

Chaos and Order

moving society and history

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This study is an overview of transformation of human society, repeatedly moving between the state of chaos and the state of order, with references to classic Eastern wisdom and theories by contemporary Western scholars including Ilya Prigogine and Niklas Luhmann, especially highlighting the role of “the Exceptionalists”, the meaning of revolution and conflict, and the mechanism of chance and chaos.

1 Crossing of chaos and order

Between chaos and order

Looking back human society with a historical perspective shows that it has formed over a cycle of collapse and formation, moving back and forth between order and chaos. Established order will eventually begin to fluctuate, and the fluctuation expands toward bringing the order to collapse. But, there, always a drive for a reformation of the next order emerges. Our society has gone through this cycle uncountable times since the very beginning. When social order gets too matured, it would become rigid and lose its capabilities. And when the condition reaches a certain point, counter reactions occur to disintegrate the order. In the meanwhile, when the disintegration process has come to the stage where the society has completely lost its unifying force, and segments of governing body battle against each other a counter reaction occurs again to restore the order this time. The history run by humans is a repetition of such

collapse and reformation.

For example, it would be appropriate that Japan's political transition in the end of Edo period from the insurgence by Heihachiro Oshio, the arrival of Commodore Perry, the brutal suppression in the Ansei era to the escalation of anti-Shogunate movement is a disintegrating period, a turn from order to chaos, and the process from the anti-shogun movement to the move of political authority from Shogun to the Emperor, the Restoration of Imperial rule and the start of Meiji period was the reformation period, when order is restored.

Such dynamism of changing state can be observed not only in such dramatic times, but also in times with more modest historical transitions. In Japan's history, repeatedly happened the shifts between collapse and reformation in various scale.

Order is a state in which various elements are mutually related closely. Chaos is the opposite state of order. In achieving a goal, we can assume the course to the goal in an orderly state. But, in a state of chaos, the degree of uncertainty is much higher, because there is no knowing of what awaits ahead of us. Generally speaking, our society is moving all the time between the state of order and chaos. Or rather, societies change when it is between order and chaos. In the transitional period, order and chaos coexist in society. There are two directions of shifts in social change, one is from order to chaos, and the other from chaos to order.

Our societies behave like a living thing when it is between chaos and order. One way is towards anarchic confusion and dissolution, and the other way towards totally unproductive ossification and uniformity. Societies moves through such dangers, keeping balance. Ordered societies that became too rigid lose ability to adjust to complex environmental changes. On the other hand, too anarchic societies can't survive complex environmental changes, either. Societies try to stay in the middle of the states to adopt environmental changes. Behaviors like this can be seen also in such natural phenomena as phase transition of substances, and generation and evolution of life. Human society is an outcome of such natural phenomena as well.

Here, in a way, chaos exists in order, and order exists in chaos. In this sense, chaos is

indispensable for order to be established. More precisely, chaos should have order inside. Chaos works hand in hand with order as well as confronting.

Order out of fluctuation

Whether it is towards collapse, turning chaos, or towards reformation, turning order, there is always an element of fluctuation in the process of social transition. Both chaos and order are produced out of amplified fluctuation. Every society has fluctuations. When society's grip on its inner fluctuations weakens, they grow and prompt the society either deformation or reformation. However small the initial flicker of the fluctuation is, when piling up forces to grow above a certain point, it can cause a huge change to the society.

When it comes to the change toward order, it corresponds to the self-organizing phenomenon that Ilya Prigogine and other scholars focused and theorized in the field of natural science. Prigogine called this phenomenon "order produced out of fluctuation". In his theory, all confusions in systems are considered as fluctuation, and he thought new order is produced when the fluctuation become amplified. (*1) This theory came up from his study on material's self-organization. However, as have much been discussed already, this theory is applicable to social science study as well.

In this case, open systems that exchange materials, energy and information with environment is treated the self-organizing systems, under the condition that they are in a state of total non-equilibrium. Certainly, societies are open systems, exchanging materials, energy and information with environment. Plus, it is in a non-equilibrium state, with various goods and intelligence constantly fluxing in from outside. Therefore, societies contain fluctuations inside without exception. When society is stable, close to an equilibrium state, fluctuations are crippled or erased, but when it loses its balance, by a rapid flux of outside information, for instance, and shift closer to non-equilibrium, fluctuations get amplified and start working towards forming new order.

