization and the self: the centralized power of the state, for instance, will be decentered into relatively autonomous decentralized regional governments (Toffler 1990); a huge conglomerate with vertically integrated hierarchy will disintegrate into smaller networked organizations (Powell 1990; Perrow 1986, 1992); and the self that has been controlled by the Cartesian unitary self since the modern era will be decentralized into multiple selves (Turkle 1995). The evolution of decentered selves, or multiple selves, is often regarded as a fundamentally postmodern phenomenon.

Despite the attention given to the phenomena of decentralization, the social sciences surprisingly have not paid equal attention to the emergence of the network society, which is simply the other side of the same coin. Decentralization can advance because a network connects the decentralized parts. If decentralization is the centrifugal

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force, networking is the centripetal force integrating decentralized units (Durkheim 1933, 130), thus balancing societal order. Organizations disintegrate vertically, yet at the same time the disintegrated units are virtually integrated by a network. A large firm, for instance, transforms itself into a network form of production where its spin-offs are closely connected. There has been a strong tendency toward a network form of production in recent years due to the development of information technology and to the changing characteristics of organizational environments. In a rapidly changing environment, large businesses are inefficient because there are too many hierarchies through which information and decision-making procedures must go. Decision making is slow because there are too many steps between the organizational boundary where information originates and the top decision-maker (CEO). Reforming an organizational structure is an extremely difficult task because it is so complex. Organizational inertia also resists the change. To use an analogy, a large business is like a whale fighting its own inertia, while networked small firms are like a school of fish whose members can adapt to the rapidly changing environment quickly. Because of its efficiency, network governance is becoming an alternative form of organization to market and hierarchy (Powell 1990; Bradach and Eccles 1989).

The rise of network society implies that the centralized power structure becomes decentralized. The monopoly power of conglomerates would diffuse into small firm networks, and the network of cyberspace would become a means of collective action especially for disadvantaged people (Mele 1999). The potential of the network can be seen in the Korean Congressional election of the year 2000, where NGOs networked to launch a campaign against corrupt candidates. The incidence of the anti-WTO movement by an international network of NGOs in Seattle 1999 is another case in point.

The aims of this paper are 1) to review the major trend of the rise of networks in various arenas and its causes, 2) to discuss the social and political problems that the network society faces, and finally 3) to examine the implication of this for "network capitalism."

To illustrate this powerful trend towards a network society, I

selected three different kinds of networks: the interpersonal network in everyday life, the interorganizational network in the market, and the global network. By dosing so, I will discuss economic and social consequences of the network society. Finally, I will explore whether the *guanxi* or *yōnjul*¹ society is in an advantageous position in facilitating the network society. The last point needs elaboration. Western scholars have characterized East Asian capitalism as network capitalism, alliance capitalism, relational capitalism, Confucian capitalism, or crony capitalism (Biggart 1991; Biggart and Hamilton 1992; Orru et al. 1991; Dore 1986; Gerlach 1992). Whatever form these name take, there is a commonality; they all emphasize that *East Asian capitalism* relies on particularistic ties in market transactions and state-business interactions or governmental policy implementations (Moon and Prasad 1994; Amsden 1989). Does this mean that East Asian countries, particularly Korea, are more suitable for the development of a network society in the information age? I will discuss this question in the final section.

II. Analysis of the Trend toward the Network Society

The emergence of the network society deserves attention because of its revolutionary impact on social change. I will make distinctions between the vertical *x-impact* and the horizontal *y-impact*, where the major consequence of the *y-impact* is the *power shift* and that of *x-impact* is the breakdown of the traditional boundaries.

The social network theory and the social exchange theory explain why power shifts in the network society (Blau 1964; Emerson 1962; Jacobs 1974). The theories postulate that power of A over B is

1. *Yōnjul* is a Korean word that is difficult to translate because of its connotation. Literally, it means connections or ties. Its connotation, however, implies that the connections mostly come from ties based on region, school, and family relationships. It is slightly different from *guanxi* in that *guanxi* is more open to various categories than *yōnjul*. Because of the difficulty of translation, I use the Korean term without a translation.

a function of dependence of A on B and dependence of B on A. This is expressed in the equation,

$$P_{AB} = |D_{BA} D_{AB}|.$$

In a symmetric exchange relation (Diagram A, Figure 1), mutual interdependence does not produce power ($P_{AB} = 0$). In a center-periphery structure, however, the central node can replace its transaction partners, while peripheral actors must depend on the center because it is the only source of information and resources. An asymmetric exchange produces power for the central node because of the asymmetric dependence between the central and peripheral nodes. If the peripheral nodes are connected (Diagram C), the relative power of the center is reduced vis-à-vis the periphery, thus the power shifts from the center to the periphery. This model does not predict that the center will disappear, but that the relative importance of the center will be diminished.

