

The Opening Chapter／Basic Composition of Systems Ethics

1. Ethics in conflict

People live and die in connection with others. One might think, "No, I can live and die alone." Certainly, in today's digital information society, it is not impossible to live every day without seeing anyone and die without knowing it. In fact, some young people live withdrawal, while other old people die in solitude.

But there are countless people behind digital communication networks. Someone must handle the dead body after all. Above all, "thinking" itself is premised on the evolution of communication among people who manipulate languages.

Inevitable conflict

People live and die in relationships with others. At that time, various "problem" events are constantly occurring, and due to differences in interests and viewpoints, disappointment and disagreement among people inevitably occur. Of course, there are times when disappointments do not manifest themselves in the back, and even when expressed as opinions, they do not lead to a clear conflict. However, the situation in which wide-ranging conflicts or conflicts are hidden occurs in all situations in which people are involved, from small personal relationships to large national relationships.

Let me give you familiar examples. In the medical scene, a lawsuit is being filed among the patient, the medical staff, and the family regarding the treatment policy. There is also disagreement among medical professionals. In the caregiving scene, there are many troubles concerning "problem behavior" among the elderly, the caregiver, and the family. There are also complaints from residents in the neighborhood. Turning to the public prevention scene,

there is a serious hostility situation regarding vaccination among the people, government agencies, groups, and experts.

Expectations and disappointments

What do embarrassed people rely on for the time being when faced with a broadly opposed situation? It is not a politics aiming at settlement by compromise. It is not a religion that makes you realize the ultimate meaning of life. In some case it is money. However, in most cases, it is ethics that includes morals.

Ethics is, in common sense, a norm for reason or prohibition, but broadly it is a criterion for evaluating the good or bad of a person or selecting a proper action. What people expect from ethics may be a soft role that can adjust the conflicts well and, if possible, resolve them.

However, today, ethics rarely adjust or even eliminate conflicts. On the contrary, it is more prominent that the ethics make the conflict confused or intensified. As a result, people's expectations of ethics often turn into disappointments, and the end is a stressful trial.

2. Existing ethical frameworks

But why do ethics betray people's expectations? Certainly, the ethics itself may have limitations. However, in my view, more than that, the existing framework of ethics (that is, traditional ethics) is not able to cope with the actual conflict situation. The reasons are summarized in four points.

Trapped in Commonality

First of all, the existing framework of ethics easily assumes "congruity" beyond the confrontation without seriously taking the "conflict" in the broad sense. The culmination of "coincidence" is an indiscriminate and transparent

relationship called "community." In other words, what is assumed there is the stereotype of ethics = equality = commonality. However, as we will see later in Chapter 4 of this book, commonality is one, but not all, of the ideals of human activity. As long as they are confined to communality, the scope of individual freedom is narrow and limited, and compromise and loneliness are perceived negatively. From this point of view, the view that activities related to economy, politics, and culture are unethical*.

*The view that emphasizes "communality" is particularly noticeable in the mainstream of ethics in modern Japan. Representatives are Tetsujiro Inoue (1855~1944) from the Meiji era and Tetsuro Watsuji (1889~1960) from the Showa era. Although the theoretical foundations of the two are different, they are common in that "individualism" is regarded as an abstract idea that does not consider relationships with others, that is, "egoism."

However, even if it is individualism, its premise has a relationship with others. For example, behind the recognition of "the right to die" by the referendum in Switzerland, there is the idea of individualism that regards an individual as "the sovereign of his life." When it comes to euthanasia, I don't like the idea of "individual type" (as discussed in Chapters 5 and 6), but as far as respecting individuals as others, rather, we should reconsider Inoue's "collectivism" and Watsuji's "relationalism."

Old and new generation conflict

Next, the content of the existing framework of ethics is essentially always the values of the older generation. In a traditional society, the sense of values is passed on between generations. However, the change of the times is rapid in modern times, and new values are born with the advent of a new generation of people. And in the eyes of the new generation, the values of the old generation appear to be stiff conventions that cannot adapt to the times. As a result, old and new values will be violently conflicted, especially as seen in the conflict over the family model and the freedom of the individual*. This is not about adjusting or eliminating conflicts.

