

Holonc (Holon Type) Engineering Vision:

How man can build a sustainable human society (Summary)

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(Translation in English by Tomiji Kawada)

Keyword: Occidental deductive ideas, Oriental inductive ideas, variety of values, free from monetary value, negative value, entropy value, co-existence, total conformability, fallacy of composition, trial and error, AIMAlSA, stratified holonic structure, duality, sustainability, non-reversibility, restriction of resources and environment, stationary state, exchange of energy=entropy, principle of complement, interactive complementary relationship, mixed system, restoration of taboo, recovery of norm, social contract, autonomy and heteronomy, non-economic welfare

An Introduction

These days, there are many opinions based on the assumption that democracy and the market economy will have universal values. Democracy or the market economy is, however, no more than an option for an ultimate objective to achieve the maximum benefit of people of a nation, or all human beings. Such an option, which naturally differs in accordance with an entity to choose it, has no universal validity.

It is true that such an option is considered to prevail over other alternatives, and, since its selection, it is now working actively in the course of history. Its appreciation is no doubt relative and never absolute at all. In history, no man has ever seen the perfect model of democracy or the market economy suitable for his final selection. This is no wonder, because democracy and the market economy are based on the “division of powers,” which will exist only when each entity to employ such division has its own values different from those of others.

In this view, the way of the United States of America, the supreme power at present, which takes its domestically selected democracy and the market economy as those like absolute truth, and drives other nations to follow them, is akin to totalitarianism rather than democracy. The assertion in economics that the market economy will produce the maximum social benefit is limited to such an instance, in which people deal with goods in terms of monetary value. While speaking up for a “free economy” and insisting on the open market of other nations, the United States behaves itself like a protectionist, insofar as intellectual property issue is concerned, where there is obvious contradiction, or simply so-called double standards.

On the other hand, the enforcement of different values always and anywhere cannot allow human beings to coexist with others as social creatures in their own nations, much less with peoples of other nations in the world. This is why we need to share common values with other

peoples, upon which minimum order must be built.

The necessity of these common values and the existence of different values among peoples, as previously indicated, compete with each other, and we will therefore be required to get rid of the dichotomy of the Western-world origin in order to find a way for the co-existence of this incompatibility. While there will be no use for Oriental mysticism of all kinds, the existing system lived through the passage of historical time is witnessed to have limited capability even in this real society, and is reasonably feared that it must fail to work properly in the information society to come, or the so-called the network society or net-society.

This serious situation leads us to the following understanding.

Democracy, exposed under the pressure of criticism of its deficiency in application since the age of Aristotle, now stands as a sort of mixed system in the course of history, through which it has been supported with its revisions and complements by implementing better features of other government systems (monarchy, aristocracy). So, too, for the market economy, as it has been made up with advantages of other economic systems (like the planned economy). The forms and degrees of the mixture are to be determined according to the history, the climate and the stage of development of peoples or nations concerned.

In today's society of global interaction, nonetheless, such different forms and degrees in different nations create other problems. These issues are therefore required to be put into conformity to the extent that the division of powers referred to above can be preserved.

That is, common social elements required to a minimum extent are to be agreed upon in compromise between the respective nations, and the rest of those will be respectfully left to the self-determination of each nation. In this case, common social elements for worldwide application shall be defined in broader terms, while those applicable to regions shall be defined much more in detail. Furthermore, in advance of rights and freedom bestowed a priori, any individual person, ultimate constituent of the nations, shall be imposed upon with specifically defined obligations and responsibilities based on the social contract.

Based on such understanding as expressed above and taking into consideration the net-society to come, I have worked on the analysis of characteristics in a more universal society to find the desirable form of a social system in the future, departing from the existing natural-born social system. The outcome gained so far is reduced to the book "Holon (Holon Type) Engineering Vision — How man can build a sustainable human society" in Japanese, published in autumn, 2005. I have suggested there an alternative solution¹ in lieu of the "invisible hand," the

1 Critics may raise tough questions, like "Does the author try foolishly to make himself 'lawmaking God,' as Rousseau said?" I cannot help accepting such behavior as they may take, when they may come across the manner of "looking for the construction of ideal systems" from the position of keeping clear of "interests of the world." On the contrary, such a "God" is desired right now. This is what I thought in my school days, and since then I have tried hard to lead my life of "routine affairs" on the surface as well as a "godlike being" in my heart by means of making use of myself as a specimen to be experimented during the larger part of my life.

In reality, "man" cannot be transformed into "God." A desired being will be consequently represented by an "alien" rather than "God" in the meaning by Rousseau. An "alien" means a being who will undertake "the construction of ideal systems" from a position cut off from "interests of the world." It could be a foreigner, but shall not be anyone directly interested in the systems to be constructed. On the other

fundamental part of the Western science.

The proposed solution is best featured in the co-existence of the “stratified division of powers” and the “total concept designed by the initiative of one man.” The designer’s function cannot be taken over with the division of labor by many people or the procedures of a wise-men conference from the viewpoint of the “total conformability” of the total system. However, no man can manage everything in any large system by himself only, and, if possible, it is, above all, feared that man tends to be caught in the trap of dogmatism or totalitarianism. I have then worked out a way,² in which we shall invite the public to participate in competition with their basic structural plans based on the self-designed total concept, and any plans, if supported by many knowledgeable judges, will be reviewed with their comments for improvement, and then will be returned to the original designers for their brushing up of the plans, based upon which subsystems therefor shall be designed in detail, in accordance with the same procedures as taken for the basic structural plans within the scope of the subsystems.

The book demonstrates my perspective on the most fundamental subjects, consisting of the ideal ways of government (an interactive complementary democracy), an economic system (an interactive complementary market economy) and the social contract (fully interactive complement between laws and ethics) in upcoming years, and further goes on to ideas for subsystems like welfare, education, taxation, recycling society, and intellectual property rights as specific examples. The limited space of this paper allows me to pick up a few of these ideas and discuss their excerpts on the basis of the most important concept, the “stratified holonic (holon type) structure,”³ in my view.

hand, someone in the same country will be acceptable, if someone is disconnected from relevant interests. Any system designer shall be absolutely kept from the operation of systems designed by him. Otherwise, the concentration of “authority” and “power” will end up with harmful effects. For example, the representatives of any legislative body shall not participate in any political party, and much less shall intend to participate in the administration of government.

- 2 The subsystems shall be made with the stratified structure as well. Accordingly, the detailed design of any upper systems shall become the basic design for systems located at the nearest lower level. The designers of the nearest upper systems shall be responsible for evaluation of the system design of the nearest lower systems to ensure the conformability of the lower systems, and the same practice, when applied to every related system, will ensure the conformability of the total systems.

The lower systems can, in turn, be permitted to maintain their self-completeness to the extent of their conformity with the upper systems. In this manner, the total systems are able to acquire and preserve their distinct characteristics of flexibility or “AIMAISA” to use a Japanese term. The term “AIMAISA,” as elaborated later, is generally translated as ambiguity (polysemy) in English. “AIMAISA” in Japanese is ambiguous (polysemous) in itself, and the term ambiguity as translated seems to be misleading. So, AIMAISA in Roman characters is used in this paper.

- 3 The stratified holonic structure is a kind of multi-layer network. To be more specific, the structure comprises a heap of constituents in order, starting from the basic structure (like international treaties) provided in the more integrated upper structure (like worldwide ones), followed by the autonomous and independent, within a certain degree of freedom, systems provided in the lower structure (like nationwide ones) established in line with the factors of more instinctive division of powers, then by the second lower structure and systems (like autonomous community and regulations) underlying the preceding upper system, and finally by a certain autonomous character (like ethical views) at home and on a personal basis. Now, let’s take a look at the structure in reverse. An individual person, the smallest part, will become autonomous and independent as much as possible, and will be supplied as

It seems to be most unlikely that the “total system” at issue can reach the final stage of completion within the finite period of time, since there will exist other numerous subsystems than those discussed in this paper. In view of another requirement for “total conformability,” none of systems themselves under review in the book and this presentation itself, will come to the final end, but formation and contents thereof will continue to undergo changes in the lapse of time, too. Therefore, value can be observed right in the process of this presentation and the systems demonstrated therein.

Comments or arguments by experts or specialists engaged in the relevant fields of research are naturally expected on the views expressed in the book after my consolidation of knowledge collected from many specialized quarters. In particular, I may expect certain strong objections from some specialists, as I define everything as “uncertainty,” which respective specialists will believe in or stand on (such as, for instance, gold for economists, institutions for lawyers, laws for scientists, God for men of religion, sentiment for novelists).

Man must keep in mind, however, that the “holonic engineering” approach is applied to the discussion generated here. Any constructive opinions or other comments are very welcome, but, at the same time, man is requested to refrain from raising negative comments or sort of hit-or-miss ones on respective parts of the discussion made in this paper, in the case and as far as such comments are made without due consideration to the conformability of the total system in question, no matter how rational and acceptable they may look only within the scope of part of the discussion.

1. Toward Conquest of the Orient and the Occident

These years, people have been sensing limits in the ways of Western thinking, the leading global view up to now. This does not mean a flat denial of all Western viewpoints, though. The more man in fact appreciates true values of the Western views in his society of today, the more man has turned to look for a new type of structure necessary for overcoming the limits.

At the time when human beings have taken hold power sufficient to destroy themselves, they cannot afford to take a wait-and-see posture until a new structure can be built as a result of such historical trial-and-error process as experienced so far. Or, it will be much riskier to select the same course as one taken by Marxists, which resulted in failure.

much as possible for shortages, if any, first at home, then in the nation, and even in the world, each of which is done on the basis of the principle of complement.

In this manner, it will be possible to keep the total system in order to a certain extent, which has been considered to be the most difficult issue to solve, as indicated before, as well as to expect the benefit that subsystems can be operated independently within the scope of the designed plan. Meanwhile, it will be the great nature or the ecological system that will be situated over the top of the structure, which means the natural law that cannot be changed by men. Though recognized as an autonomous and independent character, any individual person, as ranked in the lowest part of the total system, cannot get rid of strong limitations to be imposed from the upper structure on his rights and freedom, which are erroneously understood these days, as if they could be available without any terms and conditions. This is never taken to mean a kind of totalitarian thinking, but it is instrumentation necessary for protection against totalitarianism.

I have continued to tackle this problem in a view to finding solutions, to which I have applied the Oriental inductive ideas⁴ that I had learned by nature as a Japanese as well as the Occidental deductive ideas later acquired intentionally. I received the Kaneko Prize (in 1987) for my academic work entitled “Creating more common values — Overcoming the difference of values as such in the dynamic system,” which intended to resolve the difference of values between the East and the West.

The work of Amartya Sen seems to have been reevaluated from the same viewpoint. As I see it, he subscribes to ideas of Oriental pluralism, but I sense the shade of Occidental monism in the later development of his ideas and other activities by him. This may explain why he was accepted by Western society, the field of his activity. In other words, his views are never something new in the mind of Oriental people like us, and his ideas, the source of such views, are nothing else than a compromise between Oriental and Occidental ideas.

What’s asked now is not limited to such assimilation, compromise, mixture or introduction of Oriental thinking. It should be something compatible (hybrid) with each other after one’s good understanding and dissolution of the difference between both worlds. I am trying to overcome this seemingly impossible problem by means of a designed device of mine — the holonic engineering approach.

Meanwhile, the readers of this paper may claim that the text covers nothing new or different from conventional thoughts. But the existence of these “conventional thoughts” simply aggregated will not constitute the organic system being sought here, and in fact, is subject to fall prey to the fallacy of composition. In this paper, you will find innovation in my way of total system construction under fully harmonious arrangements and without taking the risk of such falling into the trap.

(1) Merger between Occidental Deductive Ideas and Oriental Inductive Ideas

Discussion on values in this paper is necessary to be provided with provisional parametric coordinates at the initial stage. I consider it inevitable for me to make good use of Oriental inductive ideas at the stage of installing provisional coordinates, and Occidental deductive ideas at the next stage of finding provisional solutions.⁵ Otherwise, it may be unavoidable for anyone to misunderstand the provisional coordinates as the absolute ones. That is, I have to prevent errors from arising due to little attention paid to the term “AIMAISA” during the course of our discussion, and also due to the “AIMAISA” itself in the development of the discussion on the

4 This paper is strictly based on scientific study, and absolutely excludes mysticism of traditional Oriental ideas at all. Mysticism was seen even in the West, but Western civilization or science now under my review has started by eliminating it. I do not say, though, “Let’s return to Western mysticism!”