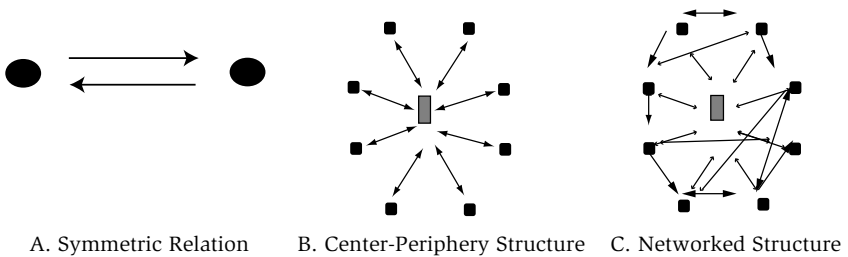


Figure 1. Patterns of Relations and Power Shift

The y-impact, i.e., the breakdown of borders, occurs due to the interpenetration of social units by loosely coupled networks. The local state in a globalized world, for instance, experiences acute border crossing in the financial system, and the production system, and culture. The state must redefine its role accordingly (Brenner 1998).

High walls distinguishing departments in a bureaucratic organization are also collapsing due to networks within the organizations.

In the following section, I will show evidence of the network emergence at three levels and its social and political consequences. On the microlevel, I will explore the expansion of interpersonal networks in people's everyday lives due to the spread of the Internet and the cyber community. On the mesolevel, I will demonstrate why and how interorganizational networks become a prevalent mode of capitalistic production. On the macrolevel, I discuss the implications of the rise of a global network, i.e., the interpenetration of economic and political systems by which traditional national boundaries are blurred.

1. Expansion of Interpersonal Networks in Everyday Life

"The Fly," a movie written and directed by David Cronenberg, shows well the underlying principles of an information society. A scientist invents a teleportation machine that can transport a human being from one place to another electronically in a matter of seconds. While testing his invention, the scientist does not notice the presence of a fly in his transportation pod and soon finds himself fusing into an amalgam of two living creatures.

Apart from the scientific possibility, the movie shows us that, once matter and even living organisms are transcribed into a set of information, such information can be easily combined to create new matter and organisms. Science has already proved in theory that new creatures can be manufactured by pooling different information sets of living organisms. If industrial society produces matter by combining different matter physically or chemically, information society produces new information sets by combining different sets of information, or *by knowledge working on knowledge* (Toffler 1990; Castells 1996). Think how easy it is to transport a "file open" subroutine program from one program to another when developing software. This easy combination of information is of a basic characteristic of information goods, i.e., a high fixed cost but an extremely low marginal

cost of reproduction (Shapiro and Varian 1999).

The Internet shows this new principle of information society clearly. The ecological space of the Internet is full of mutations, and new creatures appear every day worldwide. Most of these Internet sites promote networks among people in everyday life. Imagine a graphic world created in cyberspace where people in the community make up their faces and costumes with 3D graphic options that suit their tastes (Smith and Kollock 1999, 8). They even purchase houses with gardens to their liking on the cyber land, and get acquainted with their neighbors (Kim 2000). Some people marry partners of their own choice with the proviso that they never meet in real space, and take honeymoon trips to wherever they desire in cyberspace and enjoy cyber sex. Nobody cares about where the community is located or asks the ethnicity or nationality of a newcomer. They just choose partners to globally interact within this space.² This type of transformation is taking place in people's daily lives around the world due to the remarkable progress of information and communication technology.

