Toward Co-Emulation:
Japan and the United States in the Information Age

BY SHUMPEI KUMON

*ILLUSTRATIONS BY
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Shumpei Kumon is a bridge person: he bridges Japanese and American cultures, the 20th and 21st centuries, technology and the social sciences, the grassroots and the power elite. I first met him at a meeting of the top computer and communications research managers in Japan. We had a high old time talking about virtual realities and virtual communities. I next met him in San Francisco at a meeting of the Electronic Networking Association, a group of computer-conferencing enthusiasts from around the world. Kumon believes he is on the trail of some ideas that might help the U.S. and Japan harmonize their interests in the future, cooperating as partners rather than competing as adversaries. "Co-emulation" is the metaphor Kumon proposes to help us reach this harmony. Professor Kumon also has a wild, intriguing notion that there's a new game afoot, based on neither power nor money, but on wisdom — knowledge, tempered by experience, guided by values. Kumon is a visiting research professor at the Henry M. Jackson School of International Studies at the University of Washington in Seattle. Other bridge people on both sides of the Pacific can reach him via electronic mail: His address is @well.sf.ca.us. —Howard Rheingold

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IN JAPAN TODAY, opinion is profoundly divided concerning the future course Japanese society and the Japanese state should take. In other countries, particularly the United States, opinion is divided about economic and political relationships with Japan. As a Japanese who has participated in policy debates on both sides of the Pacific, I have come to see that the key questions people are asking about US-Japan relations are actually questions about the way the whole world will operate in the future.

I believe we are living in an age of two simultaneous transitions, each of which has profound consequences for Japan and the US. Others have written abundantly about informatization, the transition from the 20th-century industrial system to a 21st-century system based on information services. I am more interested in a second transition, the passage from the era of the prestige-and-wealth game to the era of what I call the wealth-and-wisdom game.

Since around the 16th century we have observed the rise of modern states based on the concept of "sovereignty." These sovereign states together formed a global social system in which they have competitively pursued the capability to control other actors (other states or their own people) by means of threat. One may say that these modern sovereign states are players in the "prestige game."

With the industrial revolution, we saw the rise of modern industrial firms as social actors based on the concept of private property ownership. These industrial firms formed a global societal system known as the world market, in which they have competitively pursued the capability to control other actors by means of exchange. These industrial firms are players in the "wealth game."

A new social game is now emerging on a global scale based on still another way of controlling other actors: consensus formation through information and knowledge sharing. I believe that today we are observing the rise of the third basic form of social organization, based on the concept of information rights. These new organizations, which I will call "networks" generically, share collective goals and relevant information among their members and make collective decisions mainly by means of consensus formation. They will eventually form a global social system that might be called the global network. The individual "small-group" networks will be engaged in global competitive activity to control other actors by means of consensus formation. These small-group networks are players in the "wisdom game."

This new game will have a set of rules, relationships, values, and symbols that will partly or wholly displace the "prestige game" that has been played by states and will complement the "wealth game" played by industrial firms in the past. It is in our responses to the emergence of a "wisdom" game that US and Japanese societies will be most strongly challenged to adapt to a new way of life, and it is in this area where we have the most to learn from one another.

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Information Rights and Commodities

People have three basic types of rights related to our information processing and transmission. First of all, I think I have, both as an individual and as a member of a group, the right of information-processing autonomy. In other words, I should be acknowledged to have the right to reject the attempts of others to intervene in or influence, without permission, my own decision-

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making process. Secondly, I think I may safely assume that any new information that I create or discover in my own process of information handling naturally belongs to me. I should be acknowledged to have the right to demand that others give me due credit or ask my permission when they want to transmit the information I have given them to a third party. Thirdly, I think I should be acknowledged to have, at least to a limited extent, certain control rights over the gathering, processing, and using of information concerning myself (or my group) and hence the right to demand others to tell me what information they have about me and to prevent others from using it in ways I do not like.

In the coming information society, not only intellectual property rights but also these more genuine information rights should be firmly and globally established and at the same time properly limited, since no social right can be absolute (and many of them stand in conflict with one another). It is particularly important to define and limit these information rights if we want to facilitate dissemination of the newly acquired technologies for information processing, particularly telecommunication.