5 Originally, everything from the growth and progress of an individual person to the species of human beings and to the progress of civilization is the accumulation of trial and error. As a result, everything in its origin has been acquired in an inductive way. After finding it inefficient to repeat something once obtained, human beings have acquired ability from experience to extract custom, law, axiom and the like, and furthermore to accumulate them in a inductive manner. Everything in its origin has been inductively acquired even in Western civilization and science, but the fact has gradually turned out obscure during the long period of the inductive process.

“Occidental deductive ideas” and “Oriental inductive ideas” are exhibited below in Fig. 1.

provisional coordinates.

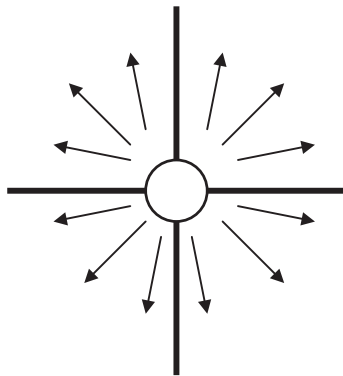
For the purpose of finding solution for the first written issue — conversion to the application of pluralism, on the other hand, it is required to reverse the flow of thinking so far engaged in exclusively on the basis of Occidental deductive ideas and monism. There is no alternative for me to make intentionally hard comments on existing studies and ideas, and to promote the discussion from the standpoint of Oriental inductive ideas and pluralism. Concurrently, I need to take into account another subject: “Overcoming the difference between the East and the West.”

There are a couple of approaches employed for different purposes in this paper, one of which is Oriental inductive ideas and pluralism useful for the extensive pursuit of my own study and the construction of original models of mine, and the other of which is Occidental deductive ideas useful for my tough comments on the existing studies accrued from the Western deductive ideas and monism. This is done so as to prevent any useless argument between them over their respective views, like “I am superior to you.”⁶

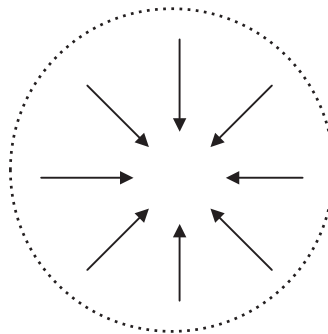
(2) Errors in the Leadership of the United States with Shorter Historical Experience, and in the Doctrinaire Freedom Originated there

In the world of real life as well as theory, modern economic society is under the leadership of the United States in many fields. It will be, however, reckless to try to expect the United States

(1) Occidental deductive ideas



(2) Oriental inductive ideas



Source: Written by the author. All other figures below are the same.

Fig. 1 The type figure of Occidental deductive ideas and Oriental inductive ideas

6 It is only in the modern ages that Occidental values and Occidental ideas, while playing a leading role in the development of human society, have grown up to the mainstream of culture, which Oriental values and Oriental ideas had enjoyed until then. Returning to the latter will be a condition indispensable for the existence of human society from now on. And yet, development will not come to an end there, but a further return to the Western philosophy will commence. In a historical look at it, thus, things go on in a spiral fashion (see Fig. 2).

to provide common solutions at least in the social and cultural field.⁷ It is because the United States is obviously inexperienced in history, and is in no place to “demonstrate” what can be called “historical dialectic outcome.”⁸

In addition, the nowadays’ progress of the United States never consists in such originality thereof as told in general. Such progress has been rather brought to its people by their free ride on many factors required for progress. The United States has maintained its society by devouring free and natural public goods since its independence, and, notwithstanding its claim for exclusive rights for fruits raised by itself in recent years, (for example, intellectual property rights), it is now enjoying the use of free of charge of the historical products of other nations or peoples (for example, languages themselves, mathematics and so forth).

Despite those negative aspects, the United States, free from restriction and convention arising out of history and culture, is capable of drastic experiments and reforms. In this sense, one of the nation’s features, “an artificial virtual economic society,” is provided with both chances, good or not, namely the risk of endangering the existence of human beings as well as the capability of contribution to the progress of human beings.

In a view from another angle, the United States, short of an opportunity to go through the ordeal of trial and error in its history, had no other alternative than seeking a certain nationwide unity of values out of the confusion of different values upheld by peoples of a so-called “melting pot of races.” Such unity of values has been brought to them in the mode of monetary values, which are more easily measurable in objective numbers as well as more easily and fairly feasible to be shared with by a variety of interested peoples. To reiterate it reversely, the United States

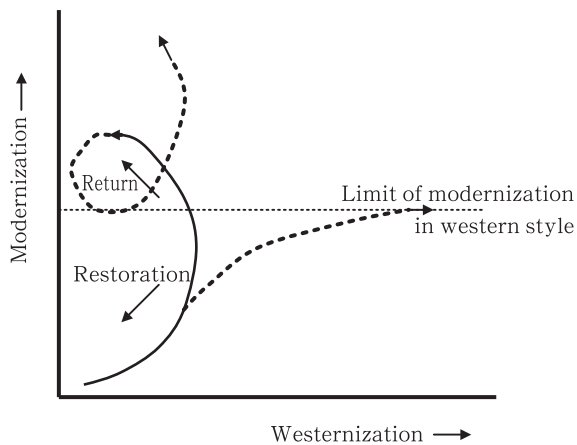


Fig. 2 The route of historical development

7 I have no intention of denying all the roles of the United States, but as I appreciate its true value, I simply like to be cautious of doing it to such an extent as more than worth it.

8 Judged from this view, an economic theory available now is found in the trap of tautology, because it insists with the example of American society that it has “proved” the justification of its application. In other words, it is needless to say that it best fits the United States, where it has its origin, but such argument is nonsense that “American society is most suitable in a theoretical sense” because of the account of its best fitness.

still remains incapable of fixing common values under historical dialectic, and it explains why that nation provides its people with monetary value or market value in place of their common values.⁹ This substitution is more easily understandable and acceptable to participants in democracy and the market economy popular in the public. Or otherwise, it means what the general public lacks is an independent and autonomous capability necessary for democracy and the market economy.¹⁰

Developing societies are fully occupied with their utmost efforts for chasing the leading models of society, and cannot afford to spend enough time to generate the fruits of historical dialectic over generations. They are therefore induced to follow such a similar form of society as the virtual society of the United States, and are more vulnerable to the influence of such an illusion as the virtual type of society like the United States is generally applicable to other nations across the board.

There is large discrepancy between developing societies and developed ones. For instance, the former is oriented toward objectives, while the latter remains stable, only subject to a certain limited range of fluctuation. In the present globalization of life, man can see requirements for a new rule to be organized and appreciated by both developed and developing nations, which will be feasible from the understanding of differences inevitably existing between the two groups of nations, and not from the unilateral imposition of one group's values on the other group.

We shall never fail to appreciate the importance of values, such as environment, culture or public property, which should be neither subject to the values of present human beings, nor left to the logic of the market.

(3) Free from Monetary Value

Modern people seem to regard economic value, above all, monetary value, as most important.

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- 9 Any current economic theory is an aggregate of "tools" to be used one way or another according to time and place. Despite its reins of the real world, it is by no means a theory equipped with "proof," such as "objectivity," "universality," "rationality," "reproducibility" and so forth valid in natural science. There is indeed an "experiment of thought" unlike "experiments" accessible in a laboratory. Such an experiment can bring social phenomena unfit for "experiments for engineering" to the subject of the experiment, and it can be hardly fulfilled with the experiment of specimens, which is conducted by means of a simulation model or "dynamic economy" to be frequently employed by some economists under the name of "proof." It rather resembles an experiment viable in the brain of a genius physicist. The term "science" in natural science and in social science is meant quite differently in each field. In natural science, for example, a hypothesis is taken over by another one with greater precision, when observation is much improved in precision and noise can be separated at discretion. Then, the new one is called a "law," where man can appreciate the evolution of a hypothesis. In social science, an object of study itself changes with the times, and man cannot always specify as noise anything changed from any preceding theory as a result of the improved precision of observation, because such change may have resulted from the evolution of the object itself. Furthermore, social science has nothing to do with reproducibility valid in natural science, since that cannot be compatible with requirements for providing different experiments with the same field and on the same conditions. To talk about proof, social science is more comfortable with indicating a kind of learning from historical trial and error or experience than to refer to proof feasible in natural science.
- 10 Despite this fact, many of the intelligent are caught in error with their discussion made on the basis that the general public would be as wise as they are.

In particular, such inclination has been accelerated, since the supreme power in the world was assumed by the United States, which had fixed monetary value as its national common values.

In the meantime, what is meant by “value” at all?¹¹

For instance, labor is the origin of value in Marxian economics. If so, however, it follows that the value of labor contained in a bottle must remain, even after it's broken. And, if value is represented with utility as defined in modern economics or value in use as in Marxian economics, it will be equivalent to neglecting the risk of a broken bottle. Or, the “labor theory of value” views exploitation from nature by human beings as a matter of course, and the “theory of utility,” calling the “disposition of waste,” “externality,” stands firm against any behavior to deal with it within the theory.

A view outside of economics tells us the necessity of adding “negative value” to “true value,” and, to wit, waste needs to be reevaluated with not only the cost of reclamation and combustion, but also “negative cost” to be incurred therefrom in environment. In a further view, it is necessary to review the original value existent in raw materials per se, which means that the value of resources, for example, shall cover not only cutting and mining costs, but also generating costs in geological history as well as ecological costs.

As a barometer of value for the implementation of this view, man can think of entropy, which indicates physical order inherent in an object. In the case of a product, the value of entropy will consist of the total sum of energy converted from order existing in the stage of raw material itself plus artificially added energy in the course of production thereafter. As we can understand from this formula, the return of a broken product to nature on non-harmful conditions, that is, the removal of the total order, will require the same amount of energy as the value of entropy necessary at the stage of production (dualism of the value of entropy).

From the relation between the amount of energy required for production and the amount of energy for the return to non-harmful conditions after disposal, it follows that the “arterial part” comprising the development of raw materials, production, distribution and consumption shall become nearly equivalent in magnitude to the “venous part” of disposal, recovery and reproduction. Consequently, reuse, repairs, recycling and the like shall prove more wise options than the outright throwing away of broken or useless goods.

The foregoing view will instruct us that modern civilization leads its life by consuming quite a large amount of resources and energy and sprinkling entropy to a wide extent. This understanding drives us to the knowledge that a bunch of environmental problems starting from the familiar matter of waste to the problem of the greenhouse effect remote from our real feeling are rooted in the same origin.¹²

11 Value and values are coexistent as a historical result, and nothing else than that. “Value is composed of the three parties, namely (1) the transcendental standard of value (values and culture), (2) an object to be evaluated by (1), and (3) a subject to perceive the value, and concurrently the three parties per se are existent only with value.” This tautology cannot help being accepted as an “axiom.”

12 To be specific, it can be exhibited as the stratified holonic structure in Fig. 3.

(4) **The Rise of Developing Nations and the Historical Mission of Japan**

The rapid rise of developing nations in world society means the arrival of powerful resistance against the monopoly of the nation of hegemony, and raises questions about Occidental ideas prevailing so far in international society. It can be taken even positively that they have come across a superb opportunity to overcome Occidental ideas now indicative of their limits and the monopoly of the superpower.

More plural viewpoints, leaving from Western unitary views, will be sought more than ever in the new world, where a variety of non-Western nations are mushrooming with different values as well as different stages of development. In these nations, it is expected to study the minimum levels of common values necessary for co-existence of, or meme to be shared by, peoples of different races, culture and climate.

However, none of the developing nations is active enough to prevail over Occidental ideas and the monopoly of the superpower, and Japan, one of the mature and influential nations in the non-Western world, has a mission to be recognized in world history.¹³ This paper is prepared by myself, as one Japanese who has recognized the mission.