Fluctuations in societies are considered as destructive elements from the perspective

of existing social order. Therefore, in societies whose order has already been well established and firmly maintained, fluctuations are often eliminated. However, in such rigid equilibrium condition, society can't have enough adaptability to surrounding environment. That means, in order to develop adaptability to environment, it is better for societies to keep inside unbalanced fluctuations of mixing elements. That way, societies can have higher possibility to produce new order, flexibly adopt to new environment and stay prosperous for future. If fluctuations are chaos in order, it is in them that new orders are fostered.

However, even it is true that new order is formed in fluctuations, what the new order would be like cannot be predicted. When a fluctuation gets amplified and reaches a certain point, which way is chosen to go on, is not something already designed. What kind of new order is produced by a transitioning society is often determined by coincidence. A slight deviation at the junction can determine the transition of society which exponentially strives for reformation of order. The occurrences of deviations are not planned phenomenon, determined by mutual interactions among various elements. In this respect, it is not exaggeration to say that the history of human society is a result of coincidence and uncertainty.

However, coincidence and uncertainty provide freedom. It is such freedom and various choices that enables society to adopt flexibly to unpredictable environmental changes. In other words, fluctuation and freedom are essential elements for society to response to environment. Thanks to them, society can survive environmental changes which come in unpredictable manner, by producing new structures. Development and formation of new order are enabled by fluctuation and freedom. In this context, flexible and fluid society with fluctuation and freedom inside seems to have higher capability in addressing environmental issues that machine-like highly sophisticated bureaucratic organization.

Chaos out of fluctuation

However, fluctuations in society do not always produce order. They could produce chaos as well. When fluctuation generating in ordered society gets amplified and reaches a certain point, it sometimes brings chaos rapidly to the society, just like a cancer cell that contracted to organs. This move has exactly the same structure as social transitions towards order in that the society is an open system, in non-equilibrium condition, non-uniformed quality, and dominated by uncertain and coincidental force.

Nevertheless, in actual history, moves towards order and towards chaos are mixed. Although, moves toward chaos is caused by amplified fluctuations in orderly state, it is from the very chaos that moves toward order occur. In real society, moves toward two different directions intertwined to cause social changes. Chaos is in order, and order is in chaos. Fluctuations are chaos in order, but they are drives for the next order as well.

The roles of the Exceptionalist and coincidence

As we have seen, in the society which changes its quality between order and chaos through fluctuation, it must be said that the Exceptionalist who causes fluctuation has a big role. In whatever condition the order is, there are always irregular elements that go against it. Indeed, they are trifle beings in the beginning and mere dropouts of society. And, in many cases, these elements are suppressed and eliminated before building into a force capable of impacting the society. However, when fluctuations caused by tiny irregular elements pile up, get amplified and reach a certain point, the societies start a dramatic transformation, immediately bringing the traditional social order to end. But, in the rapid movement toward chaos, the irregular elements will start working to create a new order as revolutionaries. Transformation of social structure is achieved through the process of turning order to chaos, and vice versa.

In such movement, we must admit that the role played by the Exceptionalists cannot be ignored. Events caused by them might be nothing to worry about in the beginning. But these small events often create tremendous consequences later to change

everything. Significant inventions and discoveries are good examples for this. In that sense, it is the Exceptionalists that undertake the role of producing new things in society. It can be said that the Exceptionalists are a necessary element of society to retain vitality.

For societies that live in a continuous cycle between order and chaos, actions made by the Exceptionalists are important. In some situations, such actions can make a decisive result. Society forms itself by shifting between order and chaos with fluctuating elements. And there, intentional actions by individuals have power to produce both order and chaos.

Our society is based on relations among individuals and individual elements. The actions that are made in such relations re-organize the relational structure, and when such a move occurs in wide scale, societies change. In this point, actions that break relational structure or, in return, limit it should be paid more attention along with moves than on actions that are made to fit in the structure.

However, there are more actions that change social relations than such conscious and subjective ones. Social relations can be changed and societies can be moved even by coincidentally made actions or something happened totally by chance. Societies are forced to change often by little misspeaks, mistakes, unexpected meetings, discoveries, accidents and other various forms of coincidences. The history of human society is full of coincidences. It is not wrong to say that society is driven by accumulation of coincidences. Even intentional actions made by individuals aimed to change society are largely affected by coincidences.