In modern society property rights have been duly established as well as limited so that the ownership of most types of assets, both tangible and intangible, can be transferred to others. This social convention is embodied in the concept of the "commodity," an asset that its owner promises is ready to be sold to others when a certain set of conditions (usually a condition about its price) is met. Such arrangement has facilitated and accelerated the worldwide process of market exchanges. Similarly, to accelerate the global process of information and knowledge sharing, we must delineate information rights as soon as possible. Then a new concept of information,

comparable to commodities in the case of goods and services, will emerge: information ready to be shared with others when a certain condition is met. One might call the kind of information that belongs to that category "the *sharables*."

Just as industrial firms accumulate wealth first by producing specific commodities and then selling them in the marketplace to make profits, the small-group networks, as players of the wisdom game, will accumulate wisdom first by creating specific information, or "sharables," such as new theories, ideologies, policies, pieces of art, or alternative lifestyles, then by disseminating them in the global network, gaining an increasing supporting cast of believers. Just as freedom of production and sales is of vital importance to industrial firms, freedom of research and dissemination is of vital importance to small-group networks.

In recent years, Japan has seen a revival of the concept of *sangakukyodo*. Literally, it means "cooperation between industry (*san*) and academia (*gaku*)." I want, however, to interpret the meaning of "academia' in a much broader sense so that it can mean not only educational and research institutions but also many other cultural institutions. Especially, I propose that "academia" in this case should include newly rising players of the wisdom game in general. In other words, I perceive that we are entering the age in which players of the wealth game and the wisdom game, rather than the players of the prestige game, play cooperative and complementary roles, particularly in R&D. Just as in the past when the state supported businesses in assuring security so that the latter could completely concentrate on business, from now on businesses will financially support the activities of small-group networks so that they can fully concentrate on playing the wisdom game. In turn, the small-group networks will

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help the business world to adopt and apply the former's findings in the development and sale of new and better commodities.

It is fundamentally wrong to combine the interests of the state with those of hypothetical businesses or small-group networks completely located within its territory and composed solely of its citizens. As we head toward the next century, many of the existing roles of individual states, having ceased to be sovereign players of the prestige game, will lose significance; they will gradually yield to global ruling organs, or to local municipalities. The global government of the future will take responsibility in designing the institutional/legal framework for coordinating the worldwide activities of the small-group networks and businesses, managing the global environment, providing the public with goods and services of global significance, and resolving regional as well as cross-cultural conflicts. Until such a day comes, the main tenet of today's individual states must be that of cooperation rather than the competition that is the conspicuous characteristic of private businesses and small-group networks.

Structure of Japanese Society

A convenient, though simplified, view of Japanese society is as a three-level structure of sub-, mid-, and suprastrata; in other words, people, basic organizations, and interorganizational relations. Depending on the stratum on which one focuses, Japan can be characterized as "a contextualistic society," "an *ie* society," or "a network society." At each level, Japanese society reflects the networks that I see emerging with the information age.

Japanese people have repeatedly been characterized as "group-oriented" and lacking individuality. Actually, most

Three Basic Forms of the Social Game

	Prestige Game	Wealth Game	Wisdom Game
Basic Rights	Sovereignty	Rights to own and use	Information Rights
Main Players	Sovereign States	Industrial Firms	Small-Group Networks
Other Players	Other States and Colonies	Households	Community Networks
Playgrounds	International Systems	World Market	Global Network
Primary Activity	Battles	Production	Research
Secondary Activity	Diplomacy	Sales	Dissemination
Immediate Goal	Territory, People, etc.	Goods and Services	Information
Relational Form	Yieldable	Exchangeable	Sharable
Ultimate Goal	Prestige	Wealth	Wisdom
Concrete Form	Armaments	Property	Knowledge
Nature of Power	Threat/ Coercion	Exchange/ Stealth	Persuasion/ Manipulation
Spread Process	Militarization	Industrialization	Informatization

Japanese have a sense of individual psychological self, and they are capable of behaving as actors, at least to a certain extent. But this "self" is strongly conditioned by what I call a "contextualist" culture that is firmly embedded in group-oriented social relations. To mention just one central and unchanging feature of the contextualist culture: people tend to have a strong

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desire to identify themselves with others. Most probably, the prototype of such a social relation is the mother-child relation. Thus, on the one hand, they want *amaeru* — that is, to be passively loved and identified with, and then to be allowed to depend on certain others they like, just as children do with their mothers. On the other hand, they also want *sewa o yaku* — that is, to love actively, to assimilate others and then to take care of them, as non-discriminatorily and equally as possible, just as a mother does her children. Taken in part, this relationship is asymmetric, if not necessarily hierarchic. As a whole, however, it consists of a multilateral relationship of mutual dependence and care-taking in which one plays the role of a dependent on someone at one time, and that of a care-taker for someone else at another time. This multilateral relationship becomes the fundamental context in which a Japanese identifies the self, that is, one's "share" in the social context. The desire to identify with others and sense of identity thus achieved, if satisfied to a sufficient degree, will form a firm ground for effective communication and networking among people.