2. Expectations toward a Net-Society and its Historical Significance

The hectic development of business through the exchange of information by electronic

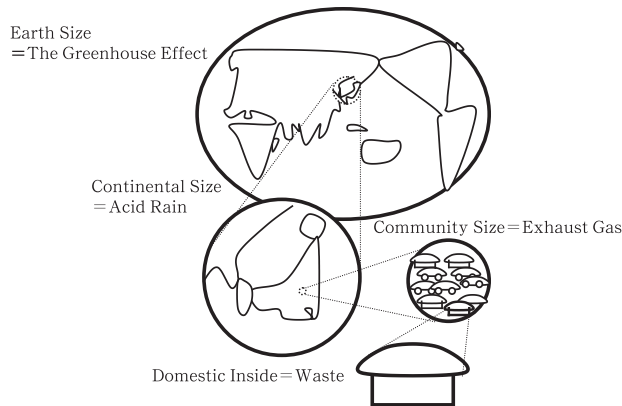


Fig. 3 The stratified holonic structure of environmental problems

13 In fact, Japan has continued to catch up to Western leaders, and to reap only something beneficial to itself since its national opening policy, which has brought us a prosperous life today. The systems or institutions introduced in Japan were operated in more original a form than that of Western nations, as this nation was fortunate to be free from the bondage of customs and circumstances then prevalent in the Western world. This nation maintains therefore quite a few more original systems in its existing ones, which can be made available now for use in Western nations, as models available from Japan, so to speak, although there are of course questionable practices in the Japanese systems, like customs of the past and contradictions in the systems inherited from Japan's random access to Western systems. This paper seeks to take up as many social systems as possible in consideration of these problems, and to propose a desirable and conformable model of a social system.

means these days indicates the major establishment of a net-society in the near future, and is expected to provide us with another chance to break the bottleneck confronting us. This movement is absolutely new to Western nations as well, and they may find it more comfortable to accept it than a "model available from Japan," as mentioned above. At any rate, human beings can never get rid of a way to destruction, once they fail to take advantage of this opportunity.

(1) Analogy and Difference between Real Society and the Net-Society

The net-society of today, contrary to our expectation, already discloses plenty of problems. Mushrooming illegal acts and unfair transactions display a cause of serious anxiety about the healthy development of the new society. Above all, speculative dealings vulnerable to throwing the world economy into disorder are likely to do more harm in the net-society, which is free from requirements for real means (real goods in the transaction of property or cash in monetary transaction), is capable of creating credit more easily than real society, and makes use of transactions through communication by electronic means in a close to unlimited speed of turnover. What is feared in such a net-society is the chain reaction to come soon from heated virtual speculation to a virtual bubble economy, then to the final stage of catastrophe after a broken bubble in the net-society involving the real one.

On the other hand, the rapid growth and progress of the net-society does not permit "such a process of trial and error" in its historical period as seen in real society. Conversely speaking, the net-society is not equipped with such flexibility and capacity as real society is, and it is therefore expected to be furnished with as less contradiction and as much total conformity as possible beforehand. In addition, "acceleration" arising out of technological progress requires a built-in control mechanism, too. Moreover, "increasing returns phenomena" are generally observed in the net-society, where special interested forces are easy to get out of control, or "positive feedback" will arise, as the followers of the complex-systems theory designate. It is consequently unexpected that the net-society will make progress in parallel between the total society and individual components thereof as real society has done. After all, man has to forget the wishful expectation that "the net-society can establish a desired order automatically, even if it is left undone."

As there are a good deal of differences between real society and the net-society, man can be hardly successful in bringing in the net-society something even modified in part from real society. Understandably enough, the net-society needs new rules and regulations, different from those of real society, for lately much discussed problems, such as the "protection of personal information," "tax collection," "intellectual property rights," and so on.

It does not mean that the net-society can exist entirely independent from real society. A tremendous amount of information supporting the net-society has its own roots in real society, and however much information may be exchanged, it can never produce real goods. Nonetheless, man may more often come across the case that information accrued in the net-society loses no time to be reflected in real society. In an extreme instance, a certain level of price established with the business of a small size in the net-society, but never valid for general use may happen to take the lead of price setting for large transactions in the real market.

(2) The Order of the Net-Society as never the Copier, but the Model of Real Society

The net-society across the national borders requires the arrangement of new ultra-international public property (including common order and meme to be shared) to be provided beyond differences among nations, races, culture, et cetera in order to ensure its appropriate operation. The arrangement must become available in advance in the net-society, as it tends to allow positive feedback to work with ease, and thereby begins to run beyond safety speed, once it gets out of control. The arrangement is in an urgent need, since it is preceded by real things. Man cannot afford to wait for precedents to be set by a real society still in need of international public property.

The current attempt of the United States to lead real society as well as the net-society is extremely abnormal and risky, because that nation is considered to be premature and a developing nation from the viewpoint of long-term, human history. Real society is tied up with numbers of distortion or contradictions stored in history, and cannot be justified at all to represent itself as a model for the net-society, which is expected to accommodate complete conformability. Rather, the system of a “virtual society” to come is expected to work as a good model for real society. That is, the result gained from prior experiments in the new net-society shall be fed back to real society equipped with exhausted systems.

The extraction of all latent capability of the net-society and the prevention of such destruction stemming from the net-society as elaborated above will call for the design in advance of a genuine virtual system without self-contradiction. Whoever may be involved in the total design of such a system must be intellectual enough to cover the wide range of knowledge from system design technology to social institution and laws, and further to economy, history, culture and others. And, the brand-new, net-society needs the design of a special and ideal total plan for its own purpose. When such design becomes available, all the latent capability of the net-society can be exploited. In reality, however, social scientists expected to seek the concept of a new society remain in bondage to legal theory and economic theory based upon the old real society of theirs,¹⁴ and then, it is impossible to portray the desired picture of a new society.

The net-society to come is not always to be different from real society. The birth of a “virtual society” accumulated with information free from prejudice is more likely to offer an excellent opportunity drastically to change real society captivated by old connections and accustomed to the inching progress of innovation.

3. The Character of the Social System

Human beings from now on shall make most of “sustainability” for the purpose of escaping from self-destruction. In this standpoint, we should build a social system capable of the exchange of energy=entropy with an external system to an adequate extent, by which the smooth develop-

14 For example, the net-society is composed of each participant who is Autonomous, entirely independent from others, and cannot always be aggregated. As a result, the mechanism of price setting, as taken seriously in the economic theory of today, is not necessarily applicable.

ment of the system itself can be assisted, and further made available in an independent and dispersive style, while the total conformability is preserved.

Concurrently, we have to regard “earth environment and ecology systems,” the superior concept of a social system and an economic system, as a given condition, when it comes to the reconstruction of these systems. It means that everything is subject to review from the standpoint of serious consideration to be paid to “co-existence” and “habitat segregation.”

Our social system is quite unlikely to comprise solid components totally independent from AIMAlSA, since nature, the aggregate of everything, to which it belongs, is not a mechanical and rigid system. It consists of holonic existence, which maintains a certain kind of non-self-finalization, namely AIMAlSA, as well as a certain sort of independence and definiteness as a component, and it is one of the set of components of the stratified holonic structure, systematically reinforced with flexibility and organic capability. So, its redesign cannot be satisfactorily completed only with current mechanisms or engineering ideas addicted to solid body beliefs.

To talk about society, what I deem most important is “system,” “process” and “enforceability.” It means nothing but the fact that I make great account of “trial and error.” Our society has grown up as a “historical and dialectical result” through the process of a great deal of trial and error during the lengthy lapse of time in history. There remains plenty of contradictions with each other, whereas such contradictions have managed to maintain their co-existence with amicable terms and conditions. That is to say, real society grown up as a “historical and dialectical result” has so much flexibility and capacity. Now that human beings have acquired strong enough power to destroy themselves, and that their activities have reached such a level as they could demolish nature and the ecosystem prerequisite for their existence, everything cannot rely on the means of trial and error. That is why a certain artificial coordination is required, but it would be meaningless, should it dare to deny human beings.

Let me summarize in advance requirements for the social system to come in the following.

First comes sustainability, as described before. It is based on the prior condition that each holonic component shall maintain the exchange of energy, equal to entropy, with externalities to a suitable extent.

Secondly, the system itself shall be flexible and organic, but never solid and mechanical. Moreover, any coordination therein shall be of flexibility always within a certain range,¹⁵ never of hard and mechanical means, because society is an institution made of human beings as living bodies and individual character.

Thirdly, the concurrent progress of consolidation and division of powers is inevitable in our society of today, which will in turn necessitate the concurrent existence of an “eye to see the woods” and an “eye to see the trees,” or “unity” and “variety.”

(1) Interactive Complementary Relationship

However much globalization may be promoted, the centralization and unity of everything on the basis of international standards will not only do harm to the dignity of human character, but

15 Not So Great to Deny Human Beings Themselves or their Character.

also lose new creative power and advantage made available by division of labor depended upon by the modern market economy. It is because either new creative power or advantage by means of division of labor owes its existence to the difference and originality of respective individuals involved. On the other hand, an approach to everything by means of division of powers will lose the most important aim of total conformability due to a trade-off between individual views concerned and “the fallacy of composition.”

It is limited to the case of a so-called “negative feed-back” effect that democratic society or the market economy works thoroughly, as such society or economy expects its total balance as a result of a trade-off between imbalances of individuals according to the “law of large numbers.” It’s never allowed to forget that democracy or the market economy, as if easily taken as the common national system at present, needs conformability with not only international societies, as the upper part of structure, but regional societies, as the lower part of structure, as well. In reverse, the mixture of such “autonomous atoms” as the basis of democracy or the market economy does not automatically ensure the conservation of total conformability. The fall of the socialist system in the former Soviet Union and other eastern nations does not always mean the supremacy of the power-divided market economy or democratic system in all respects. Or, the way of the planned society will work against dynamism or efficiency in society, as such society appreciates total conformability above all things, and then reduces it to a partial balance in lower levels. Moreover, the lack of dynamism will not only hold progress in check, but turn up to reject even real existence itself brought in by progress itself.

Therefore, when it comes to the relations between the whole and a part, or market activity and government activity (policy), it is indispensable that each party shall “be mutually complementary,” but not that one party shall complement the other.

(2) Variety

The high development of civilized society has increased not only a variety of materials, but also a plurality of problems, such as a variety of values which are difficult to be measured in volume and further to be compared to each other. Above all, the variety of values calls for the comprehension and understanding of existence as stratified values, such as great nature (ecosystem) \ni human society (culture) \ni economy \ni monetary value from more scientific views, but not as parallel values, such as religion, race, nation and individual person. Our society has made its progress with parallel development between total society and components thereof (starting from the consciousness of constituent members to a variety of systems).

Human beings, as “social creatures,” cannot leave everything to plurality, and while variety provides more options, it not seldom does harm to unity necessary for society.

The conventional Occidental ideas still leading this world left pluralism once lived in Greece only to drift between monism governed under the influence of Christianity and relativism, the apparent negativism against the former, and have never reached the true pluralism, which integrated monism and pluralism as well as absolutism and relativism. They only have been dancing within the terrain of monism or in the palm of the Creator’s hand.

When reviewed at the starting point, society, as a system featured with “separated parts and

consolidation between such parts,” naturally requires “structure,” “comprehension of the total picture,” “integration of deduction and induction” or “the third method beyond reductionism and holism,” as stated by Koestler. Without such recognition, human beings cannot cope with the net-society to come to its highest, and also with cyclic society or non-growing society under the restriction of resources and environment.

In reality, however, such recognition is not accepted by people, and the natural born system of today is equipped with the patchwork of its components (laws and regulations, various organizations, economic systems) and its background (legal theory, economic theory) made available under symptomatic tentative treatment, but not with the “basic idea,” their source. The social system of today is not compatible even with society to come on line of extension thereof. Or, should the present system be left as is, all human beings on earth would be confronted with an emergency.

The preceding assembly of the total system does not mean the solution of all relevant problems, though. It is because anticipated problems, or the uncontrollable actions of interested parties are feared to grow stronger, if the assembler puts his own or his nation’s benefit before anything else. Any system, whether made out of natural development or by the preceding assembly, would be brought to such risk by a single misstep, if taken, as to drive it to despotism, totalitarianism or system of hegemony. Before such risk happens to come true, we have to be prepared for an order and system adaptable to the net-society to come on the basis of artificial but neutral and fair stance apart from the interests of influential parties. It must be something quite different from what is now in real society, and for the time being, we need to start afresh.

And yet, it will be totally unexpected for human beings to dispose of all the results of natural selection in the evolution of life, the results of historical dialectic in the progress of human beings and the results of trial and error in the growth of individuals, only to think of something new and invent something new. Rather, “to start afresh and examine” means “to learn from history.” On top of that, it will be of great use to learn a lot from not only Western society, the leader of real society for a long time, but also Eastern society with longer history and other areas’ histories and experiences.