The chaos of coincidence is found in order, and the order is in the chaos of coincidence. It is not the case only in human society. The entire world is working in the middle of crossing of chaos and order, repeating the cycle of generation and transformation. The source of coincidence is also found in this crossing.

2 Chaos and generation

From order to chaos

When the order of a society is renewed, a chaotic state often occurs. In any society, once new principle has established, a quantitative increase phase would come next so that the order of the society is reinforced. However, there is a limitation in quantitative increase, and after reaching the limit, the society shifts to a quality improvement phase. It is during this shift when chaotic states often emerge. In other words, chaos concealed in order is materialized. Effective works by fluctuations caused by irregular elements to bring order into a chaotic condition is also observed in this phase. Thus, a society, exposing its internal contradictions, crumbles. This process is often accompanied by public insurgences, coexistences of multiple leaders and unruly conflicts. The order is not something one can get at will, but something that need to generate by itself. It ceases to exist by itself too.

In such state of chaos, conventional standards as justice or merit are lost, and, on the contrary, the dark side of humans are exposed. All societies have elements of chaos inside. When they emerge, humans' inherent chaos, or instinct, burst out. Thomas Hobbes thought that in the natural world, human nature such as competitiveness, suspicion and self-conceit become unleashed, causing "war of all against all". For there is no regulation to stop violence, fraud and injustice, conflicts are inevitable. **(*2)** Human life is naturally driven for change in such situation.

Such turns from order to chaos can be seen anywhere in what ever called a society from family to international community as well as in cases just described. For example, families are always capable of breaking up for relationship discords among members. Indeed, it could harm trust between family members, becoming visible in such forms as children's delinquent and problematic behavior.

Such phenomenon is known as Anomie phenomenon. Anomie is a state without any social regulations induced the disruption of collective binding force, where people lose

compassion to social principles, regulation's binding ability weakens and anti-social activities and anarchism become active. With the increase in crimes and illegal activities by not only by adults but adolescents, the society moves toward destruction and disorder.

Also, the international community always sees the similar state of disorder that often results in war when an authority of a ruling country is weakened or the balance of power among a few measure states collapses. There, conventional order disappears, the logic of power based upon mutual suspicions between nations prevails, and international rules are overturned. It can be said that international community has always embraced such chaos inside. Just as people who lived in the medieval time, a clever management based on mistrust is more important rather than mutual reliance.

From chaos to order

However, chaotic movements eventually subside and turn its direction toward forming a new order. Just as chaos has order inside, order has chaos. Chaos and order are intertwined and work together. State of order eventually turns into chaos, making unregulated condition, but this unregulated condition is the source of making a new order. In society, there are always movements towards destruction, and yet, at the same time, movements for construction of a new order are generating, which is visible often in the form of a unification of community by prominent figures or establishment of new order by powerful dictator.

The phenomenon in which higher order and forms are produced from self-organizing movements that occur in a chaotic state where numerous elements are mutually interacted is also commonly observed in the natural world where substances and natural lives dominate. In this sense, it is also true that order is concealed in chaos in human society as well. However, we mustn't forget that also in this case, the exceptionalists had its role in making order in a chaotic situation.

Revolution and conflict

In general, in social movement called revolution, there are two different directions of drives crossing, one from order to chaos, and the other from chaos to order. Revolutions are an entanglement of collapse and formation. Revolution is an effort to reform itself entirely from inside with an awareness of the old social system being malfunction. But, to start the process, there must be the disintegration of conventional order, which causes the shift from order to chaos. Success of revolution is brought by a move to create new order generating in the chaos.

However, revolution doesn't always succeed. There are several levels of fluctuations in the process to revolution. Various attempts of reform and protests by conscious minority are often committed first. For example, in the course of modernization of China, there occurred the Westernization movement aimed at modernizing military force and industry in the Western way, and the Hundred Day's Reform aimed at modernizing political system at the end of the Qing dynasty. After the failure of both in-party reformations, revolutionism came to the forefront, resulting in the Chinese Revolution.