*There are three levels of ethics. The basis of ethics is a level that is universally applicable to human society, such as do not lie, do not kill others, do not steal other's things. On that level, the standards applicable to specific times and societies overlap, which substantially binds people's thinking as the core of ethics. Then, on the surface, there will be levels that are conveniently arranged, such as guidelines and traffic rules. It is the core level of ethics that causes conflicts of values between generations.

Confounding criteria

Furthermore, in contemporary society, conflict situations are becoming more complicated due to the division of ethics into various fields. This differentiation tendency is called "modernization." Taking medical ethics as an example, first, the bioethics of the patient side and the professional ethics of the medical side conflict. However, this is not the only conflict, and there is a conflict between common sense and organizational ethics. Moreover, we must not forget the conflict with family ethics. Moreover, in addition to the above, institutions that have special functional purposes such as law, politics, economy, and technology surround and constrain the confounding conflict (Fig. 2).

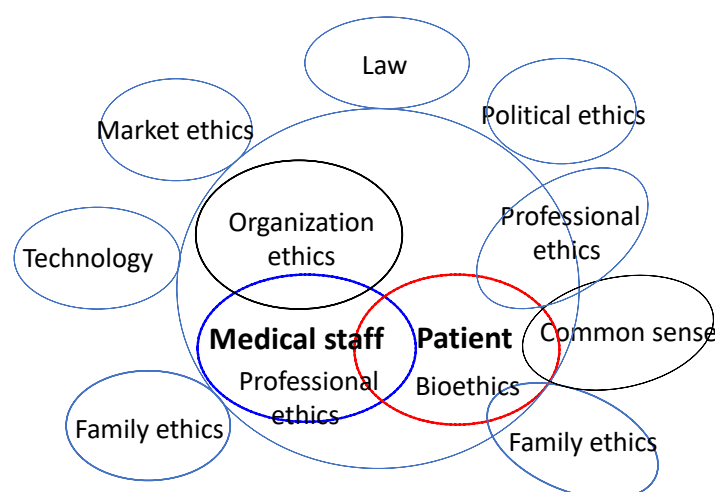


Figure 2 Confounding ethics

Penetration of digitalization

Finally, the pervasiveness of "digitalization" in all areas of society today* makes it even more difficult to understand and adjust conflict situations. For example, when disease or accident is explained by risk probabilities, the gap between the expert side and the patient side regarding the interpretation becomes deeper. Or, as the number of single persons increases in a highly convenient digital information environment, self-help and mutual help supporting nursing care are significantly weakened. Moreover, the expansion of virtual reality obscures the line between truth and fake, leading to an increase in intolerance and division in various fields. That is what is actually happening.

*"Digitization" means that various things that were previously considered to be different dimensions, such as letters and images, life and machines, spirit and matter, are first arranged on the same platform using a binary code (0/1). And then they are combined appropriately and synthesized on it. Today, cutting-edge technologies are being digitally integrated via computers ("Ethics of Life and Science and Technology").

Looking broadly at the current state of ethics, the ethical framework itself, which is expected to adjust and resolve conflict situations, conversely creates new conflicts within the conflict of values between generations, due to not directly accept the conflicts. So that a situation emerges in which it is difficult to deal with the complicated and uncertain changes in society as a whole.

3. The fundamental perspective

If the above diagnosis is correct, the basic policy that we should have regarding ethics is clear. In other words, it is the construction of the new framework that considers the conflict-situation in a broad sense, incorporates changes between generations, includes complexity, and deals with the

uncertainty due to digitization. This is a real challenge. However, it is the "systems ethics" of this book that dares to take up the challenge. Let me explain the fundamental perspective.

Structuring of communication system

Systems Ethics regards all human activities as "communication", and regards the function of directing and maintaining communication from the inside, that is, the function of controlling as "structuring", and the communication controlled by structuring is called "system". The name of systems ethics derives from the viewpoint that so-called "ethics" is regarded as "structuring of communication system".