With regard to the issue of policy, it will become important to establish a given condition or rectify it to the desirable environment and the direction, as it is easily understandable from the theory of chaos that a little difference in the given condition would make a dangerous change in the long run. Policy concerned with a living economic society naturally differs from nation to nation in accordance with each nation’s cultural background, its international environment and its stage of development, where both the correction of policy, as I usually assert, and rules therefor are required. No rules are expected to be born from nature or to be developed by themselves, and they need to be enacted by artificial means based on a certain intention.

4. Requirements to be Provided by the Desired Social System

A social system is required to exist in a manner that any component system thereof (that is, subsystem) shall be in harmony with each other. We must therefore recognize thoroughly the

basic structure of democracy and the market economy, the basis of our modern society, and install such subsystems so as to meet the basic structure. First of all, we have to begin with the question about what kind of basic structure we should accept, after we confirm the understanding that democracy and the market economy are nothing else than a tool for the ultimate purpose of enriching the welfare of human beings.

To the contrary, this simple reasoning is in fact not understood across the whole domain from the social economic system, the so-called macroscopic phase, to the domestic order, or so-called microscopic phase. Such ignorance in the most fundamental areas has caused the contradictions, which were covered up by dynamism generated out of economic growth in the past, to emerge suddenly and has provoked too much confusion to be neglected in our present matured society.

In the background of such problems, there is a change to be exemplified as, according to the growing complex of the social system, no one appears to be capable of taking care of everything by oneself, unlike great men of the past, and even if there were some remainders of such capable men, people at large would not pay attention to their opinions. Also indicated is the erroneous understanding of democracy that “opinions of the majority” are regarded as absolute. One of the decisive factors is the division of labor in excess by “specialists” without coordination among them. Leaving everything to decisions by the vulgar crowd without regard to comments by great men capable of commanding a bird’s eye view of things, and leaving everything to judgment by specialists with a narrow field of vision are clear to work against the conformability of the total social system.

Incidentally, the social system (social institution, laws and regulations) is, as expressed before, no more than a tool for the final objective of advancing the welfare of human beings. Or, under the major objective there are intermediate and minor objectives, such as preservation of the environment, the maintenance of public peace and order and the boosting of economic welfare, and the majority of social institution as well as laws and regulations is only a tool for achieving the middle and minor goals. We shall not distort the fact by the reality of a “contract with God” delivered from Christian society, which declares “God comes first,” and further of the “priority of social institutions” based thereupon, or of giving priority to the arrangement of social institutions and laws and regulations in the developed nations’ fashion from the viewpoint of developing nations, where an issue to catch developed nations is their supreme proposition. But, the standpoint of advocates positive for institution or laws and regulations prevalent nowadays, or arguments for the revision of social systems based upon the existence of “institutions” and “rights,” will be extremely dangerous to human beings. It will be imperative to get rid of the false premise and to reconstruct the social system, which shall be started afresh, to wit, which shall seek an ultimate purpose. For all that, any attempt in this direction will encounter strong reactions from interested parties involved in the existing systems in depth, like nations with supreme power, influential individuals and specialists, and it would not be too much to say that human beings might be already in the stage of heading toward their destruction.

With the aforesaid understanding, I clarify requirements to be provided for the social system in line with the final purpose of reinforcing the welfare of human beings as follows.

(1) The Stratified Holonic Structure¹⁶

New rules to be installed shall not be unified all the world over, but shall be modified or adjusted to a certain degree according to the difference between large nations and small nations, stages of development thereof and areas to be involved in, and shall be conformable in their own way and formed in the shape of the stratified structure. For example, what is realistic and even fair to all parties concerned will be that nations, enterprises or individuals shall observe global rules for their global activities, and local rules for their local activities, while the basic rules, such as compliance with contracts, shall be shared by all of them. It is because democracy and the market economy are established and maintained with the expectation of individual's activation and efficiency by the "division of powers."

At the same time, there are, however, "errors out of consolidation" in a wide range. This is why a certain arrangement for coordinating the contradiction between rationality in a microscopic view and dissociation in a macroscopic view is required. We need to establish "common objectives" of a long and macroscopic range, as the key for such arrangement, and concurrently to transform social structure itself to the stratified holonic structure with flexibility and progress abreast of the times. To be more specific, indispensable are the structures of the "mixed system that will complement shortcomings of democracy with superior features of other political systems and the third forces" and the "mixed system that shall resolve deficiencies of the market economy by mutual complementarity with policies."

16 See Fig. 4

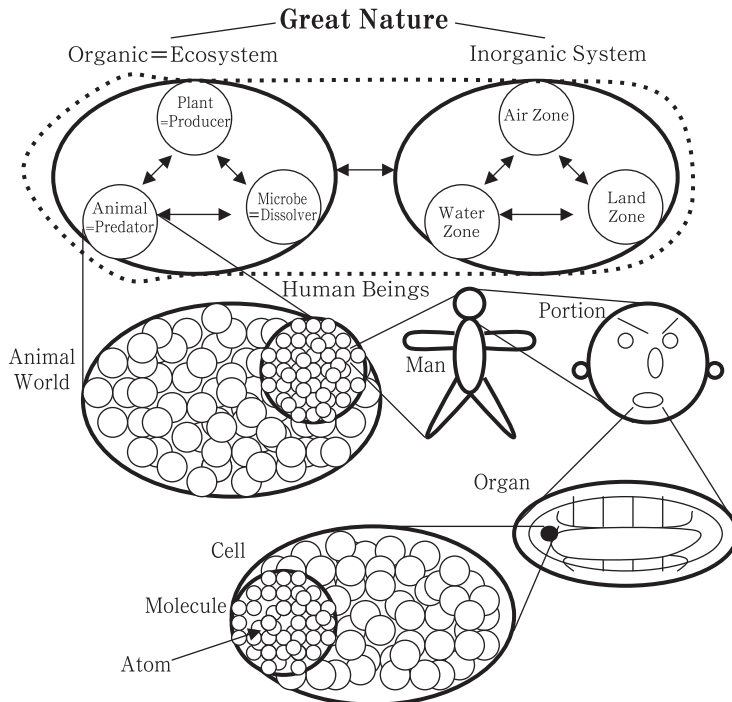


Fig. 4 The stratified holonic structure

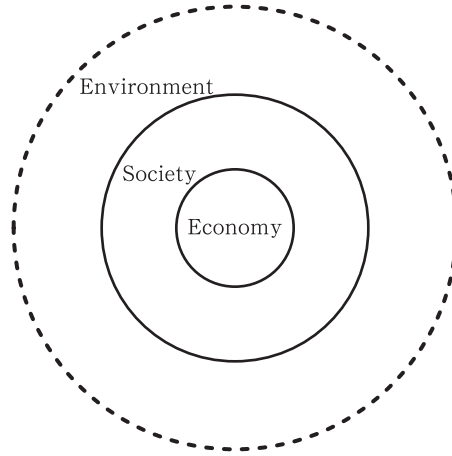


Fig. 5 Natural Environment \ni Human Society \ni Economic Activities

In the stratified holonic system, it is expected that the lower subsystems or components therefor are placed, the more they become independent or autonomous. In legal systems, for instance, treaties, laws, regulations and so on for the purpose of maintaining order of international societies and nations, as the upper level of the structure, shall be valid with limited restrictions to the “freedom in principle” rule. Or, ethics for the sake of keeping order among individuals, as the lowest level of the structure, shall be an autonomous release from “restraint in principle.” In the event this autonomy fails to work properly, the upper mandatory rules shall be inevitably reinforced. Similarly, in societies where the ethical autonomy of individuals is not expected, treaties, laws and regulations shall be set forth and applied more in detail. In this respect, it is scarcely sensible that the United States will take leadership of social rules from now on, since the nation is lacking in ethics as a consequence of historical dialectic. The United States and other developing followers, like Japan, are rather required to look for new ethical views and national doctrines of their own.

The social system, featured with the substance of a certain autonomy and definitude and with the holonic existence of a certain non-self-completion or AIMAlSA as well, is composed of the aggregate of components in the form of such a stratified structure as built up with flexibility and organic capability. In the concept of sets, aggregated components or parts can be deducted from the total aggregation, but doing vice versa cannot be permitted from the former because of their self-denial. In the relationship of [environment \ni natural environment, non-natural (\ni social) environment] and [(social environment \ni) culture \ni economy, non-economy], culture, i.e. the set of parts, and environment, i.e. the total set, are impossible to be excluded from economy, i.e. part thereof.¹⁷

17 In the present economics, culture or environment among other things is more likely to be excluded as an “externality.” Needless to say, in the event economic field is taken up as an object for scientific study, non-economic elements or the aggregate of non-economic parts on the same level may be permitted to be eliminated as noise. However, this situation is utterly different from the exclusion of the total set of components or parts.

(2) Duality Indispensable for the Maintenance of the Stationary State

Any “system” can maintain its “sustainability” by keeping its “stationary state” in a certain “fluctuation.” In this respect, there is no exception for democracy and the market economy.

From the viewpoint of maintaining the stationary state, it is absolutely a wrong understanding that “rights are endowed by nature.” It is nothing else than what has been given on the condition that “duties sworn to God” shall be done on the basis of the “contract made with God” in Christian society, which has brought to us the current concept “human rights.” In the background that the idea the “division of powers” has been emphasized in Europe and America, there is further the history that God is the absolute being in Christianity, and that men of power bestowed by the absolute God (kings’ power granted by God) monopolized power. In the West, there was thus nothing like the division of power and authority between Emperor and Shogun, i.e. General, in Japan. This is the reason why the “division of powers” is expected to work as a mechanism of “negative feedback” for preventing the concentration of power.

In the future world including non-Christian societies, however, there is neither such “natural granted human rights” nor such “natural granted freedom” as taken for granted by the Western modernists. There is no “contract with God,” the lingering vestige of “mysticism” alive subconsciously in Christian society. On behalf of the “contract with God,” there is “a social contract” in the true meaning. The “social contract,” as a “contract” in force, shall be a “reciprocal one.” It shall be necessary to clarify the scope of “rights and freedom” and “duties and responsibilities,” i.e. what citizens are given and what citizens can take by the “social contract.” As Locke and Rousseau said, then, it will begin with the fact that “citizens deliver to society everything they have.” However, it never means “totalitarianism.” Rather, each citizen has the mission that he shall adapt himself to society and that he shall be careful not to proceed to “totalitarianism.” In this view, it will be a partial opinion to assert that the “restriction of power is the essence of the ‘rule of law,’” as said by Hayek. It should be concurrently told that the “restriction of rights and freedom is also the main issue of the ‘rule of law.’”

In democracy and the market economy essentially based on the premise of autonomous and independent atoms (individuals), free riders shall be entirely excluded. Otherwise, the contract system in the whole society, that is, the “stationary state as a system” will be inevitably broken down. In short, democracy has the premise of equilibrium between “rights and freedom” to be rendered to individuals and “duties and responsibilities” equivalent therewith. Similarly, the market economy is based on the premise of “benefits” earned by individuals and equivalent “costs” incurred to individuals (See Fig. 6). Or, neither can maintain the “stationary state” or “sustainability.”

Meanwhile, “capacity” including latent capacity as generally understood means the “capacity of action (competency)” at all times. In other words, it is biased in favor of the “capacity of enjoyment of rights,” and “criminal responsibility” is neglected. If so, the consequence will be that duality or balance between “rights and freedom” and “duty and responsibility” goes wrong, which will then cause democracy itself to be in jeopardy. To say in reverse, the concept “equality” shall mean not simply “equality in the capacity of action” and “equality in the capacity

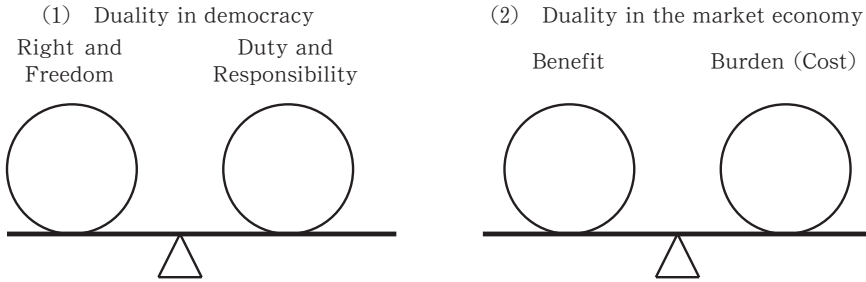


Fig. 6 Duality

of enjoyment of rights,” but “equality in criminal responsibility” as well, which will be certainly called “truly equal opportunity.” Needless to add, there is hardly “equality” in “criminal responsibility,” if this responsibility is a given condition. Now, this is the reason why the “principle of complement” in the “stratified holonic structure,” as clarified later, is called upon.