Before reformation movements became active, a process of revelation of the gap between traditional regulations and new circumstances can be seen. In this level of fluctuation, small number of insurgents who are frustrated about old system gather to engage in various protests, and, at one point, they develop their actions into a radical reformation. Revolutions in this level of fluctuation largely rely on chances. It can be successful or failure, affected by coincidence.

In addition, there are always periods of confusion in the process of revolution, which makes establishing new orders a difficult task. Military conflicts and war with those who try to maintain conventional system, popular revolts and weakening of ethical standard caused by the disintegration of old regulations, all of which brings chaos into the society. However, a new order emerges in such chaotic situation.

When the Russian Revolution happened in 1917, there was a long fluctuation period and confusion. Frustration with the Imperial regime had spread not only among the politically conscious but also among factory workers and farmers, which later became visible as numerous strikes and riots. This social fluctuation, enlarged by food and fuel shortages due to Russia's participation in the WW1, developed to the nationwide strikes and large-scale riots of 1917, ultimately ousting the Russian emperor. The interim government was established immediately, but it didn't last long either. The Bolshevik led by Lenin had the government dissolve by force and placed itself into the ruling position. Even after that, it took some time before a new order was established, due to the war between the Bolshevik and oppositions. Lenin managed to construct new organization in such a state and implemented social reformation policies, with his iron-fist policies supported by the Red Army.

Like this, when we look at the process of social transformation where the cycle of disintegration and reformation, from order to chaos and from chaos to order, come repeatedly in turn, we must pay attention to conflicts between old and new elements appearing there. Conflict is not a mere confusion for society but it is rather a principle of creation. Actually, fierce battle disturbs harmony and order of society and disorganize society. But new order is produced in the chaotic situation. That means that conflicts aimed at reforming social order are important part in creative transformation of society. It prevents society from becoming fixed and rigid, and contributes it to acquire new form to adopt ever changing environment. Conflict is a common phenomenon as long as human society embrace contradictions inside. In other words, it is a necessary aspect for society, because only through it, society can progress and develop. Conflict is driving force to produce social processing dynamics.

In this respect, the society model suggested by Talcott Parsons in his book, *The Social System*, seems insignificant. Since Parsons' social system model is based on the homeostatic mechanism of biology, he regards social unrest as social disease. Therefore, a chaotic situation needs to be suppressed by the homeostatic system of society and the society need to restore the original equilibrium state. In his view, conflicts have nothing

to do with creative transformation of society. (*3)

However, in the world of biology, amplified irregularities that come out of equilibrium system enables lives to grow and make evolution, or ontogeny and phylogeny. If so, also in society we shouldn't ignore social development and evolution induced by creative derogation. Some kind of derogation plays an active role in social development. When conventional system that maintain order cannot control deviations that emerge in society, movements that encourage the deviation tendency. New orders and forms of society are created when the movement get amplified. In this point, the exceptionalist who prompt societies disintegration and reformation deserves an attention.

Self-formation from mutual interaction

Society is made up with mutual relations between objects and elements. It is from these connections that social formation occurs. Each object and each element mutually relate, reflect and work each other, forming itself continuously. Society is essentially a self-formation system through relations. Various social system theories have set this as the base of their argument and have commonly defined society as a self-formed entity based on relations of countless elements.

As it is in the material world and life world new structures and forms are generated, and new order is produced through the interaction between elements. The structures and forms of society, too, don't stay still but continuously transform. Social order is not static but dynamic. Society keeps changing its structure and form in order to go beyond the way it is at present. Also, in the point that its purpose is to adjust to the environment and self-conservation, society is similar to life. With such purpose, society arranges elements to meet the necessity and create new order.

In other words, society is one semantic system where various elements are organically arranged, and a force to organize elements toward the system. Moreover, society constantly rearrange and update the system.

During the transition process when society shifts from one order to another that

often disorganization and chaotic state emerge. Irregular elements inside the order cause fluctuations that produce a new order, which eventually gets amplified through interactions between objects and elements, causing the collapse of the old order.

Disorganization and chaotic state occur in this process, but they become a force to create a new order, too. They are not only a phenomenon that happens during the transitional period. Chaos is contained in order in the first place, and it can become a fundamental force to producing order as well as bringing chaos into order. In this transition from order to chaos, and from chaos to order, meanings of society are tested and new meanings are added. Disorganization and chaos are periods of searching for new meanings. Here, actions by exceptional individuals who contest the validity of conventional social values, meanings and institutions, can be found.