The keywords here are "communication", "structuring", and "system". These are not familiar everyday words, and different technical terms have different definitions. If so, why choose such terms? Isn't this just to reject the reader's understanding? The doubts are legitimate, but of course there is a good reason for choosing them. As pointed out earlier, the reality, which is the basis of ethics, has changed.

Transformation of reality

Today, in the 21st century, the reality that is the basis of ethics changes from "personal action" and "behavior in the environment," which were the focus of conventional frameworks, to the world of broader communication, including the exchange of digital information. In the first place, knowing and acting are all part of communicating, but now they are being digitized, as seen in SNS and Pokémon GO.

* Some traditional ethics still focus on individual behavior and question its motives and consequences. It is a remnant of the ethical framework that was the mainstream of the 19th century philosophy centered on the balance between religion and science. It was Kant's philosophy of object recognition that provided the basis.

Some others are within the framework of the 20th century philosophy that focuses on biological behaviors in the environment, centered on the balance between humans, organizations and machines. The focus here is unconsciousness, language, body, and climate that cannot be captured by reasoning. Bergson philosophy and pragmatism were the first to provide this foundation. The above will be mentioned in the final chapter.

The ethics of Tetsuro Watsuji's "Aida", as introduced earlier, is still the basis of most textbooks on Japanese high school ethics. However, as long as Watsuji advocates "relation" that goes beyond individuals and seeks the foundation for it, his theory is within the framework of 20th century philosophy.

Looking back, the criteria for "reality" up to the 20th century were "body" that people can feel, and "human" as the relationship between people who have bodies. However, the way of feeling reality changes in the digitization. For example, wearing a robot suit makes you feel like a cyborg, which is a combination of the body and the machine. Or, if you go to the exhibition area of Team Lab in Odaiba, Tokyo, you will feel as if you are in the digital universe (www.team-lab.com). The permeation of digitally synthesized reality urges us to make a fundamental overhaul of reality.

Communication

There was a theory of communication in the 20th century. What was supposed there was either information communication without humans or human communication without digital. However, nowadays, what is needed to build a new framework of ethics is to recapture human communication within the context of the relationship of all things, including the exchange of digital information, as communication.

The origin of the word "communication" is the exchange (communis) of "gifts (munus)" as explained in Chapter 1. In other words, the relationship of exchanging something is at the core of the meaning of "communication." We

usually think that "communication" is the only human communication that involves gestures, symbols and words. However, there are countless relationships in which something is exchanged, including electronic energy and pheromones, and these relationships are all communications.

In the existing framework of ethics, that is, in conventional ethics, the relationship between humans and animals has been taken as the standard of "person". The same applies to the relationship with AI and AI-equipped robots that have newly appeared in the 21st century. However, with the pervasiveness of digital reality, "person" can no longer be the norm. To recapture the relationship between humans, animals, AI, and robots (this point will be discussed in Chapter 9), it is necessary to generalize communication, including digital communication.

System

The concept of "system" is essential for the generalization of communication. The "system" of system ethics is the system of communication.

"System" comes from the Greek word "standing together", and the core of its meaning is "relation among elements." At the beginning of Europe in the 17th century, indexing at the end of the dictionary allowed cross-references of words and phrases, and the book was understood as a "system." In the 18th century, the "system" of the living world was created, and in the 19th century philosophy became proud of the "system." In the 20th century, general systems theories such as equilibrium system, open system and closed system were proposed. Finally, Luhmann integrated them and applied communication system to society (see "Introduction to System Theory" and "Introduction to Social Theory").

The systems theory in this book is inspired by Luhmann's ideas of "division," "boundary," "communication," and "division of divisions," but the basics and development are also unique. Luhmann does not have a general view of

communication in the first place, nor he has a way of thinking about four-dimensional correlation as described below.

If the relationship between things is communication, then everything is a whole communication among smaller communications as well as a part of a larger one. A myriad of communications is constantly occurring and disappearing in this universe. Among them, "communication that maintains the inside that is distinguished from the outside" is called "system". Humans, animals, robots, minds, societies, and cultures are all communication systems in that sense.