The Internet community attracts people and flourishes by providing its clients with useful content (e.g., stock information), communication tools (e.g., free Internet phone services), games (e.g., Starcraft), and/or benefits (e.g., free e-mail accounts, hard disk space etc.), and all of these cyber communities never fail to provide chatting or MUD services to promote relations among members. Some sites explicitly aim at finding old school friends and making quasi-familial relations among people.³ Consequently, the connection among Internet users increases exponentially.

Its social and political impact is already felt; Indonesian student activists ask for advice from Korean student activists, who had accumulated strategic know-how during their fight for democracy over

2. A typical example of a site offering this type of service is Alpha World (<http://www.activeworlds.com>). Here 37 million objects cover thousands of acres of virtual land in cyberspace.

3. For instance www.iloveschool.co.kr finds school alumni, while www.cyworld.co.kr creates quasi-familial relations. If you register your friend, he becomes your 1st relation, and your friend's friend becomes your 2nd relation and so on.

the past decades. NGOs' successful demonstration against the WTO Summit in Seattle in 1999 and the proliferation of "issue sites" are other examples of increasing connectivity and coordination among people and organizations. Social movements and collective actions will rely more on personal connections in cyberspace (Mele 1999, 290).

The expansion of personal networks in cyberspace not only brings a quantitative change but also a qualitative change in the nature of interaction. The unprecedented question, "Who am we?" (Turkle 1995, 1998) symbolizes such a qualitative change. When people chat with others in cyberspace, they often invent their own identity. Thus, one day a married middle-aged woman disguises herself as a man seeking a gay partner, and the next day she becomes a lesbian seeking a young girl. Identity is manufactured piece by piece at her own choosing. Accumulating acute on-line experiences, the woman develops a multiple personality syndrome and comes to ask, "Who am we?" The identity crisis is more problematic if one begins inventive Internet chatting from an earlier age.

The question of self-identity expands to the larger issue of cultural identity at the macrolevel. Will local societies maintain their cultural identity when their members constantly interact with other ethnic groups?

As Castells (1996, 22-24) points out, no one knows yet how the relationship between the Net and the Self will evolve, but one can be sure that the expansion of personal networks will bring about significant changes in the real space community. Various studies have already shown that the nature of on-line communication or computer-mediated communication (CMC) is different from off-line communication (Sproull and Kiesler 1991). People get excited more easily, those in power do not enjoy the monopoly right to speak more frequently (the hierarchical authority relationship does hold), and people speak out more candidly and directly, etc.

Interpersonal networks in cyberspace, of course, cannot replace real space networks, but the relative importance of the former will increase continuously as information technology provides a more

realistic means of communication, including 3D animation with higher graphic resolution and even smell and a sense of touch. The spread of virtual community has brought about a revolutionary change in the definition of community, i.e., defining community in terms of social network rather than defining it in terms of neighborhoods or space (Wellman and Gulia 1999).

2. *Networks of the Production as Innovation System*

Besides personal networks, interorganizational networks are also expanding. They are becoming a prevalent mode of production through two mechanisms; first, large firms spin off sectors of their business and then network smaller units. Second, preexisting independent small firms network to pursue a collective goal by coordination.

A key problem facing all large companies today is how to unleash the explosive, innovative energies of subunits within a large organization. Toffler called it “decolonization of organizations” (1990, 184). In industries where constant innovations are required and the organizational environment changes rapidly, the small-firm network (hereafter, SFN) has become prevalent worldwide. This new emergence is especially noteworthy in economic theories because it shows a vertical disintegration of hierarchy. Neo-institutional economic theories had dichotomized market and hierarchy, and had predicted the widespread of hierarchy because of its economic efficiency in reducing transaction cost (Chandler 1977; Williamson 1975, 1985). Williamson, a strong proponent of this view, for instance, treated network governance only as a transitional form that will eventually turn into market or hierarchy.⁴ Apparently, the current trend toward

4. Williamson argues that hierarchical organization is preferred to market as the level of *asset specificity* increases, due to “bounded rationality” and “opportunism” of economic actors (1975, 1985). A lodging industry, for instance, is not likely to invest in building motels near a coalmine deep in the mountains in order to service the mine workers. Because such motels are impossible to use for other purposes, asset specificity is high. To make a contract, the lessor as well as the coalmine operator has to take various measures of safeguards against breach. The resources