It will be necessary to establish new rights and freedom corresponding to the growth of new technologies and new enterprises, or to set up new duties or obligations in a world like a virtual world, where the new capacity of enjoyment of rights will be born (Fig. 7).¹⁸ For that purpose, new duties or obligations shall be expressly set forth, and if time is insufficient for such express provisions, ethics or the natural law¹⁹ shall be temporarily made use of on behalf of such provisions. In case the net-society is left to grow solely on the basis of convenience without explicit consciousness among people of such requisition, the net-society will only proceed toward destruction before it can prove its existence of real significance.

Nonetheless, as rights and freedom or duties and responsibilities are an immeasurable concept, equivalence or balance is meant to be nothing but “a concept” with “fluctuation” to a certain

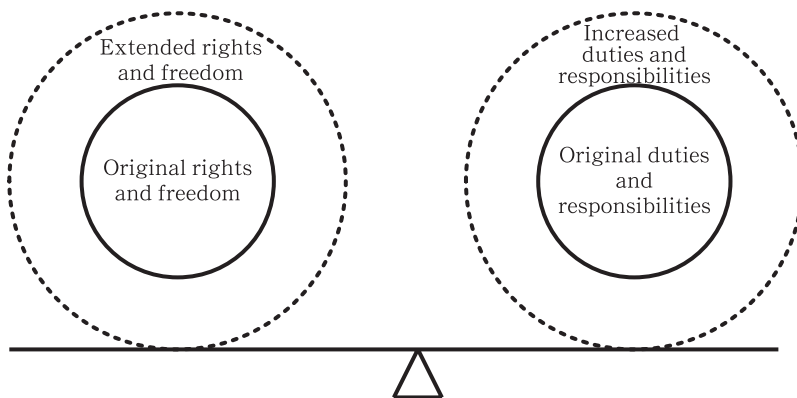


Fig. 7 The increase of duties and responsibilities in parallel with the extension of rights and freedom

18 Major nations with the large capacity of enjoyment of rights shall take as much responsibilities as they can.

19 As described later, ethics change in line with values, and values themselves change from peoples to peoples and in history to history. The natural law in question is not such a natural law in force now as derived from Christian ethics, but is meant by a new law to be established with much consideration to the natural laws and logic as done in the age of Greece and to be shared by all mankind.

extent. Ethics do therefore play all the more an important role. Globalization makes it inescapable to “live together with other peoples on earth,” and existent saturation in environment on earth causes men to seek “symbiosis with other living matters in the natural world.” In advance of entering such situations, men will be required to change their consciousness so as “to correct their euphoria or the increment of his self-centered benefit by shifting the strain to the external system, i.e. causing other people to get into trouble,” such as not only awful acts of folly like wars or nuclear arms tests, but also problems in men’s daily lives like the use of cell phones in public spaces, smoking and illegal parking on the streets. When every man becomes convinced that he bears something, while he feels somehow inconvenient, the sense of fairness and oneness as whole human beings including future generations will be brought about.

The maximization²⁰ of allotment to individuals so far attained in the democratic society has been in fact achieved only by the sacrifice of external systems. It is exhibited in the historical events, starting from free citizens in Greece based upon slavery, to the modern European democracy based on colonialism, to developed welfare nations on the premise of exploitation from developing nations and to the prosperity of modern mankind achieved at the expense of the disruption of the natural environment, which shall be left to their posterity as a gratitude to their ancestors. All the events are however regarded as a kind of free ride, and none of them can be called to remain in the sustainable stationary state.

(3) Applying the “complementary principle” to the stratified holonic structure

Man cannot forget that “freedom” usually used in the transcendental meaning is of a stratified structure in concept. For instance, “freedom of wild nature” looks relatively less restricted, but restricted, when it comes to “freedom of action,” as observed in the case that weak animals can be active only at night. On the other hand, relatively more restricted “social freedom” subsumes the “freedom of thinking,” as exemplified in the event that prisoners in a jail cannot be restricted in their brains.

Now, “rights” and “freedom” defined by jurists in an extra-superficial sense come under review from the standpoint of outsiders. For example, let’s assume the dual structure consisting of the law as “restriction on freedom in principle” and ethics as “release from prohibition in principle” (i. e. freedom insofar as other people are not gotten into trouble) (See Fig. 8), before going into discussion about the legal permission, i. e. “release from prohibition in principle” as routinely called by jurists. This structure can eliminate “open space” between the areas, which shall be never permitted to exist formally and logically.

The latter, i.e. the source of ethics, is the Christian ethics in America and Europe, and is the concept of the natural law now in force. It shall be different by nature according to peoples and their histories, but developing nations including Japan, thanks to the faulty education of democracy in the American style, have disposed of all their traditional ethics as “convention.” Although

20 Privileges once owned by despotic monarchs could be redistributed to the public, but rights and freedom gained by people would be far from the level of magnitude specific to the privileges enjoyed by the monarchs. It is because the object for the distribution is awfully large, if the grantee is only one, but it becomes by far smaller, if divided to innumerable individuals of the public.

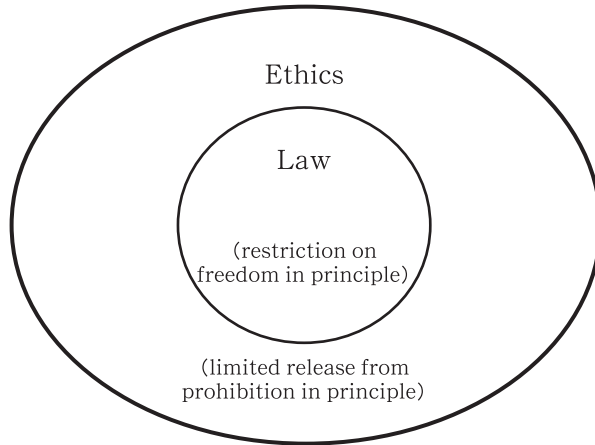


Fig. 8 The dual structure of law and ethics

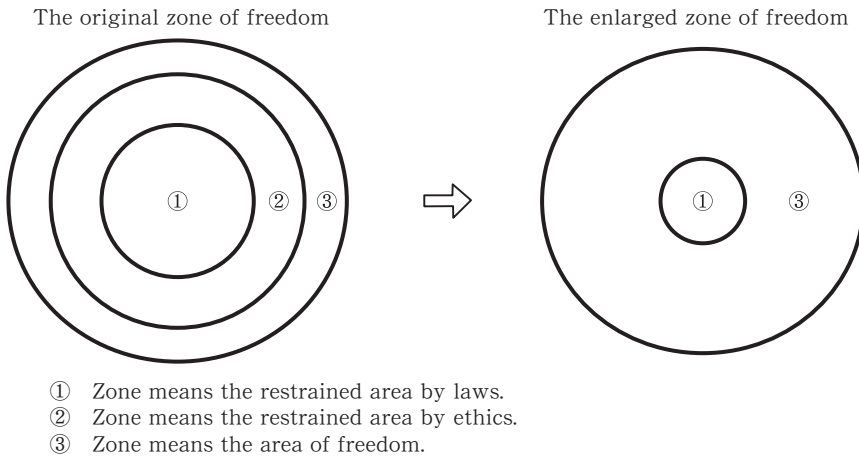


Fig. 9 The deterioration of ethics and freedom out of control

freedom looks enlarged at a glance, consequently, the erosion of ethics and the increased negligence of laws have in fact worked only to leave freedom out of control, which have caused in turn its balance with responsibilities to be lost and then the order of society to fail to be maintained (See Fig. 9).

In consideration of the “weak in society,” it will be impracticable to assure even among individuals the perfect balance based upon such “equality in the capacity of fulfillment of duties” as discussed before. An idea to ignore the weak will be equivalent to the denial of their own “personality” as human beings. Therefore, there is need for a certain “principle of complement”²¹

21 One of the Christian doctrines. To refer to it in relation to this paper, it is to cover non-autonomous elements of constituent members by the similar members of the upper classes, i.e. the subset and further by the entire set, while such non-autonomy with dynamism is permitted within a certain range of value, provided that each member shall be autonomous as much as possible.

in such society or market as to be in the stationary state²² of existence. For instance, it is a configuration, in which an individual shall be independent and autonomous as much as possible, then in which whatever he is unable to be independent or autonomous of as an individual shall be absorbed at the level of his home level, further in which whatever he is unable to be independent or autonomous of at his home level shall be absorbed at his community level, even further in which whatever he is unable to be independent or autonomous of at his community level shall be absorbed at his national level, and finally in which whatever he is unable to be independent or autonomous of at his national level shall be absorbed at the global level (See Fig. 10).

The burden to be required inevitably of the strong in this configuration looks excessive in part, but it can be understood to be equitable from the viewpoint of circuitous benefits (for example, the wealthy benefits most from the stability of society including the weak) and interests in excess (for example, think of the scope of freedom and the size of rights and the capacity of enjoyment of rights) (See Fig. 11). It can be differently said that the burden to be imposed on the strong shall be construed to be their “duties” or “thoughtfulness” in the Oriental sentiment, but never to be the “natural rights” of the weak in the Western sense. The weak shall be then obliged to entertain their “gratitude” in mind equivalent to the burden on the strong. In reality, however, it has been widely misconceived as the “natural rights of the weak,” which will cause their society in the stationary state to be shaken, and which will result in diminishing the value of their innate “rights,” the counterpart of their “criminal responsibilities.”

The magnitude of such “thoughtfulness” cannot be reduced to such a style of “social basic

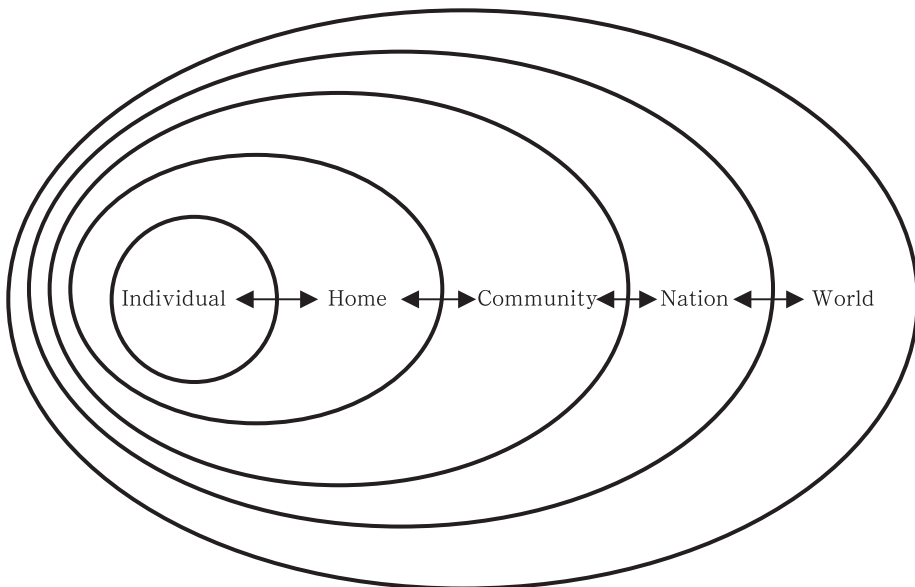
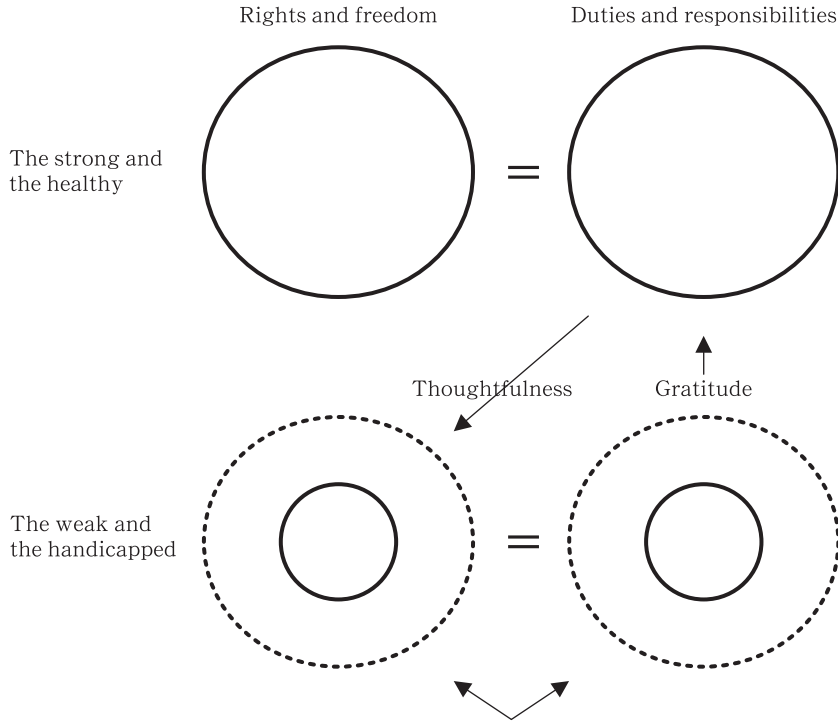


Fig. 10 The principle of complement

22 The stationary state means the situation, where there is unbalance and fluctuation in a short period of (microscopic) time, but where such problems will be settled within a certain range of value in a long interval of (macroscopic) time.