Structuring

Whether or not communication becomes a system depends on whether or not the function of directing and maintaining (that is, controlling) communication is within it. Its function is "structuring". Why do I express this word?

We can see the "shape" of things. The various shapes that can be seen are constant expressions of "patterns" from time to time. A "type" is an immutable relationship among elements and is invisible to itself. In mathematics (topology and projective geometry) this is called structure. The structuralism of French modern thought also derives from it (Levi-Strauss "Structural Anthropology").

The structure, of course, is in the communication system. However, communication systems are not stationary like mathematical objects, they are constantly moving. If so, as for the function of controlling the movement from the inside, the expression "structuring" that implies movement is more appropriate.

Communication that is controlled from the inside by structuring (structure) is "system". In addition, the movement of the parts that are connected inside the communication system is called "function". From this comes the concept

of functionalism.

4. Inclusion and distinction of the ethical world

Systems ethics is probably the only new framework of ethics that corresponds to the reality of the digital age of the 21st century. The viewpoint of (structuring of) communication system makes it possible to fundamentally shift the perception of reality and person, but it is not the only one. That viewpoint also makes it possible to comprehensively capture the complicated world of ethics and then distinguish it. Let me explain this point by taking the "human mind" and "social institution" that are usually discussed separately.

Mind and Institution

Inside the human mind, self-dialog (that is, self-inquiry) is being conducted. At the core of self-dialogue is a conscience (belief) that, for example, "I will not betray others" or "I want to be sincere with myself," and this unconsciously guides the flow of self-dialogue.

On the other hand, each social institution has its own special founding purpose (idea) to direct the movements of people involved, such as "justice" in law and "support for development of immature persons" in education, and its purpose makes a difference among others.

Common sense states that the mind and the institution are separate events that are not directly related. However, by introducing the general viewpoint of <working> here and looking from there, the characteristics common to both parties emerge. In other words, the mind and the institution can be seen as "connection among elements", and the conscience and the purpose of establishment can be seen as "internal control of connection", although there are differences between ideas and actions.

Here, we will replace the connection among elements with "communication", the function of controlling the connection from the inside by "structuring", and the communication controlled by "structuring" with "system"*. Then, the human mind and the social institution become communication systems, and the conscience and the purpose of establishment become the structuring of each system.

*"Connection" is communication, and "connectedness" (established and maintained by the connection itself) is communication system. Systems ethics becomes "ethics of connectedness" using everyday expressions. We will return to this point later in the closing chapter. The reason why "connectedness (established and maintained by oneself)" is reinterpreted as a "communication system" is to build a general ethical theory for the digital age.

Conscience is of course the center of morality, and morality is also the internal attitude of ethics. On the other hand, the purpose of establishment is the control idea of the organization and a part of social ethics. If so, <structuring of communication system> is functionally equivalent to "ethics (reason of human relationship, 倫理)". In other words, the communication system corresponds to "倫理(human relationship)" and the "structuring" corresponds to "理(reason)".

Multiple levels of Ethical World

As seen above, the viewpoint of the structuring of communication system makes possible to comprehensively capture the ethical world, including the human mind, face-to-face relationships, groups, society as a whole, history and ideas, and furthermore to distinguish one from the other. In the existing framework (conventional ethics), ethics was limited to individual actions, face-to-face relationships (interrelationships), or groups, and therefore it was not capable to capture the complexity of multiple levels of ethics. That limit can be exceeded only from the viewpoint of the structuring of communication system. Corresponding to <Structuring of Communication System>, multiple

levels of the ethical (or moral) world are distinguished as follows.