SFN proves this prediction wrong. Various studies have shown that the network form of corporate governance is more efficient than hierarchy or market and predict its prospective dominance in the economy. To cite a few examples, SFNs in the engineering industry in France (Lorenz 1988); the blooming return of the putting-out system in the Italian knitwear industry, i.e., the *Emilian* production system (Lazerson 1993, 1995); innovative relationships among textile factories and their subcontractors in Germany (Sabel et al. 1987); the high performance and trust formation in the New York apparel industry (Uzzi 1996, 1997); the competitive advantage produced by stable network structures in Japanese *zaibatsu* (Dyer and Ouchi 1993); and the strategic alliance network in Silicon Valley (Saxenian 1994).

Various sources of SFNs' efficiency were advanced theoretically (Perrow 1986, 255; 1990, 147-148; 1992, 448-453; Hakansson and Johanson 1993, 44-49). First, the cost and uncertainty of developing a new technology is increasing in the information society. Therefore, the network is used as a means to share the cost and risk of technological development.

Secondly, by sharing information with each other, network nodes with a common goal can increase their productivity. The network is a fast means of gaining access to *know-how* that cannot be produced internally. Thus the network is capable of innovations and fast technology transfers. When the product life cycle of technology becomes so short that the timing of technological development becomes crucial, monitoring market opportunities and technological advances made by others at the right time is extremely important. The network is better suited because its members can span the technological environment of their specialty. The model of technology development also has changed from a linear model, expressed in terms of demand

invested in these safeguards increase transaction costs. Consequently the coalmine operator himself is likely to build the housing for the miners. This example shows that make-or-buy decisions reflect transaction cost. Transaction cost theorists extend the same logic to explain organizational forms, which are decided on a certain point along the market-hierarchy continuum, in proportion to the level of asset specificity.

pull or technology push, to an interactive one, where production network plays a key role. When controlled knowledge and resources are different among firms, their exchange can produce a Pareto Improvement, or positive-sum.

Third, a network produces trust through recurrent interactions. Trust reduces monitoring or the governance cost of hierarchy. Some theoretical and empirical studies have found that the core of competitive advantages of network lies in its unique inter-small-firm cooperation (Perrow 1990, 1992; Uzzi 1996). Norms of reciprocity, cooperative settlement of conflicts, X-efficiency (Liebenstein 1976), and relational contracting (Dore 1986) are produced by trust. If transaction costs are considered as friction in the economy, then trust can be seen as an extremely effective lubricant (Lorenz 1988, 198). For this reason, most studies on inter-firm cooperative relations consider trust as the most important variable (Smith and Kollock 1995, 15). Trust therefore is the distinctive control mechanism of the network, if authority is the control mechanism of hierarchy, and price of market (Granovetter 1985, 493-504).

Fourth, the autonomy of each node in a network is another source of efficiency. Compared with subunits of a big firm, independent small firms enjoy high autonomy and profit incentive. The CEO of a small firm does not pursue a subgoal, while the director of a subunit of a big firm does. Due to the incentive of each node, there is no need for costly organizational monitoring.

Up until a few years ago, we often read the newly coined term "Japanization," or "Japan as Number One." After the advent of new information technology, however, Paul Krugman has come to argue that Japan developed through perspiration but the U.S. developed through inspiration. Silicon Valley has been the symbolic place of inspiration. The success story of the Silicon Valley proves empirically that network governance is efficient for innovation. A comparative study of the Silicon Valley and the *Boston Science Park* near Highway 128 shows clearly that SFN is a better form of technological development than hierarchical organizations (Saxenian 1994). The Boston area was the first to develop radar- and computer-related electronic

technologies through the government military funding. Due to government support, huge hierarchical firms were developed in Boston, and this was the very cause of their decline. Large firms tried to develop new technologies within the firm boundary because they were self-sufficient developers. This type of production system did not fit the environment of new technologies that requires constant innovations. Silicon Valley, on the other hand, relied on strategic alliances among small firms. The small network firms interacted closely to solve technical problems and even allowed a free cross-citation of patents each firm had. The firm network included universities such as Stanford, UC Berkeley, and California state colleges as well as nearby research institutions.