Note: Enlarged part with the dotted line shows fictitious (instituted or not) rights and freedom granted from the thoughtfulness of the strong and the healthy.

Fig. 11 Interests in Excess and Burden in Excess by the Strong

property” as named by Rawls or “basic latent capacity” as called by Sen, but will be of variety in accordance with races, climate, circumstances surrounding problems concerned and other factors.²³ It will be also dependent on the reasons of individuals, beneficiaries of social “thoughtfulness,” whether they are accidental, liable or not, to the individuals. For instance, there are different kinds of people under the same classification of the “handicapped,” such as injured “heroes” who fought with enemies for the defense of their nation and people, the “victims of disasters and accidents” or the “congenitally handicapped” who are not liable for themselves, nor responsible as a result of any contribution to the whole, the “self-inflicted sufferers due to their own intention or negligence” who are also responsible, or “racketeers and gangsters” who are mere fighters for their own interests, and there are naturally differences of benefit to be given to each category of the classification by society or the third parties.

²³ For instance, against the Western critique about “suppression of women,” Islamites can counterattack Western society that “ethics of charity from the wealthy to the needy as a matter of fact is not observed.” In the meantime, “thoughtfulness” apparently looking like “virtue” can become “vice” in the world unknown to the benefactor. For example, “thoughtfulness” given to sickly children in noble families turns to bring cruelty to the slavery strata and exploitation from colonial inhabitants, and other cases sort of follow. To take global environment into account, modern mankind’s ever growing desire for welfare will be fairly in danger of cheating posterity through the disruption of the ecosystem.

(4) Systems Inclusive of Ambiguity (AIMAISA)

Real existence per se, including human beings, is quite ambiguous. All human work under the restriction of limited life, up to languages • definitions • logic systems, knowledge • information • comprehension systems and institutions • laws and regulations, cannot get rid of ambiguity, AIMAISA. If so, we should be engaged in its construction with awareness that any social system will involve AIMAISA.

By the way, the Japanese term “AIMAISA” includes not only ambiguity, but other meanings, such as chaos, fluctuation, fuzziness, indefiniteness, indistinctness, moderateness, noncommitment, uncertainty, unclearness, unaccountability, unknownness, unknowability, unmeasurableness and vagueness.

As the term is so ambiguous, some advocates take it to mean that the Japanese language is indistinct.

To the contrary, however, there is no English word which will indicate the comprehensive expression of all those concepts, and man cannot cope with this problem, no matter how many English terms with similar meaning may be combined for use due to the fearful aspect of the fallacy of composition. Logic derived from the Western science of reasoning is not prepared for mechanisms or logical symbols to take in AIMAISA, and, worse than that, it has resulted in failure to eliminate AIMAISA.

I have prepared a few tools including AIMAISA in order to complement the limitation of Western logic. One of them is to deal with the situation that is neither microscopic nor macroscopic, thus characterized with AIMAISA, as a mecroscopic situation. For instance, supposing the cosmos is macroscopic, and the quantum world is microscopic in the field of physics, then the world inhabited by human beings becomes mecroscopic. Similarly, in the event the status of individuals and enterprises is microscopic, and the level of their nation and the world is macroscopic, the position of industry is deemed to be mecroscopic. Such mecroscopic fields cannot be taken care of by the rules applicable to the macroscopic and microscopic worlds,²⁴ and it needs another special dealing.

24 In the field of human real activities, follow-up experiments may not be possible more often than not, because there would be some influence caused by human power on the postulate in question, and they would require a certain period of time, too. In daily economic activities, and even in the larger ecosystem of the world, as well, disturbances generated by human work are large enough, and available time is limited, all of which will prevent us from finding something close to the law of probability. For example, in economic theory, human work is assumed to be sufficiently little (i.e. like a small country) in relation to the “invisible hand” expected to control the market, and activities by individuals are also supposed to be plenty enough to justify the significance of probability. However, human activities do satisfy none of the assumptions. As a result, what can be attained will be always a sort of the lesson of experience and historical teachings including AIMAISA, and will be by no means something definite like a law. Concerning this kind of problem, therefore, man needs to think of a new field totally different from the macroscopic or microscopic world, and further from the medium or semi-macroscopic land evolved out of compromise between the two worlds. That is termed the mecroscopic world.

Another invention I have made is the AIMAI mark “ $\{ \}$ ”²⁵ as a logical symbol. The mark will be enable us to cope with problems including AIMAI, which cannot be taken care of with the conventional logical expression, until such AIMAI can be driven to fade away to the last degree.

(5) **The Recovery of Norm**

This kind of discussion requires a certain proposition to be fixed prior to its beginning. A system to be sought will be more “normative,” as this sort of arbitrariness is hardly unavoidable. In social science aimed at human work, it will be the first and indispensable step for the sake of ensuring its scientific competence to distinguish between individual’s subjectivity inherent in his values and norms to be sought (values with the greatest common factor to be shared).

Modern economics with powerful influence on modern society has made much of abstract objectivity and numerical formulae because of its misconception of the meaning of “scientific significance,” and has consequently turned to be far away from norms. Economics, like other sciences, can be understood to have nothing but its true mission to help human welfare ultimately grow. In addition, we cannot afford to forget public goods or culture and environment essential to human social life as valuables, which can be scarcely left at the mercy of the doctrine of economics or market.

But, now in the age of growing numbers of participants from outside of Western society, we cannot expect, as we did up to now, American society grown without dialectical outcome, namely

25 The meaning of this mark is explained for better understanding with particular examples below instead of disclosing its idea only.

- (1) $\{ \}$ is defined to mean a concept including “AIMAI,” and $| |$ is likewise a concept not including “AIMAI.”
- (2) To exemplify the “blue sea,” then, the concept the “sea” can be standardized with physical perception as the “huge pool of salty water” in general.
- (3) However, when it is modified with the adjective “blue,” there could arise conceptual discrepancy between the intention of the speaker and the comprehension of the listener, as the former means a rather specific “blue” as seen in the South Pacific sea with coral in summer, while the latter imagines the sea with a range of color like sky blue to indigo. Nonetheless, the discrepancy can be gradually reduced and can end up with virtual solution, if the speaker explains it further in detail. It means that the discrepancy outstanding at the outset was not that of reality, but that it was nothing else than existence as “AIMAI” (fluctuation). Therefore, it can be expressed that $\{ \text{blue} \} = \{ \text{sky blue} \} \text{indigo} \}$.
- (4) To think of the “sea” combined with the “fluctuating” concept “blue,” for example, the “sky-blue sea” and the “indigo sea,” both landscapes in view will represent each other a variety of backgrounds (from the natural factors of land • season • weather • *et al.* to the speaker’s state of mind) beyond the difference of mere color. The fact is therefore that the source of “fluctuation” was not “blue,” but the “sea.”

As observed above, the “subject itself” (factor) can be defined in a certain degree of strictness, when it is a bare entity, but, when modified with adjectives or other terms, it will inevitably become liable to “AIMAI.” In a reverse view, the fluctuation of the concept of the “predicate itself” is caused by the “fluctuation” of the “subject itself.” This kind of explanation in depth for “AIMAI” (fluctuation) is applicable to not only the domain of definition, but those of axioms and essence as well. For instance, the “uncertainty” of quantum, which is deemed to “fluctuate” by the act of observation, is considered to be ascribed essentially to quantum itself as the “fluctuating subject.”

universal applicability, or the new classical school of economic doctrine and the doctrine of collective option developed there to play a leading role. What is needed from now on will be the formation of institutions, norms and systematization of theories with greater universal validity, incorporating viewpoints of non-Western societies.

In the field of natural science followed by modern economics as a model, artificial noises have to be eliminated by all means for the building of systems of pure theories. Scientists often conduct their observations or experiments in ideal spaces specially built for them. In the ground of social science dealing with human activities, a variety of human work is involved and scientists will have great difficulty in finding beforehand one or more among those noises which may be irrelevant to the pure theories to be sought. Furthermore, in social phenomena, noises arising afterwards cannot be known in advance nor eliminated beforehand. In the area of advance issues like forecast and policy planning, therefore, interim evaluation, evaluation after the work done, or learning from precedents is deemed to be important. In the field of social science, not a few reservations will be required, should experiments for thinking be performed in ideal artificial spaces or virtual fields like those in the field of natural science. In this respect, modern economics with belief in God or existence of pureness has already reached its limitations.²⁶

Postulate to become the base of norms shall be made attractive with additional values like "truth, goodness and beauty" acceptable to parties with different values, provided that scientific and physical restrictions such as environmental problems shall be given the first priority. In such a case, "AIMAISA" cannot be absolutely wiped out, because such additional value unavoidably depends upon men's subjective viewpoint. It will be sheer nonsense to demonstrate formal logic in detail, as done by theorists of collective option, without taking into account the shaky factor indicated above.

(6) The Restoration of Taboo

In order to understand the limit of the existing Paretian paradigms that theorists of collective option are caught in their own trap, let's introduce the concept "social unrest." Then, supposing such "social unrest" becomes so large that "those who received favorable allocation at the initial stage" turn as a result to feel "it removed even with resort to revision of the allocation," it follows that "the revision of the allocation does not violate the Paretian optimum."²⁷

In this case, however, if part of fellow members take it that "the revision of the allocation will bring bigger loss than before," such revision is deemed to violate "the Paretian optimum," and as far as the Paretian paradigms is respected, there will be no alternative than upholding the status quo, which then may not preclude the case that social unrest will become eventual reality, which will then make "the total welfare diminish to a drastic extent." To say in reverse, this fact suggests the existence of the case that "even in the event welfare may get smaller for each party

26 This remark is applicable to Marxian economics based on the leadership of absolute planners, and to the economics of complex systems or economics of experiments, which deems to be able to replace the real world with the virtual field.

27 This assumption does not mean simply maximin, but constitutes preparations for the following progress of our discussion.

involved, the total welfare of society will absolutely grow, as far as social unrest can be held in check." Man can see there "the fallacy of composition," and finds it necessary to form transcendental judgment (i.e. heteronomy) for the purpose of taking care of such problem. Besides, "welfare" in the subjective sense of individuals is pretty much influenced by relative judgment. For instance, people discontented as the poor in modern developed nations may become satisfied with their hypothetical position as the rich in ancient times or in developing nations.

Now, in order to establish universal common values free from the bondage of Paretian optimum as well as relativity, it will be necessary to provide a certain existence like "God" as the lawmaker advocated by Rousseau or "aliens." The most likely existence at the moment will be "taboo" acquired by mankind and each people of nations after a long term of trial and error in history. There is no doubt various non-scientific superstitions and customs to be overcome, included in such acquisition. And those obstacles shall be disposed of, provided that careful attention has to be paid to the fact that the criteria for evaluation in the selection of such disposal may be often Christian ethics or Western values, which cannot be deemed to be scientific at all. Those ethics or values are nothing else than one of innumerable taboos available everywhere. That is, so-called "common sense" in the present time is nothing but forced by the West, and can be never universal.

Criteria for judgment (common values and basic common sense) applicable to all human beings in years to come shall be more objective. Those existent in the root of the matter shall be commonly shared irrespective of the differences of either nations, races or areas concerned, and others may be slightly different according to the respective groups or areas, or of the stratified holonic structure including fluctuation in a certain degree (See Fig. 12).