Self-dialogue in the mind...Structuring...Conscience/Beliefs...Ethics

Mutual personal relation...Structuring...Trust/common sense...Ethics

Society(institution)...Structuring...Establishmentpurpose/Mission...Ethics

Co-relation among societies...Structuring...Ideology/public opinion...Ethics

Group of people...Structuring...Practice/Organizational culture...Ethics

History...Structuring...Civilization/Cultural Tradition...Ethics

Thoughts...Structuring...Worldview/Ideal...Ethics

5. Thinking method of <four-dimensional correlation>

Systems Ethics is a highly abstract general theory, but at the same time, it is also a tool (analyzer) for concretely analyzing problems that cause conflict situations. For non-philosophers, the tool story may be far more interesting than the confusing theory story. What distinguishes systems ethics from conventional ethics is the analytical power of this tool. What makes this possible is the thinking method of <four-dimensional correlation>.

Typology of Actions

Let's take human actions as an example. Various types of actions have been proposed so far. For example, M. Weber's four types of "zweckrational," "emotional," "traditional," and "wert-rational" are famous ("The basic concept of sociology"). However, neither Weber nor other theorists have been able to provide rational explanations for why it should be of this type. Only the correlation of four-dimension thinking can do that.

As will be explained in detail in Chapters 1 and 3, there are four phases of "performance," "sentiment," "negotiation," and "reflection" inside the human mind, and these work as a set. The action-intentional purpose arises from the fact that one phase of them becomes the center. For example, if the focus is

on the performance phase, actions that aim at survival and utility occur. This is Weber's "zweckrational" action. Or, when the sentiment phase becomes the center, actions that aim for empathy and conformity occur. This is an "emotional" act. In other words, the act, which is the expression of the mind, can be regarded as the expression of the bias of the balance of the four phases working inside the mind. In this way, existing typologies can be flexibly accepted and recombined.

Ethical theory

Bias in typology of actions is also seen in existing ethical theories*. Ethical theories include utilitarianism, deontology, virtue ethics, and liberalism, all of which are caused by emphasizing only one of the four aspects of the thought, which is the practical idea system. The four aspects in this case are "rational will of the individual", "attribution to the community", "universal public agreement", and "transcendental ideal", as described later in Chapter 5. By tracing the origins of these four aspects, we come to the four phases of mutual communication, namely, "utility," "mutual help," "integration," and "idea." Unless we can see that these four phases are correlated, the situation in which the ethical theories that are only one type are confronted will not end.

* There are three levels in ethical theory: descriptive, normative ("should be") and meta levels. Normative level is the center of the theory and its content is actions, policies and ideals of individuals and groups. There are two main viewpoints classifying normative ethics.

One is the basis for making the norm "correct". This includes "purpose", "intention", "result", "procedure", "person", and so on. The other is the basis for the "goodness" of the normative content. This includes, for example, "harmonious cosmos," "God's will," "logos or reason," "heart and honesty," "personality and virtue," "desire for self-preservation," "pleasure (happiness)," "mutual trust," "community-survival" and "nature or life". However, the basis for distinction between good and bad is neither good nor

bad.

Based on the above, when characterizing existing ethics, Bentham's utilitarian ethics is composed of pleasure, results, maximization, etc., and Kantian deontological ethics is represented by reason, motivation, virtue, etc. On the other hand, liberalistic ethics originating from Locke is self-preservation desire, respect for others, contracts, etc., and virtue ethics dating to Aristotle consists of community attribution, ethos, and practical wisdom. Religious ethics follows the will and divine order of God, and existentialism ethics emphasizes individual decisions.

Correlation of four dimensions

Unlike existing ethics, Systems Ethics does not stick to a specific "typology" that arises from the bias of the four-sided correlation, but returns to the presumed four-sided "correlation" and constantly considers the balance between the four sides. By paying attention to this four-sided correlation, it is possible to change the situation in which ethics conflict with each other and move that conflict. The expression four-sided correlation does not mean that the four sides are simply arranged, but that the four different sides are linked in a fixed order. Therefore, in order to emphasize "difference" and "order," we use the term "dimension" instead of "side"*. The thinking method that always considers the four-dimensional correlation, that is, the balance of the four-dimensional correlation, makes Systems Ethics an effective tool for reality analysis.