Based on the successful model of Silicon Valley, the Triple Helix theory was formulated (Etzkowitz and Leydesdorff 2000). This theory proposes a new model of technological innovation where the state, industries and universities are loosely coupled. When knowledge is increasingly utilized as a resource for production and distribution systems, a network in which intentions and strategies are exchanged among members performs well (Etzkowitz and Leydesdorff 2000, 112). In short, given the upsurge of strategic alliances among venture firms and networks with universities and the government, we could argue that the network will be the prevalent innovation system in the information age.

3. Globalization: Complex Connectivity across National Borders

The impact of globalization has begun to undermine the basic structure of every society. Yet what we mean by globalization inevitably contains political connotations. Some define globalization as a neoliberal ideology that the United States has promoted to sustain her international dominance following the demise of communism, while others have defined globalization as social phenomena that people in far-away lands are no longer immune from the influence of global developments and are thus destined to live within a global cultural sphere capable of overwhelming every individual choice. Another view char-

acterizes globalization as an intensified form of interdependence on a global scale; an event occurring in one region having consequences on the opposite side of the globe simultaneously. It defines globalization as a process of integrating national economies into a global system, each unit being capable of influencing each other simultaneously in real time. The third view is what this paper will focus on, without denying the first two. Seen from this perspective, globalization is a process of interpenetration across boundaries by networking previously independent units. Let me cite an example that shows the gist of globalization as breaking preexisting boundaries.

About a century ago, Koreans waged a nationwide campaign to use domestic products in the face of an economic onslaught by foreign powers. This nationalistic campaign has repeatedly been recalled by the news media as a means of restoring the domestic economy whenever the country has suffered from economic recession. Right after the IMF bailed out Korea, some newspapers carried a provocative advertisement of a foreign apparel manufacturer, FILA, when Koreans were lining up to donate gold to help boost the nation's foreign exchange reserves. The ad asked which of two companies contributed more to the Korean economy—a Korean firm that sets up a factory in a foreign country, employs foreign workers, and deposits its earnings in a foreign bank—or a foreign company that builds a factory in Korea, employs Korean workers, and deposits its earnings in a Korean bank? This provocative ad squarely defied the nationalist sentiment that purchasing foreign goods is unpatriotic. It pinpointed the decline of the traditional notion of the national boundary and its diminishing relevance to a nation's economic interests (Kim 2000).

Witnessing the emergence of a new society in the wake of the *Industrial Revolution*, Max Weber observed that diverse standards established by various classes and interests were converging into universal standards. He noted that precapitalist Europe was characterized by discrimination and division in the form of fiefs, states, religious hierarchy, and classes. The price of the same bread for commoners, for instance, differed from that of fiefs, and prayers for

redemption differed for priests and common believers. With the elimination of such divisions, Weber noted, bread prices became uniform so as to boost sales. The religious division was also eliminated and the idea that all men are equal before God helped to promote communication across class divisions. In short, the elimination of divisions or boundaries resulted in an upsurge of capitalism.

The fall of social boundaries also gave rise to the nation-state during the early industrialization process. In place of small polities based on local feuds, larger political units of nation-states with large domains and vast resources were able to establish political authority. A strong military, together with the development of efficient organizational networks and administrative procedures, paved the way for uniform regulations and moral standards for the citizens, and ultimately national unity. The code of conduct became uniform for all citizens under the same rules of regulation.

The current globalization process is breaking down boundaries even further. The uniform regulations and modes of morality, which have thus far been possible only within national boundaries, are now spreading throughout the world. Developments in information technology have made it possible to transcend geographical, cultural, and national borders at unimaginable ease and low cost. The global *e-commerce* network is a good example of taking advantage of the shrinkage of space and time constraints. Smaller regional markets are being absorbed into larger systems, while international capital is now able to cross national borders with the stroke of a computer key in pursuit of higher yields. The intricately woven global network of economic transactions has given rise to numerous international organizations that attempt to impose international regulations on economic, political and environmental problems across national borders. Thus the fate of a nation-state is influenced by the decisions of global political organizations such as the G7 or the OECD.