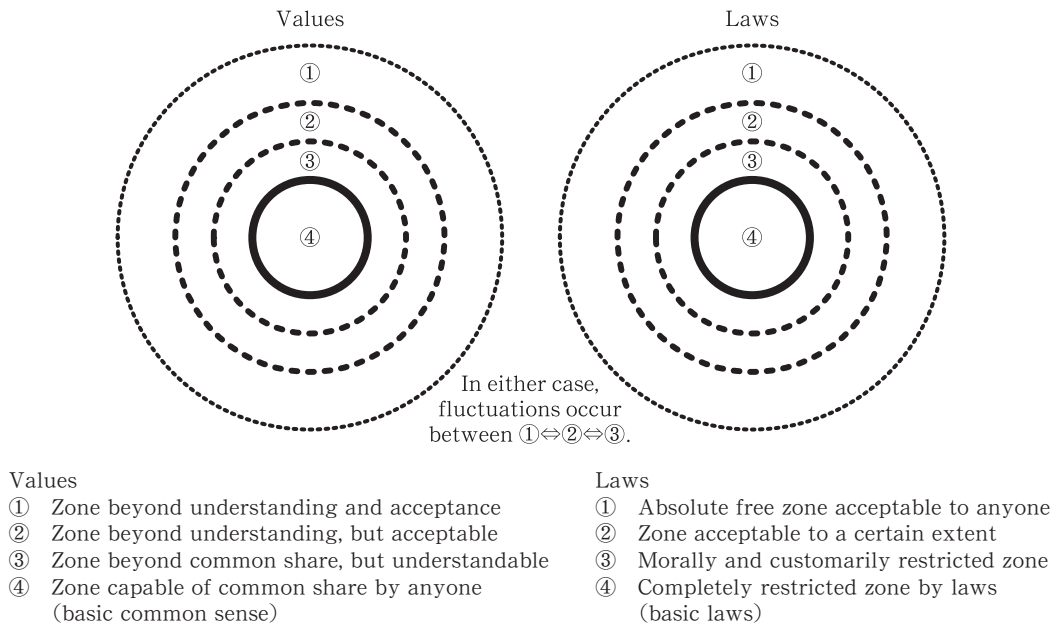


Fig. 12 The stratified Structure and the reverse duality of values and laws

5. Democracy and the Market Economy as the Interactive Complementary Holonic System

Neither democracy nor the market economy can come into being from democratic procedures and dealings in the market. Should social solution therefore be sought with democratic procedures under the existence of multiple value, there would be no alternative for it to end up with society heavily inclined to monetary value like the American way, which could lead human beings to destruction. There is here the reason why a kind of the “restoration of taboo” is required.

Man can understand the reason, if man thinks of such a decision made as to “sacrifice part of human beings in order to increase welfare for the majority of them.” Let’s take an abnormal case, in which man can see extremely little possibility of his selection as a victim, and if, for example, a single person in a year is to be selected from 6 billion people in the world as a victim to be sacrificed for God, such a selection as to unanimously “decide a victim in question by lot” may be enforceable. Unlike in such an extraordinary case, however, if the victim could increase in number to 100, to 1,000, and even to one million, what would happen? Apart from the general question about “justification in the selection of victims per se,” assessment will begin to be made gradually with regard to comparison between benefit and detriment among those issues like the magnitude of welfare to be earned with the selection, probability to be obtained by the sacrifice or the magnitude of sacrifice to be paid by the minority of people.

Similarly, there is a continuous linkage, impossible to be reasonably separated, between the different types of governance, i. e. dictatorship, control by minority, decision by majority, and unanimous agreement. Things under natural circumstances are always in jeopardy of catastrophe, and what human beings have devised as historical wisdom for the protection of themselves against such danger are “taboos,” as I mean. Above all, as common issues to be recognized by all human beings, I like to express an absolute veto to be placed on any free ride as well as on murder, theft and other crimes, to wit, I call for bearing the burden of “duties and responsibilities” equivalent to “rights and freedom” and paying “cost” comparable to “benefit.”

On the other hand, the social system, in which all affairs from global environment as an upper concept to the character of an individual as a lower concept are taken into account, is not such a simple structure as duality like a political system and the system of enterprise, or the regional integration and the consolidation of enterprises. It is a multiple edifice with complexity, or the stratified holonic structure, covering NGOs and NPOs outside of the former category, or internet integration outside of the latter framework, and accommodating a variety of their activities from time to time or case by case, such as (a) existing without any relations each other, (b) working as unilateral restrictions, (c) working with each other in a competitive or substitutable way, and (d) working with each other in a cooperative or supplementary way. All subsystems in each stage to be incorporated in this stratified holonic structure need to be maintained with an appropriate exchange between energy and entropy from the viewpoint of their sustainability.

Besides, the design of the total plan requires not only knowledge from various fields of

profession, as expressed before, but the concurrent design in detail of subsystems relating to the total plan as well. Due to limited space for this paper, I wish to focus on “democracy” and the “market economy,” prerequisite to modern civil society, and to emphasize that each of them will be sustainable, only when “duality” based on the “social contract” is observed, and further that both are indispensable to shift to the “mixed system” mutually complemented with the “doctrine of complement,” because they can be incomplete as long as they are alone.²⁸

(1) Interactive Complementary Democracy

Democracy of our current choice is considerably deviated from its original model, i. e. direct democracy in the Grecian era. The reason why current democracy has taken root extensively is merely ascribed to a couple of the causes that other political systems had too large flaws to be permitted, and that democracy was nothing more than that selected through the historical process of trial and error as next to the best choice. Democracy has been complemented in part with such “good monarchy” or “good aristocracy” as told by Aristotle, since democracy is as much vulnerable to falling in ochlocracy as monarchy is to autocracy, and aristocracy is to oligarchy. This is the true aim at the “division of the three powers,” which are alive as presidency or premiership introduced from “good monarchy” and the representative system or the system of judicial officers and executive officials introduced from “good aristocracy.”

Therefore, while taking democracy as the basic system, we have to recognize its limit, to preclude the risk of mutual cohesion between the three powers and to apply the brakes lest the residue of monarchy and aristocracy remaining in “presidency,” “representative democracy” and the like should be revitalized. To be more specific, it will be essential to promote extensive participation of citizens, to open information to the public or to introduce PPBS for the good of guiding such activity in the right direction, and to educate citizens themselves, i.e. principal

28 In the viewpoint of the total system, it is likewise necessary to give to the compound systems each system existent in such a stage of the stratified structure, as ecosystem, human world, international society, nation, community and home as one hand, or all organization wide, between organizations and within each organization on the other, which are other than the social system and the economic system. Major examples of artificial systems are exhibited in Fig. 13 with triads for comparison as follows. To add a few comments, historical observation allowable from the triads indicates that artificial systems will find a desired solution never in the extreme class on the right or left side, but in the class on the middle, and that the solution is always an interim solution within “fluctuation” rather than a strict solution. Here is the reason why the Oriental “medium” idea shall be reevaluated.

Supremacy of environment (Denial of human existence)	Ecology-oriented (Human activities within ecological restrictions)	Supremacy of human beings (Collapse by disruption of ecosystem)
Totalitarianism (Monarchism) (Communism) (Complete welfare type) (Centralization)	Democracy (Representative) (Civil society) (Mutual aid type) (Provincial division of powers)	Anarchism (Mob society) (Primitive society) (Type of the survival of the fittest) (Resident autonomy)
Planned Economy (Controlled economy)	Mixed economy (Mutual complement type)	Market economy (Laissez-faire)

Fig. 13 The triads of artificial systems

parties for participation. For seeking this purpose, history has brought in the concept of “natural law,” deemed to be the ultimate taboo, and other credos like “freedom of information,” “freedom of speech,” “academic freedom,” and “autonomy of university” by mass media and academia as a restraining function outside of authority.²⁹ When the parties responsible for education of citizens are to be politicians selected by citizens themselves or mass media sensitive to and active with audiovisual ratings, they will fall in loops, finding solutions in vain. Then, we cannot help relying upon the elite of free opinion or the organizations of citizens to take over the work.

Then, in view of the original motive to transform themselves from merits of “aristocracy,” representatives to be elected in “representative democracy” are not the interested agents of electors, as witnessed with many of them in the society of these days. Electorate shall elect “those who will be more capable of forming judgment than they are, as they are vulnerable to inviting mobocracy,” or “those who are deemed to be more capable of being autonomous and independent than they are,” that is, “wise men.” By the way, in “autocracy,” all wise men cannot be crushed to death, but in “mobocracy,” all wise men except for some vicious “wise men” flattering the public or agitating the public can be crushed to death. In this view, party politics these days liable to the voting of their interested agents are substantially mistaken. Especially right now when we find the earth getting smaller, and see “God” or genuine “aliens” nowhere, representatives of the legislative councils, i. e. lawmakers in behalf of “God” or “aliens,” shall be elected on the basis of their “character and intention,” and those furnished with party spirit or the possibility of taking power shall be excluded.³⁰ And, from the rule of division of the three powers, it is absolutely unlikely that representatives will be authorized to draw up rules for the election of themselves. Here is a solution barely available, for which the judiciary, the bearer of the third of the three powers, shall draft rules for election on the basis of precedents and provide them to the public for their direct election.³¹

As told above, representatives are bound with awfully strict restrictions, and then, citizens shall be obliged always and extensively to follow decisions made by the representatives with trust in their authority, once citizens have trusted them. Should citizens find such decisions unacceptable, they would better reconsider themselves at first as to whether their opinions unlike from decisions made by their agents might be mistaken, or whether their activities for election might have been something wrong. Even so, should they be still not persuaded, they would have to express their intention by means of recall.³² But, please remember that headmen or

29 However, people engaged in mass media and scientists behave themselves to arrogate vested privileges to them, and to adhere to power, all of which are ugly enough. They shall be promptly deprived of such privileges that will be used for other purposes than the original aims.

30 Provided that representatives of “administrative assembly” qualified to vote for the premiership in cabinet government shall be admitted to be involved in factious activity or activity for political power to a certain extent.

31 Provided that direct vote shall be put to a strictly limited use, because it can be in jeopardy of inviting mobocracy or totalitarianism, if abused.

32 The electorate shall go to the polls, even if they can find no one they would like to vote for. It is because whatever intention they may have expressed by blank or invalid ballots, they are considered to have concurrently demonstrated that “they have an intention of participating in recall,” should the elected by valid ballots of other voters have any problems, and further because such implied intention amounts to restraining influence on eligible persons or the elected.

representatives, who are neither gods nor saints, cannot fully satisfy the desires of the electorate. It will be fair to evaluate their outcome in comparison with that in such a degree as anticipated in advance. Otherwise, among other things, the voice of criticism against shortcomings of their work would get louder, which could result in allowing replacements of inferior characters.

In this regard, a portion of political scientists and philosophers, namely absolutists for democracy, commit errors on the assumption that all members of a society are in the same level with them, and that the members are as much autonomous as they are.³³ In reverse, it does not mean that man can be allowed to despise people other than himself, and such thought is very dangerous to society. However, in the meaning of permitting the rise of populism, it will be equally dangerous to forget that there are people capable of “autonomy” (the group of self-help) and people incapable of that (the group of outside help) in the world. Discussion about social systems hereafter will need steps for clear distinction between autonomous and heteronomous areas at least in idea, which shall not be changed for religious theory secretly. This is because the current confusion has been brought in as the result of discussion about idealism conducted without such steps. For instance, perfect democracy could be established eventually, when it would be composed of individual members, all of whom would be perfectly autonomous and independent. On the contrary, society of all members comprising perfectly autonomous and independent individuals would not be necessarily to be of democracy.³⁴

Next, the judiciary shall be permitted, except for the task of providing rules for the legislature, as mentioned above, to adopt the doctrine of precedents only in the case that there is lack or deficiency of applicable laws, and, in other cases, to act exclusively upon the laws and regulations established by the legislature. Provided that such laws and regulations made by the legislature are in conflict with their superior laws like the constitution, the fundamental law or the like, laws and regulations are not in coordination with themselves one another, or the action of the administration is deemed to have gone beyond the rules set forth by the legislature, then the judiciary has to give timely judgment to that effect in advance to any relevant lawsuits to be brought in. The legislature and the administration shall be obliged to take remedial measures without delay upon the judgment of the judiciary.

In turn, the administration shall conduct its administrative and institutional operation within the framework of laws and regulations as well as systems entrusted by the legislature. In the event of non- or insufficient-existence of suitable laws, however, the administration shall be allowed to take action without statutes and precedents. If so, the legislature and the judiciary shall be required to pass prompt judgment on whether or not the action taken by the administration is justifiable.