*"Dimension" comes from the Latin "measurement", from which the meanings of "size" and "extension" or "sides" and "elements" were derived. It has become a "dimension" of mathematics, and generally refers to the "level" or the "world." On the other hand, a word similar to "dimension" has "hierarchy." This is familiar since it was used by philosopher Aristotle and psychologist Maslow, but it has a strong spatial meaning such as buildings and strata compared to "dimension". This book uses "dimension" rather than "hierarchy" because it focuses on the functional order

of the different aspects.

When analyzing problems that cause conflict situations, visualizing the four-dimensional correlations and arranging them in a plane such as coordinate axes may be useful for providing an analytical overview of the problem event. That is the “four-dimensional correlation” diagram introduced in Chapter 1. I would like to leave detailed explanations to the relevant section. A basic diagram of four-dimensional correlation (including the system) is attached to the Foreword (Fig. 1). This figure is often used in this book to intuitively understand the textual explanation.

As will be described later in Chapter 2, the thinking method of four-dimensional correlation is not a convenient tool (2x2 matrix) that simply divides things into four to organize them neatly. The selected four dimensions make up the basic structure (structuring) of the human semantic world, and each has a special function. Therefore, all the events that are meant by humans are captured by their four-dimensional correlation. Conversely, the four-dimensional correlation does not apply to an external environment that does not communicate meanings. The basis for this four-dimensional correlation is sought by “person” as an integrated being of four-dimensional communication systems. This point will be explained in detail in Chapter 2.

6. Four pillars of the basic framework

In light of the above, I would like to present the basic framework of Systems Ethics that confronts conflict situations. This framework is supported by the following four pillars.

The first pillar concerns how to grasp the ethical world. Introducing the general viewpoint of the structuring of communication system, multiple levels of the ethical world, from the human mind to groups and organizations, or

from the whole society to history and thought, can be comprehensively included and also distinguished from each other, without limiting human ethics to face-to-face mutual relationships. We have already mentioned this pillar.

The second pillar concerns the ethical goals of confronting conflict. In communication, the meaning-interpretations that both parties have made do not basically match because of the different perspectives of the parties. If so, rather than aiming at the resolution of the conflict on the premise of mutual agreement, we should aim at the transformation or movement or shift of conflicting situations, thinking that the conflict will continue forever. Systems Ethics provides the two-sided parallel model that aims at the conflict-movement itself. The key to this model is the self-transformation of each parties*.

*The system is generally unchanged only by external stimuli. The change would be by re-defining external stimuli internally. This is called "self-transformation." For example, assuming that a teacher instructs a student, if the student is passive, he/she will not listen with bright eyes, and no knowledge will take root. However, when the student himself/herself listens to the teacher's story with some interest, the student's eyes shine and he/she starts to study. As mentioned in Chapter 5, self-transformation is a characteristic of general systems, including personal system.

The third pillar concerns the approach to conflict situations. In order to promote self-transformation smoothly, it is necessary not only to prepare a table for discussion, but also to provide a foundation for mutual understanding of the interpretations and positions of the parties. Systems Ethics sets the foundation for specific problems by the four-dimensional correlation approach. That is the correlation of the issues involved in the confrontation situation and the correlation of the perspectives that enable a relative view of the differences in positions.

*It is not easy for opposing parties to reach the same table. Furthermore, it must be said that it is extremely difficult to continue remaining. It is "trust" to the counter party that overcomes the difficulty.

For example, this was the relation between a leader of local farmers who returned from evacuation after the Great East Japan Earthquake and a local manager of electric power company. No matter how many times the manager went to the farmer's house, he faced the anger of the leader and couldn't be listened to his story at all. The situation changed because the farmer acknowledged the sincerity and consistency of the manager and trusted him as a person.

Although this approach pushes rationality to the forefront, it never forgets that the emotional dimension is the most powerful in human communication. It is a rational way of thinking on the basis of emotionality. In this regard, Chapter 5 refers to the relation between the "Open Dialogue" and the approach of this book.