In my view, the single most important type of social actor in Japan for many centuries has been its mid-stratum. Japanese refer to human organizations at this level as *ie*. The *ie* originally emerged in the 11th century, based on the developer-warrior system that existed at Japan's eastern frontier. The developer-warriors in that region organized, both militarily and economically, highly self-sufficient enterprises with survival and growth as their major goals. To achieve these goals the *ie* developed a hierarchic structure of functional roles. Since then, the *ie* structure has manifested itself in every sphere of social organization in Japan. On one hand, the *ie* resembles the modern sovereign state in that it is an

organization with a functionally differentiated hierarchic system of roles, and in that it has regarded threat as its most important political act in its pursuit of survival and development, particularly before the industrialized era. On the other hand, the *ie* resembles an "individual" in Western individualistic culture in that it shares certain individualistic values such as independence, autonomy, and self-sufficiency.

Even though the *ie* has so far maintained its basic nature, simultaneously it has been very responsive to environmental conditions and has thus reorganized its structure and behavior to cope with changes. For example, one may interpret the process of social evolution after the Meiji Restoration (1867) as an attempt by the founders of the new state to disintegrate the constituent feudal domains in the old state, which were *ie*-type organizations. At the same time, however, the new Meiji state also stimulated the development of highly independent, decentralized *ie*-type organizations within the state in business and household sectors. These organizations were also encouraged to graft onto themselves Western institutions of modern industry, governmental administration and constitutional politics that were gradually syncretized with the traditional form of the *ie*-type organizations, thus producing, among other things, the so-called "Japanese management" that fully developed during Japan's postwar high economic growth. But this "Japanese management" does not stand still. Under the impact of internationalization and informatization it is further reorganizing itself, probably into what might be called a network-type business organization. At any rate, I think this midstratum, the *ie* system, is the most versatile part of the Japanese society.

At the suprastratum level, no one can deny that Japan is a state, that is, an

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independent actor with no supra-actor to govern it. However, this state is more like a network organization, or even a societal network, than another modern sovereign state. It rarely uses legal coercion, let alone violence, as a form of regulatory command in its process of rule. Rather, it has yielded substantial power of autonomy to sub-level network-type organizations composed of a number of *ie*-type organizations. In other words, individual *ie*-type organizations usually conspire, sometimes voluntarily and semiformally, sometimes encouraged and/or authorized by governmental bureaus, to form various kinds of network-type supraorganizations or societal systems. Various parts of the Japanese government participate in these various networks; rarely does the government act as an independent ruler of these networks. This point, that governance in Japan is performed through networks, cannot be overemphasized. While every society has certain networks in its apparatus, the Japanese system of networks is ubiquitous and tends to be formally institutionalized.

Looked at from one angle we find that this "network state" is vertically divided into a number of circles, or what we call *kai*, which center around various occupational areas such as politics, business, bureaucratic administration, education, professional sports, arts, etc. These circles are further divided into a number of sub-circles and sub-sub-circles, all of which are networks.

Another form of network organization is what the Japanese call *keiretsu*, of which there are horizontal and vertical varieties: horizontal *keiretsu* are semiformally organized transindustrial networks of firms, usually with a bank or a trading company as the leader or the main "caretaker" of the organization; vertical *keiretsu* are composed of a big firm and its subsidiaries and/or subcontractors and suppliers, which work closely together, often having financial or ownership ties.