Furthermore, from the original motive that they should be transformed from good features of “aristocracy” as much as representatives should, judicial officials and administrative officials shall not be those who would choose such performance of action as today’s society seems to

33 In this respect, the doctrine of collective option obviously commits an error in dealing with “entirety” and the “aggregate of components” on the same level of theoretical expression, since entirety and aggregated components are different each other (as seen in existence of “errors out of consolidation”).

34 For instance, think of such a society as comprised exclusively with Almighty God and Buddha.

consider that the public in general might be fond of, but they shall be those who would take action upon their faith. The device of division of the three powers has been installed primarily to drive out the risk of arbitrary decisions likely to arise from such action, and there are the jury system,³⁵ roles of ombudsmen and duties of the press et al., as referred to above. What is called for in society from now on will be consciousness of the elite as such a social status and their noblesse oblige. Only when they become available, the doctrine of complement previously cited will be concluded and man can see the existence of democracy of the division-of-powers type, which will require each party, starting from international organizations to governments, communities, public enterprises and the third sectors, private organizations (enterprises and NGOs), households and individual people, to play a respective role of their own.³⁶

(2) Interactive Complementary Market Economy

The fall of socialism or a planned economic system no more means right away the self-completion of the market economy than that of democracy. Despite a variety of flaws it has, like the “survival of the fittest,” “a panic,” “social unrest” and so on, the market economy has survived up to now, because it has imported features of the socialistic economic system from early on in order to get rid of such flaws, has supplemented its weakness,³⁷ and has consequently reached a sort of mixed economic system.

On the other hand, there are many defects in the activities of government, too. That is, due to their stark tendency toward “non-reversibility,” policies or systems have such vices as they are biased, tend to stand by vested interests, give way to inefficiency and so forth. It is because, while either “policies” or “market mechanism” is a kind of the “process of trial and error,” government has a role to bridge the gap between monetary economy and real economy, which are the outcome of the same “trial and error,” but different from each other in characteristics, as the former is on good terms with “reversibility,” and so is the latter with “non-reversibility”.³⁸

After all, market and government are necessary mutually to complement their drawbacks, and they shall end up with the mixed economic system, which will modify a priori a market economy to a certain extent, and admit measures of policy like welfare policy and business adjustment measures to a certain degree. There is, though, no definite pattern applicable to “mutual complementarity between market and government” or the “mixed economic system,” as simply called. For instance, there is something dealt with in a higher degree of planning than others, if seen from the respect of free competition, as pursued in Japan in the past, or something dealt with in a higher degree of public or national ownership than others, if seen from the stand-

35 In this respect, the jury shall be installed to work as a control device against arbitrary decisions made by judicial officials, and shall not be allowed to make themselves participate in judgment, although such is made a rule in the United States.

36 The elite or the bearers of noblesse oblige to society in the future could be anyone who may not be of the nobility or the wealth, as far as one has an intent to be so. That is, what's important is one's voluntary activities in the neighborhood of oneself like street cleaning in front of one's house.

37 Included in measures taken are “restrictions,” “governmental meddling,” “institutions” and “rules.”

38 For instance, the injured from a traffic accident can be compensated in the account of money, but the injury inflicted cannot be always restored in full.

point of private ownership, as done in Europe. The intensity of combination of those elements is consecutive and spread over a wide range, and differs in factors involved, such as global, national or regional size, the level of history and culture, and even the stage of development. And, the stratified holonic structure shall be applied to the cases involved in those factors.

These days, people fail to be aware of flaws or shortcomings of the market economy,³⁹ and understand as if there were value in itself. To the contrary, economic activities and money are no more than a tool for the enrichment of human welfare. There is also the concurrent coexistence of correlation and negative-correlation between economic welfare and non-economic welfare, and non-economic welfare will prevail over economic welfare along with economic growth. For example, in case more people go on an outing due to vanishing nature in the neighborhood caused by projects of development, money they spend appears to increase GNP, but it becomes inversely proportional to “true wealth.” Thus, economic growth beyond a certain extent will work against the total welfare of society (i.e. economic welfare plus non-economic welfare), which will result in decrease (See Fig. 14). The majority of developed nations have reached the latter part of the stage of development.⁴⁰

Monetary economy or society of an American type has built up a social character destined to prefer economic welfare easy to be converted into numerical value by the “numerical expression of value” to non-economic welfare difficult to be changed into numerical value. Economic welfare easy to understand has been understood as a direct benefit to an individual person, and non-economic welfare difficult to appreciate has been more frequently taken over by public property. In addition, the former tends more often than ever to be given priority over the latter.

The following models show the essence of our discussion made so far. Thanks to this analysis, the way in which personal benefit is inevitable to prevail over social welfare, as seen in society of today, can be clarified.

(1) At first, supposing the aggregate of personal benefit is I , and non-personal social welfare is

39 There is indeed the saying of the “market failure,” but the term “failure” means that what can primarily succeed in completion becomes in vain, and does not include what is incapable of success from the beginning. In this sense, the saying is nothing else than the arrogance of the fundamentalists of the market, because there are in this world a wide variety of resources, like something incapable of being dealt with in the market (for example, the establishment of the order of the market), something not suitable to the market (for example, public goods), and something, if left to the control of the market, liable to doing harm (for example, monopoly).

40 For the purpose of soliciting easier understanding of this respect, man can find the idea an “equation for happiness,” that is, “happiness (economic wellbeing) = goods (subject for desire) ÷ desire,” as proposed by Carlyle and introduced by Shinichi Inoue, which was derived from the Buddhist thought “happiness = liberation from distress.” This can be generalized to the equation “true happiness = true wealth = degree of the attainment of desire = achieved desire ÷ the total expected desire.” Then, the maximization of happiness can be fulfilled with not only the increment of the numerator (achieved desire, especially material desire) but the following ways likely to contribute to the conservation of environment.

- (1) The curtailment of “negative externalities” bound to reduce the numerator.
- (2) The contraction of the “total desire” bound to increase the denominator.
- (3) The reduction of percentages of material ingredients (=the increase of mental disposition) within the denominator (=the total expected desire) and the numerator (=achieved desire).

Holonc (Holon Type) Engineering Vision

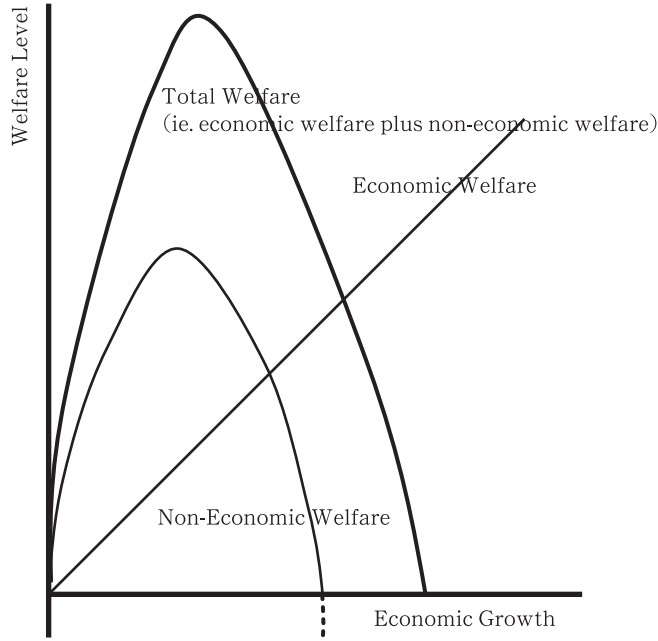


Fig. 14 Correlation and negative-correlation between economic welfare and non-economic welfare

S at an initial time, then the total social welfare becomes $(I+S)$ at the time.

- (2) Next, suppose increased welfare for an interested person in the case of preferential dealing with personal benefit is i' , the loss of welfare to be inflicted by such increase on the entire society is s' , the loss of welfare per person in the case of preferential dealing with social benefit is i'' , added welfare per person to be received by the entire society is s'' , then the outcome will be as follows:
 - i. In the case of preferential dealing with personal benefit, the total welfare of the entire society is $[(I+S) + \Sigma(i' - s')]$
 - ii. In the case of preferential dealing with social benefit, the total welfare of the entire society is $[(I+S) + \Sigma(-i'' + s'')]$
- (3) Therefore, “maximization of the total social welfare” can be attained in the following combination.
 - i. In case it is $[(I+S) + \Sigma(i' - s')] > [(I+S) + \Sigma(-i'' + s'')]$, that is, $\Sigma(i' - s') > \Sigma(-i'' + s'')$, we had better take preference of personal benefit.
 - ii. In case it is $\Sigma(i' - s') < \Sigma(-i'' + s'')$, we had better take preference of social benefit.

In other words, “the priority of a private right” or “laissez-faire” is superior in the first case, and “the preference of public welfare” or “plan and control” is prior in the latter case.
- (4) Nonetheless, insofar as “economic welfare” is made much of, as done so far, “non-economic welfare” or “public property,” i.e. s' or s'' , is neglected. Accordingly, the total welfare appears to be in the manner that the left formula always becomes bigger than the right one by $\Sigma(i') - \Sigma(-i'')$. It means that real society will place priority on personal benefit, with

which it will turn out to make light of social welfare. Consequently, the fallacies of composition will be involved there, and the total social welfare will be reduced. What is required for the protection of ourselves against such negative effects may be a corrective way through intervention outside of the market. It hardly means the supremacy of a planned economy or control by government, though, because activities of government are tied down to flaws in efficiency, dynamism or the like.

Meanwhile, modern democracy or society of the market economy has made not only factors of production, which shall be dealt with as non-market property, but also information, which is public property itself existing as the premise of the market, subject to the market. That is not all. Foolishly enough, it has made the framework of the market as well as the formation of the order of the market, which is composing the market, subject to the market (for example, the incorporation of securities exchanges).

The proposition that “free competition can produce the maximum welfare in the market of general goods,” as based on by the new classical school, is valid only when the total volume of factors of production like land, labor forces and capital is fixed on the condition of the initial stage in addition to the event of transactions limited to the value of money. Thus, to make the factors production subject to a market means to change exogenous variables to endogenous variables, by which the preset condition of the initial stage is turned over. There would be no solution obtainable, should no additional equations in line with the increase of variables be made available, but be left to the “invisible hand” solely in a static way.

It is reasonably said that the liberalization of the market of general goods or others so far attained has assumed the unchanged or stable supply of factors of production, because the loss of comparative advantage and factor prices equalization as a result of the liberalization of factors of production will give rise to the production cost equalization, which will be in turn beneficial to domestic production by transportation charges in other industries than those with increasing returns capable of enjoying a scale merit, and which will bring international trades to naught. To the contrary, the first comers in industries with increasing returns are likely to dominate respective markets, and there are some reasons for restrictions to be imposed on them, which then can be no more called free trade. As a matter of fact, policy intervention for the purpose of stabilizing the market of factors of production shall be naturally acceptable as “complementary measures” for the aim at keeping the market of general goods stable. Its importance is getting stronger especially in these days, when the market of general goods is in rapid liberalization.

Furthermore, among factors of production, labor is “character” itself, land is “natural environment” itself, and capital is “monetary function” itself, which are all different a lot in nature from general goods. In view of the scientific fact that “progress means the growth of entropy in a macroscopic level~the systematization of constituent parts~diversity in the microscopic level,” economic progress can be reinforced by liberalization, too, which will however result in the escalation of entropy in the natural environment as a macroscopic existence (the upper concept) and in the cultural field, which in turn causes the collapse of the order. In order to prevent this antinomy, more order and regulations shall be imposed on factors of production more closely

related with natural environment and culture, that is, “externalization” shall be introduced, while general goods are put into more freedom. Provided that the style of such externalization shall naturally differ from factors to factors involved.⁴¹

In the final summary, the economic system shall be not the genuine market economy, but the mixed economy with mutually complementary relation to policies. In addition, it shall be the stratified holonic (holon type) structure involving the dual structure of the market of general goods and the market of factors of production, while the first market is easier adaptable to globalization, but the other market is different in accordance with nations, stages of the development of nations and other factors concerned.

41 The following consideration is available as examples.

- (1) Regarding land, restrictions shall be imposed to a certain extent on ownership and the right to use it.
- (2) Regarding labor, workers shall be predominantly ensured and protected in terms of their human rights and safety from hazards.
- (3) Regarding capital, vetoes shall be put on speculations in excess for the purpose of protecting the order of the market.