The fourth pillar involves a practical policy for moving conflict situations. First, we will grasp the differences in mutual interpretations while making concrete correlations of problem points. Next, in light of the correlation of viewpoints, the positions are made relative to each other. Then, a practical goal is to be set. This is not a general ultimate end, but a special goal inherent in the problem itself. Whether or not this practical goal can be set is the key to promoting the movement of conflict through self-transformation. Only by setting the practical goals, it becomes possible to practically propose some normative policy suitable for the problem.

*For the system, "ultimate end" is the continuation of the system itself. The ultimate end is of fundamental value, from which all the normative, and thus the general norms of "should," are drawn. On the other hand, "practical goal" differs for each problem that creates conflicts among systems. In the case of infertility treatment, for example, the practical goal is not the child's centered welfare or the priority of the parent's way of life, but "succession of the broader parent-child connectedness."

This is a realizable and desirable future situation from which the normative policy is specifically derived. This point will be explained in detail in Chapters 5 and 6 with specific examples.

As seen above, Systems Ethics is a general theory that elucidates the ethical world, and is also an effective tool for analyzing the reality, which is the basis of ethics. Rather than those, it practically proposes normative policies based on theory and analysis. Systems Ethics has the power of theory, analysis of reality, power of normative, and power of practice.

7. Constitution of this book

I will show readers the entire development of this book beforehand.

Chapter 1 deals with face-to-face communication and illustrates that the logic of four-dimensional correlation runs through it. In response to it, Chapter 2 seeks the basis of four-dimensional correlation in "human" as the four-dimensional integrated body of the communication system. Here, since it is filled with philosophical content, it would be something that non-specialists would want to avoid, but consideration of "what is a human" is indispensable for ethics. This chapter will also serve as the basis for comparing humans with animals, AI robots in Chapter 9.

In Chapters 3 and 4, we reconstruct the human meaning(semantic) world, and hence the ethical world, by the thinking method of <four-dimensional correlation>. Since mind and society, history and ideas are comprehensively regarded as ethics here, readers will witness a completely new form of ethics. The thinking method of four-dimensional correlation is the basis of Systems Ethics.

Chapter 5 uses the thinking method of <four-dimensional correlation> to

concretely show how conflict situations move. From a practical point of view, this chapter is the apex of the book, which is the first to depict the full picture of methods of Systems Ethics. In the following Chapter 6, the method presented in the previous chapter is applied to a concrete example. This includes "surrogate mother birth" in assisted reproductive medicine (fertility treatment), and "euthanasia" related to terminal care. Behind these two problems is the transformation of the family community responsible for child care and nursing care.

In Chapters 7 and 8, the thinking method of <four-dimensional correlation> is applied to "happiness", and the reconstruction is focused on the concept of QOL, which is a scientific version of happiness. Behind conflicts among people is the different interpretation of "happiness." Therefore, these two chapters are extremely important. The efforts here should not only promote the "self-transformation" that is essential for the movement of confrontational situations, but should also enable collaborative work with a wide range of psychological and social science researchers beyond the fields of medical care and nursing care.

In Chapter 9, the concept of humans in Chapter 2 is applied to comparison with animals and AI robots, and on the extension of that, the reality of the "soul" is positioned, so that we can make the "competitive symbiosis" among heterogeneous systems possible.

In the closing chapter, first, we will analyze the entire digital age based on the thinking method of four-dimensional correlation, clarify the problems of the 21st century, and then guide practical goals not only to this problem but to general problems, emphasizing the perspective of "connectedness," and looking ahead to a wide range of applications of Systems Ethics*.

*In this book, many examples are taken from the field of medical ethics for explanation. Originally, System Ethics was conceived with the theme of medical

ethics and advanced medical technology, and has been refined mainly through medical and nursing lectures. Many of the cases were taken up in it. However, Systems Ethics can generally deal with conflict situations in all areas, not just medical care, nursing care, or welfare.

So far, I have explained why Systems Ethics is required and what is the theoretical basis of Systems Ethics. From now on, I will enter the world of "Systems Ethics". This world begins with communication and ends with communication. What is human communication in the first place? Unraveling this is a prerequisite for reconstructing the relation between ethics and reality.