There are also network organizations, formally or semiformally institutionalized, which transcend individual industrial circles connecting them to organizations belonging to other circles, such as political, labor-union, mass-media, academic and consumers' circles. These trans-circle networks typically are mediated by the relevant governmental offices. Their most representative form is that of legally established councils, or *shingikai*, on both national and local levels. A council usually has a large number of sub-councils, sectional meetings, small committees, etc., each specializing in one particular area. There are also less formal, "private" counseling or study groups advising government ministers, chiefs of bureaus, etc., again with their numerous subcommittees. Such organizations consist of former officials of concerned ministries; representatives of relevant industrial associations, labor unions, or consumer groups; and other learned or well-informed figures such as scholars and journalists. The government department concerned acts as the secretariat. These groups are typical network organizations in that they meet regularly, with their members and the secretariat bringing in information to be shared by all. They use this information to obtain a common perception of the present conditions surrounding them both at home and abroad, as well as to forecast future trends, and to reach overall consensus on how the public and private sectors in question should respond to those environmental conditions, especially to their changes. The conclusion of such a joint discussion is usually confirmed in the form of a document (often called the "vision" for a given industry).

The question arises as to how a sufficient degree of social integration and order can be maintained in a society

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composed of numerous, overlapping networks that seem to lack a central governing mechanism.

One conspicuous trait is that the consensus formation process tends to be based mainly on perceptions and evaluations thought to be commonly shared all over the network. Thus all the members make their best attempts to sense and accept, quite spontaneously, those perceptions, evaluations, and sentiments (*kuki*) held by the network as a whole, and tend to agree with decisions and acts that naturally result from this particular *kuki*, more ardently and actively than other members, with the intention of occupying a more eminent individual position than others.

Another conspicuous — and sometimes dangerous — trait of networks in Japan is a tendency for consensus to be based on value orientations, rather than on dispassionate factual recognition or on logical reasoning. (Our mass media are manipulators of such sentiments more than providers of factual information on which people can make rational judgments.)

Opening the Networks

How well or badly do these traits of Japanese society, particularly those of network-type social systems, fit into informatization? Let me emphasize that what I have described here as the traits of Japan's social systems, especially of networks, are not necessarily unique to Japan. Many Americans argue that most of the traits of "Japanese management" were widely shared by American business corporations at least until the early 1960s. According to one American sociologist, the "collectivist organizations," such as cooperatives and communes, that mushroomed in the United States in the 1970s as an alternative to bureaucratic and "rational" organizations show

many traits which most Japanese believe to be unique to Japanese organizations.

Moreover, rapid progress in the technology of computer-aided telecommunication is making it possible for anybody to become an information provider for others, thus making the formation and maintenance of networks much more effective and democratic. This suggests the possibility that networks as a social system will be playing more significant roles all over the world in the future, acquiring new positive meanings and social legitimacy. This also suggests that at least some of the social systemic principles underlying Japanese society can not only be better understood in a positive sense but also accepted and even emulated. It is not difficult to imagine a universal applicability for Japanese-style consensus making, based more on shared emotion — that is, warm sympathy — than on allegedly cool, rational reason, and for Japanese-style management of a network organization based on collectively shared goals, decentralized mutual acts, and spontaneous coordination. Some of the "Japanese" ways of running a society may, if clearly spelled out, well understood and widely adopted, contribute significantly to coping with today's global problems, societal as well as environmental.

I have to admit, however, that there are still a number of negative aspects or limits that hinder the Japanese in their attempts to be more acceptable and responsible members of the global community. For example, networks in Japan tend to be closed and selfish in the sense that they select "homogeneous" members who share their basic world outlook and values; their goals are often defined narrowly in terms of their members' welfare only. To some extent, this is an inevitable cost for a social system that relies on consensus formation. Information sharing and

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consensus formation in networks can only take place effectively when based on long-standing and stable relations of mutual trust. Conversely, when a network functions effectively, mutual trust among its members will be reinforced. Consequently, a network's success tends to lead to complacency and "closedness" of the system.

How can we expect this deficiency to be overcome? It is neither realistic nor desirable to discard all the coziness and amenity provided by networks for the sake of unconditional openness to outsiders and equality among members. However, members should make more serious attempts to invite more newcomers to their networks, be more tolerant of internal heterogeneity, and listen more modestly and open-mindedly to criticisms and demands from the outside, while trying to understand more self-consciously and explain more clearly the essential characteristics of networks, their strengths as well as weaknesses. But, with the strong external pressure for Japan to open as a matter of principle as widely and indiscriminately as possible, this way of dealing with the deficiency of Japanese networks might not be sufficient. The "civilizational conflict" that has cropped up recently between Japan and the United States may inevitably continue for quite a while.