The expansion of a global network poses new questions to the social sciences. The first concerns a *two-level game* that each nation-state must play. The local state must deal with global and local issues simultaneously. But this game is delicate because the demands of

global institutions often contradict the interests of some local groups. Developing countries, for instance, must reduce carbon dioxide emissions, hurting their industrial development. Choosing between global and national goods is a complex agenda that local states have never had to confront before (Angell 1995; Brenner 1998).

The second question is the possibility of global ethics. As the globe becomes an arena of intensified economic competition, will the “winner-takes-all” principle develop into a global ethic and culture? Global goods cannot be provided solely by legal measures but need an ethical dimension. Environmental issues and maintaining a secure global financial system, for instance, can be better solved when global ethics play a role. There have been numerous studies on the post-materialist “culture shift.” Once the needs for material and physical security are met, people shift their attention to the satisfaction of such nonmaterial needs as belongingness, esteem, and intellectual and aesthetic satisfaction (Inglehart and Baker 2000). Whether the postmaterialistic values being developed worldwide will converge to a global ethic is a new research topic of sociology and social philosophy.

The third question is how to understand the global system. The global network has become so complex that it shows the characteristics of a chaotic system. A small initial change of parameter may end up with large-scale consequences, as seen in how financial problems in one country spread to others—starting in Mexico, moving to Thailand, Malaysia, Indonesia and Korea. A “butterfly effect” symbolizes how unexpectedly a small local change can be magnified to affect the whole globe.

III. Trust in the Network

In the previous section I discussed the emergence and expansion of networks on three levels: networks in personal everyday life, organizational networks in production, and finally, global networks. For the emergence and maintenance of these networks, trust is essential because without it, recurrent interactions and pursuit of a common

goal would not be possible. Thus the rise of the network society presupposes the enhancement of trust in the network. To explore how trust is produced and maintained I will look at the process in an interorganizational network.

Constituent organizations of a network must produce trust not only at the dyadic level, but also at the collective level. Sharing firm-specific technological know-how or a fair distribution of the advertisement cost, for instance, presupposes trust at a collective level. In social dilemma literature, the role of trust in solving the prisoners' dilemmas or mutually beneficial consequences is well articulated (Hardin 1982). Despite the outpouring interest in trust, however, a clear definition of the concept has not yet appeared because defining trust is an extremely difficult task. Is trust just a probability of trustworthiness or an emotional, internalized trait? Is trust a kind of information goods as economists argue (Dasgupta 1988), or a type of social capital or norms not reducible to the individual level (Coleman 1990)? Do the actors strategically invest in order to be trusted, or is the trust a structural outcome? Is trust the property of an individual, relations or a group? Rigid and persuasive answers to these kinds of questions have yet to emerge.⁵

In a network community, trust itself can be qualified as collective goods. Buchanan defines collective goods as having the following five features (1982, 89):

1. Actions by some but not all members of the group are sufficient

5. Instead of trying to define trust, I attempt to identify the elements of trust in order to set its boundaries. The first element of trust consists of behavioral expectations about trustees. Here the existence of uncertainty or risk is a precondition of trust (Williamson 1993; Gambetta 1988). Thus "to defect" is an available option for a trustee. Second, the subjective behavioral expectations must involve the anticipation that trust relations will result in beneficial consequences for both the truster and the trustee. Thus, "I trust him to harm me" or "I trust him, but I am sure it will bring me a loss" is outside the boundary of trust. Third, a sanction must be an available option, where "exit" is the most passive form. Fourth, the relationship between truster and trustee must be voluntary. Thus, trusting someone through coercion is also eliminated.

- to provide each member with the goods.
2. If the goods are produced, they will be available to all, even to those who did not contribute to its production.
 3. There is no practical way, or a way that does not involve excessive costs, to prevent those who did not contribute from enjoying the goods.
 4. The individual's contribution is a cost to that individual.
 5. The value of what each individual would gain from the goods outweighs his share of the costs of producing them.

Trust existing at a collective level, which I would call *normative trust*, satisfies all these features except for the first condition because it cannot be produced by actions of some in the group. Thus, trust is a special type of collective goods where most members of the collectivity should contribute to its production. In fact, sociologists are more concerned with such types of collective goods as "revolution" or "clean air or water," which require the contribution of most members for production. Let me now justify theoretically why and how trust should be conceived of as collective goods.

