Symposium in Commemoration of Professor Fineberg's Takemi Award and the Bridge to the Next Generation

Hideaki Koizumi, Symposium Committee Chair

Professor Fineberg has been one of the leading proponents of Taro Takemi's philosophy and has been a highly influential global figure for more than 40 years.

To pass on the ideas of this world-leading commemorative symposium to the younger generation, we asked some enthusiastic high school students to participate. We would like to express our deepest gratitude to Professors Masato Yasui and Hiroyoshi Inoue of Keio University for their efforts in this regard, and to Professor Hiroshi Kasanuki, chair of the Takemi Foundation Steering Committee, for allowing us to undertake this endeavor.

We received about 10 written comments (impressions) from the high school students who attended. All the comments were sincere and moving, and we would like to share two of them here.

The format and content of the original text was left as is, and the English translation preserves the original Japanese text to the extent possible.

The students' comments reflect the serious engagement of their participation in this symposium.

Impression 1
Takumi Moriyasu (Hongo Senior High School, second year)

I felt three things when I attended the symposium commemorating Professor Fineberg's receipt of the Takemi Award.

I learned about Seizon and Life Sciences with Dr. Taro Takemi for the first time at the symposium. In addition, although I have attended symposiums and lectures on brain science, which I am interested in, public health science is a field with which I am not familiar, so it was fresh information for me. In writing my impressions of the symposium, I would like to mention three points that particularly impressed me: 1) the characteristics of the field of Seizon and Life Sciences, 2) human beings in nature and 3) science and philosophy.

1) Seizon and Life Sciences

Dr. Mikoshiba's explanation that "Seizon and Life Sciences is a field that solves problems from multiple perspectives through the fusion of disciplines" was easy to understand. The stance of Seizon and Life Sciences (Ars Vivendi), which aims to solve the medical problems of human beings by integrating not only medicine but also other fields, matches the approach of the type of doctor I aim to be.

I have been interested in medicine from the field of medical engineering and have been conscious of its relationship to other fields. In addition, I have had experience in various fields such as economics, welfare and environmental issues, so I would like to use my strengths to gain a bird's-eye view of the commonalities and differences with other fields. Therefore, the concept of "Seizon and Life Sciences" supports my desire to apply the idea of looking at other fields from a bird's-eye view to medicine and become a research physician with a multifaceted perspective.

I also find the concept of Seizon and Life Sciences similar to how Dr. Satoshi Nakamura, whom I respect, approaches medicine. As Dr. Takemi states, "Doctors should not be repairmen."[1] This connects with the idea of not continuing to heal the local

population in Afghanistan, but rather to fix the infrastructure, which is the root cause of disease. It was a valuable lesson for me to recognize that Ars Vivendi refers to the concept of Seizon and Life Sciences, which can be said to be the basis of Dr. Nakamura's idea that medicine is a means to an end—not trying to solve a problem through medicine alone, but rather through multifaceted medical care involving other fields.

In addition, it was impressive to see the strong contribution of the characteristics of Seizon and Life Sciences in the discussion of the limitations of elemental reductionism and the shift to a holistic approach, which was used repeatedly throughout the latter half of the symposium.

I am interested in pursuing basic medical research on psychiatric disorders. Therefore, before the symposium, I had an instinctual feeling for elemental reductionist ideas, although I had never heard of them by name, and thought that microscopic cellular and genetic functions could explain human behavior. However, after hearing about the superiority of the holistic approach at the symposium and through research after the lecture, I was shocked to find that elemental reductionism was being rejected even theoretically, as supported by the rise of the field of complex systems chemistry.[2]

It was a valuable experience for me to learn about the holistic approach, as I really like that approach with its bird's-eye view from my own process of pursuing medicine and my own perspective on life. In retrospect, I was convinced of the limitations of elemental reductionism when I considered that depression, schizophrenia and other mental illnesses are not a single pathology but rather encompass a multitude of pathologies, each of which is caused by the intertwining of individual elements.

In addition, the concept of Seizon and Life Sciences is consistent with one of the definitions of holistic medicine, which "stands for a holistic view of health,"[2] and is strongly consistent with the approach to medicine required for the future. Also, I was impressed that Dr. Taro Takemi advocated this at an early stage. Moreover, I learned that holistic medicine, which harmonizes the science of existence, is not limited to public health but can be widely applied to medicine in general and can be applied back to my own field.

2) Human beings in nature

The repeated use of the phrase "human beings in nature" made me, as a high school student who aspires to become a brain scientist, strongly consider my approach to science. Basic research on mental disorders, which is my field of interest, is focused on analyzing microscopic objects such as human genes and cells with the aim of discovering organic abnormalities in the brain that are caused by mental disorders. Therefore, compared to fields such as public health, where problems surrounding human society are studied from a macroscopic, social scientific perspective, brain science tends to be human-centered.

However, in recent brain science research, a macro perspective, in other words, a human in nature perspective, is necessary. For example, in discussions on how to expand human capabilities in areas such as neurodiversity, it is essential to find the right balance between natural human capabilities and artificial capabilities. In such discussions, we must not forget the ultimate starting point of human beings, which is what nature is.

In my field of interest, mental disorders, there seems to be a great need for a similar "human beings in nature" concept. This is because, compared to organic disorders such as brain tumors and other disorders with clearly recognizable defects, developmental disorders such as autism, which are treated as functional disorders at this time, and other "vague" disorders seem to lack consistency in the interpretation of their cures. I believe that the debate over such treatment methods should be concluded in the context of the question of what a "natural human being" is.