As I noted at the beginning of this article, opinion in Japan today is divided concerning what future course Japanese society and the Japanese state should take. In the past several years, on one hand, many voices have been heard declaring the necessity of *kokusaika* (internationalization) for Japan. These have been met by opposing voices warning of the dangers of a too-hasty or unthinking move in that direction. And even though consensus may have been reached on the need for *kokusaika* in some form or other, it is by no means clear what exactly that would entail. As yet, therefore, no clear

consensus has been achieved in Japan concerning either the direction or the speed of internationalization.

On the other hand, a much wider consensus seems to have been formed with respect to the necessity and desirability of catching up and coping with informatization. But a push by the Japanese government for informatization could be politically dangerous in that it might lead to outright competition and rivalry with other nations, particularly the United States.

One possible direction would be to try, by a serious and active introduction of the institutions and cultures of the developed Western nations, to make Japan more "Westernized" so that Japan and the West can more readily interact. However, as I have just mentioned, opinion is divided about how far such homogenization is possible (or desirable).

Another course would be to go in the opposite direction and, having reevaluated the merits of Japan's traditional institutions and culture, make the best efforts to have foreigners understand the characteristics, especially the strengths, of Japanese civilization and culture, thus persuading them to accept and coexist with diversity, or even actively propagating things Japanese abroad. However, here too, there is no agreement on what is typically Japanese, or on what is especially valuable about things Japanese, or on how far it would be possible (or desirable) for Western countries to "Japanize."

These two courses do not necessarily stand in contradiction to one another. In fact, to provide a socioeconomic model for the information age, I believe it is very important to attempt to meld the socioeconomic arrangements typified by the United States and those found in Japan.

The information age is inevitably leading to more and more networks in the West. The West, then, can surely gain

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from studying the positive and negative aspects of the network society in Japan. At the same time, Japan must become aware of the impact that its socioeconomic structure and behaviors are now having on the world as a whole. It must realize that it can no longer confine the boundaries of its social networks to its own national or cultural borders. Instead it must draw examples from the far more open societies of the West.

The best way for Japan, and the other nations of the world, to deal with the information age is to produce a prototype socioeconomic model that each country can mold to fit its own unique history and culture. I believe that much of the "network society" of Japan can be applied to such a model. At the same time, there are certain negative aspects of Japanese networking that make Japanese societal characteristics inappropriate for the heterogeneity and globalism of the information age, and here the societal characteristics of the United States and other countries will no doubt come into play.

In retrospect, if the world system during the first half of the 20th century experienced the era of a "hot war" between the libertarian camp and the totalitarian camp (fascism and Nazism), the latter half has been dominated by a "cold war" between the libertarian camp and a new version of the totalitarian camp (communism). What then will be the basic trend of the world system in the coming century? Will it be something like a trade war and a cultural rivalry between the libertarian camp of the West and still another version of the totalitarian camp (groupism) of the East? Not necessarily. In my opinion, it is more likely (and desirable) that the world system of the next century will be the era of "co-emulation" between the individualism-based culture/civilization of the West and the contextualism-based culture/civilization of the East.

Co-Emulation

By "co-emulation" I mean mutual self-organization based on both competitive mutual learning and transcendence of self. Take, for example, the case of the computer industry, where there are fundamentally different and competing computer communication standards such as IBM and UNIX and personal computers. A way for each individual system to gain the benefits of communication with other systems is to develop a software "emulator" in each system that creates a small scale model of each foreign system while retaining its own integrity. Can we conceive, create, and adopt a similar "social emulator" into each co-existing civilization of today so that we can peacefully co-emulate each other?

I believe we have two urgent tasks in front of us. First, we must study as objectively and thoroughly as possible the comparative characteristics of the different societies of the world. Anthropologists, sociologists, and psychologists already have much to tell us; much more involvement of social sciences in these global intercultural/intercivilizational issues remains to be implemented. Second, we must closely analyze the direction and nature of the sociological and technological changes that the world is now experiencing. The completion of these tasks will set the stage for nations to cooperate in jointly designing the prototype model that I have discussed. Then each country can customize the model for its own society without losing sight of its traditions and culture and, at the same time, with due attention to emulating others.

This admittedly ambitious approach seems to me the only answer to the potential for international rivalry and division that the dawning information age holds. ■

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