Mutual interactions don't work only to maintain conventional societies but also to raise questions to them and create new frameworks. In reality, self-formation through interaction is done through such process. In this point, German sociologist, Niklas Luhmann was right in focusing on the difference between society and interaction, and having pointed out that evolutions of society are caused by this difference. (*4) With such differences, society moves from chaos to order, and from order to chaos. However well-organized a society looks, it must carry chaos inside. Societies move based on the fact that chaos is found in order, and order is found in chaos.

The power of chaos and generation

In terms of generation of things, the Eastern philosophy stresses on the roles of chaos. A well-known story in *Zhuangzi* tells us the unlimited life force of chaos in a symbolic way.

Once upon a time, there are two gods, one named Shuku of the southern sea and the other named Kotsu of the northern sea. They met by chance a god named Wonton in the middle between north and south. KWonton treated them very well, and Shuku and Kotsu discussed what they can do for him. Then, they noticed that Wonton doesn't have

eyes, ears, nose and mouth. So, the two gods decided to give him seven holes on the face that all humans have, digging one hole a day on his face for seven days. But, their efforts only killed Wonton. (*5)

This ambiguous story can be interpreted in many ways. But, read in the context of chaos and order, this is a story that underscores the power of chaos. In essence, chaos is a source of something distinguished and organized, such as directions, two gods and seven holes. To exist, these distinguished things need the power of chaos to be working at the bottom. The story seems to tell us that we should trust the work of this chaos. If we try to artificially modify it, it would lose its life. Chaos is the very source of order, and it always exist deep in order, coming visible when situations go disorganized. Because of chaos, things generate and change.

Zhuangzi lived in a civil war period after the order of Chou dynasty disintegrated with lords fought each other, thieves multiplied and ordinary people suffered enormously. Living in such society of confusion, Zhuangzi told people to leave their life to the power of chaos that they lived in. Order requires chaos to emerge. That is how things move from chaos to order, and order to chaos.

The thought of divination saw that not only chaos and order but also other things follow the cycle of generation and corruption, changing positions from yin to yang, from yang to yin. The term, divination, itself represents change. It captures everything existing in universe in terms of the process of change. As full moon gradually goes missing, nothing is fixed. In the thought of divination everything is changing and flowing. Those who have gone will come back, after cold Winter comes hot summer, strength and weakness keep replacing. Coming and going of things never stop, everything moving according to the shift of yin and yang. Humans, being just the same, are part of the divine working of creation of the nature. That is what the divination teaches us.

The I Ching says when something comes to the end, changes will occur, and by changing a new way will open up. (*6) It means that things go round forever in this way. This is one of the basic principles of the divination. It sees heaven, earth and

people, all of them, to keep changing forever, replacing positions of yin and yang. Human society, too, changes, with the shift of yin and yang.

The thought that everything changes with the cycle of yin and yang is Laozi's teaching. In *Laozi*, fortune is accompanied by misfortune, and fortune comes with a hidden misfortune. It also says nobody knows the beginning and end of disaster and happiness, like a twisted rope. (*7) Laozi, who lived in the time of confusion, too, saw collapse in development, and development in collapse. Human society is bound to go along the shift of fortune and misfortune, and development and collapse.

The world is an eternal activity and generation. Human society is a dynamism that never stops generating. It mustn't be seen as static.

Notes

- 1 Prigogine, Stengers, Order out of Chaos. Flamingo, 1984 chp.6
- 2 Hobbes, Leviathan, English Works of T.Hobbes vol. III, Scientia Aalen, 1962, I-13 pp.110-116
- 3 Parsons, The Social System, Tavistock Publications, 1952, VII
- 4 Luhmann, Soziale Systeme, Suhrkamp, 1985, S.566 S.589
- 5 Zhuangzi, Zhuangzi, chapter 7
- 6 Yi jing (Book of Changes), The Xicizhuan
- 7 Laozi, Tao Te Ching, chapter 58

Reference

Complexity system ethics, chapter 2, The Philosophy of Life 2, Minerva. Kyoto, 2016