When firms in SFN constantly monitor other firms' behavior to calculate the probability of trustworthiness, economic efficiency drops due to the monitoring and transaction cost. For this reason, firms have a strong incentive to solve the free-rider problem collectively. Whether trust enables the network or the network generates trust involves an egg-hen problem. But most network firms deliberately try to enhance trust especially at the initial phase of network formation. There are three major ways of manufacturing trust in SFN. First is to introduce organizational sanctions for the defectors to induce cooperation. Multiple "third-party monitoring" is always available in a densely connected network, and it makes the network members behave well because a bad reputation can spread quickly. Second, organizations generate the convention of cooperation⁶

6. Lewis defines convention in an n-person game as follows:

A regularity (R) in the behavior of members of a population (P) when they are agents in recurrent situations (S) is a convention if and only if it is true that, and it

through repeated interactions in a stable network (Hardin 1982, 153-161). Thus they attempt to make a durable long-term relation even though it is costly in the beginning. Relational contracting, for example, may be costly in the early phases of interaction, but it pays off later. Thus, rather than changing partners, organizations resort to re-negotiations when contracts are not fully conformed (Dore 1983).

Third, organizations may rely on various strategies of sharing common ideologies that will facilitate norms of reciprocity. Through various rituals such as frequent gatherings and activities, they come to share a collective identity. Relying on familism, the idea that we are one family, is a common practice.

Besides these intentional means of enhancing trust, a certain type of organizational environment also induces trust in the strategic alliance network. For instance, when a product life cycle is short, and firms' knowledge becomes useless within a year or so because of rapid technological development in the market, they must reveal the secret know-how to other members in a suitable period of time. The cumulative experiences of inevitable cooperation enhance the level of trust.

IV. Implications for *Yōnjul* Society

Given the fact that the network can operate under trust, and that there has been very high trust in *yōnjul* or *guanxi*, it is natural to ask

is common knowledge in P that, in almost any instances of S among members of P,

- 1) Almost everyone conforms to R;
- 2) Almost everyone expects almost everyone else to conform to R;
- 3) Almost everyone has approximately the same preferences regarding all combinations of actions;
- 4) Almost everyone prefers that any one more person conform to R , on condition that almost everyone conform to R;
- 5) Almost everyone would prefer that any one more person conform to R , on condition that almost everyone conforms to R .

Where R is some possible regularity in the behavior of members of P in S, such that almost no one in almost any instance of S among members of P could conform both R and to R . Lewis (1969, 14).

whether the future network can be replaced by *yŏnjul*. Here I make a distinction between the *yŏnjul* and the network based on the following. *Yŏnjul* is closed and relies on particularistic and personalistic connections such as school ties, family ties and regional ties, whereas the network is open to anyone who has merits and competence. Fukuyama (1995) argued that Korea is a low-trust society because of a low level of trust outside the *yŏnjul* boundary. The question is then whether *yŏnjul* can substitute the network to rise in the future.

Korean society's *yŏnjul* seems to become ever more powerful even in the modern era, contradicting the theories of modernization that postulate industrialization and capitalism will breed individualistic meritocracy, and eventually bring about the demise of traditional social organization. They argue that the transition from *Gemeinschaft* to *Gesellschaft*, or from *mechanical solidarity* to *organic solidarity* (Durkheim 1933) is universal and inevitable. Korean capitalistic development, however, has not weakened the importance of particularistic ties and the old boy's network, a major characteristic of the traditional society (Chang 1991). Rather, the market has strengthened them in various ways, as people rationally choose to invest in maintaining and fine-tuning these ties. The three most important ties are family (*hyŏryŏn* or blood relations), region (*chiyŏn*), and school (*hagyŏn*).

During Korea's rapid economic development, these particularistic ties played an important role. They have been the medium of information flow among bureaucratic and capitalistic control (Amsden 1989). State-led industrialization became effective when a higher circle of state-business networks were based on particularistic ties. In the labor market, if the employer and employee came from the same region or school, loyalty was higher. In short, *yŏnjul* is still a basic mechanism for how society is organized and operates. High trust in *yŏnjul* reduced the transaction cost and solved the free-rider problem. The question I want to raise then is whether the traditional *yŏnjul* community has accelerated the rise of the network society. My answer is "no" both in positive and normative senses.

Historically, Korean people developed *yŏnjul* as a self-help sys-

tem, when the public sector was not concerned with the social welfare. *Yŏnjul* was the clear demarcation line within which resource mobilization and deployment occurred. However, the sense of community in *yŏnjul* developed into an “us-them” dichotomy. Within the boundary of a *yŏnjul*, there is flexibility, tolerance, mutual understanding as well as trust. Outside the boundary, on the contrary, people are treated as “non-persons” and there can be discrimination and even hostility (Fukuyama 1995).

Flexibility within a *yŏnjul* boundary, no matter how locally efficient, however, undermines the predictability of institutions because it overrides institutional rules and universal codes of conduct. It is not difficult at all to cite numerous examples in Korean modern politics where a special favor (such as the monopoly right in the market, bank loans and subsidies) was given to *yŏnjul* members unjustifiably. When institutions fail to provide predictability, people rely on *yŏnjul* more extensively to overcome unpredictability⁷ (Hamilton 1985), and the result is a vicious circle. For instance, when institutions do not exercise rules in resource distribution, *yŏnjul* takes their place, and *yŏnjul* further undermines institutional predictability. Thus if emerging network utilizes, and is limited by the traditional *yŏnjul*, favoritism and cronyism jeopardizes social norms and morality.

Yŏnjul also harms social efficiency because it would not invite competent members to a network. Intensified market competition in a globalized world requires open membership where all competent members can join the network. Think of a venture network. If its members are limited only to those sharing particularistic and ascriptive characteristics, its chances for survival are low. Imagine a matrix where the (i, j) cell indicates an interaction of i group characteristic with j group characteristic. The diagonal elements of this matrix indicate *yŏnjul* connections in that they indicate the interaction between the same characteristics. Korea could develop quickly because of high trust in the diagonal cells, which could compensate for low trust in the off-diagonal cells, and thus there was no strong need to facili-

7. *Yŏnjul* has been the functional equivalent of institutional rules.

tate the off-diagonal interactions. The rise of the network society, however, means that off-diagonal interactions must increase beyond the boundary of *yŏnjul*. In an (n by n) matrix, there are only n diagonal cells and n^2-n off-diagonal cells, which means that the number of off-diagonal cells outweighs diagonal cells. If trust exists only within diagonal cells, *yŏnjul* society will be maladapted to network society and suffer from low social efficiency.

V. Concluding Remarks

In this paper, I surveyed the major trends in the information age towards the rise of the network society in three selected areas, interpersonal, interorganizational and global networks. I also discussed the social consequences of such trends somewhat selectively. Because we are still in the early phase of the network society, we do not know all of its implications. It is apparent, however, that the rise of the network society poses a new challenge for the social sciences because of unprecedented power shifts and the crumbling of traditional boundaries brought by the network. Let me summarize a few of the questions that may be asked. The expansion of interpersonal networks in cyberspace may create multiple self-identities that raise the question, "Who am we?" The spread of network governance may restructure the economic system where the relative importance of small firms increases vis-à-vis big firms. If the network becomes the prevalent form of production, the implications for social stratification are significant because the danger of scarce resources being monopolized by huge conglomerates would be reduced. The global network makes the world a kind of chaotic system in which a small change in a local region may produce unpredictably large consequence elsewhere. The world is becoming a "risk" globe especially with regards to the financial system. A new system theory is increasingly needed to understand global phenomena, but its development waits to be seen.

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Network society is the expression coined in 1991 related to the social, political, economic and cultural changes caused by the spread of networked, digital information and communications technologies. The intellectual origins of the idea can be traced back to the work of early social theorists such as Georg Simmel who analyzed the effect of modernization and industrial capitalism on complex patterns of affiliation, organization, production and experience. Focuses on challenges, trends and new opportunities. see more benefits. Buy this book.Â Socio-ethical Problems of the Digital Economy: Challenges and Risks. Pages 96-102. Guryanova, A. V. (et al.) Preview Buy Chapter 24,95 â,-. The Transition to a Digital Society in the Peopleâ€™s Republic of China (Development and Implementation of the Social Credit Score System). Pages 103-110. Timofeeva, E. A.