While CRISPR is being used to eliminate congenital diseases, the problem of designer babies is also surfacing. The main criticism of designer babies is the question over the

inherent “natural” nature of human beings.

In addition to the easy-to-understand examples such as environmental issues, Dr. Taro Takemi’s words made me feel that future medical care must rethink what the ultimate nature of human beings is and take up the concept of human beings in nature anew. In addition, as he said, “Do not pursue research only out of intellectual curiosity, but as a human being in nature,” I would like to conduct my future brain science research in a nature-centered manner, returning to the nature of what humans should be.

3) Science and philosophy

Dr. Fineberg interpreted Dr. Taro Takemi’s approach of emphasizing the relationship with other fields as Seizon and Life Sciences and his perspective of human beings in nature as based on his philosophy of life and thought.

Through the opportunities I have had to hear from researchers, I have felt that ethics is an increasingly important aspect of medical research today. For example, some members of a medical laboratory are not only medical professionals but also professors in the philosophy department, and it seems that they are required to address research ethics carefully. Hence, I reaffirmed that the philosophy is an important perspective that serves as a major guideline for finding optimal answers in medicine, where complex issues are intertwined and answers are not uniquely determined.

That is reflected in Dr. Taro Takemi’s statement, “Bioethics is a new comprehensive ethical system that integrates the ethics of the general public on the receiving end of medical care (general ethics) and the professional ethics of physicians (medical ethics). Moreover, it is a system of ethics that is not based on the conventional principle that ‘one should not.’” In summary, “It must be a new ethics that corresponds to the progress of modern science and precedes the rights and obligations, rather than the ancient ascetic ethics that commands.”[3] The ethics of the future must provide a new and comprehensive perspective that is not limited to traditional perspectives of ethics. Thus, the future of bioethics must have a new and comprehensive perspective that is not bound by conventional ethical views, and an understanding of the importance of examining the complex issues surrounding medical care from multiple perspectives rather than dealing with them centrally.

In the age of the Enlightenment, there was no clear distinction between science and philosophy, and even today the goals seem to overlap in terms of “understanding the psychology of the world.” In addition, communication with the field of philosophy is indispensable in a holistic approach to medicine. In particular, as medicine requires a strong awareness of ethical aspects, I believe that introspective philosophical thinking about what medicine is for will be required in the future.

By the way, I believe that the essence of philosophy is philosophical thinking. Of course, learning the theories of philosophers about the psychology of the world can lead to scientific applications and an understanding of the world, but the more important key is introspective philosophical thinking about how to think deeply about an issue with the knowledge one has at hand. One of the reasons why science and philosophy have taken different paths is because of the increasing sophistication of knowledge. It is not realistic for a person who wishes to practice medicine to have an equal knowledge of philosophy, therefore the ability to reflect on one’s approach to medicine within one’s own knowledge will be effective in drawing ethical conclusions.

Finally, personal philosophy is formed by considering experience and the ideas of various people, and the experience of learning about some aspects of Dr. Takemi’s philosophy at this symposium provided tremendous growth in the formation of my own philosophy of addressing medicine, and that was my greatest gain.

In general, I felt that one cannot gain a perspective such as that of Dr. Takemi simply by

being involved in medicine alone. It is only by engaging in a wide variety of activities and experiences and systematically incorporating them into a form that makes sense that we can arrive at the ideal form of medical care, which is to save people comprehensively. I would like to continue to take on a wide range of challenges without being confined to my field of specialty.

References

1. "Dr. Taro Takemi and Seizon and Life Sciences." Hideaki Koizumi, Takemi Memorial Seizon and Life Sciences Research Fund, Public Trust. Interviewer Yonematsu Shion [English]
   http://www.takemiseizon.com/konwakai/interview/koizumi_en.html

2. "Holistic Approach." Takayuki Yoshioka, Japan Health Action Society https://www.jahbs.info/TB2017/TB2017_1_6_9.pdf

2. "What Is Holistic Approach—Its Historical Significance and Mission: Taro Takemi's Seizon and Life Sciences and Introduction to Medicine." Akihiro Fujino, College of Occupational and Environmental Medicine, Japan [Japanese]
   https://www.uoeh-u.ac.jp/kouza/gairon/history.html#cite_08

Impressions 2
Yuta Inai (Keio High School, second year)

Symposium Commemorating Professor Fineberg's Acceptance of the Takemi Prize Impressions
I would like to report my impressions of the lecture I attended.

1. Title of Lecture: Symposium in Commemoration of Professor Fineberg's Takemi Prize—International Cooperation in Science, Education and Health
2. Venue: Gakushi Kaikan
3. Date and Time: Saturday, February 24, 2024, 1 p.m.–4:40 p.m.
4. Impressions of the Lecture

Associate Professor Sakamoto's lecture:
First, you mentioned that the nature of medical care has been changing in recent years. However, due to factors such as globalization, there are problems that cannot be addressed within the existing framework, and it is necessary to make the concept of measures and policies related to medical care more comprehensive. I applied for the GSC program because I wanted to become a doctor, and I was aware that the top priority of the medical professional is to concentrate on curing diseases, but I was able to recognize that the environment surrounding patients in the field of medicine is broad and consists of close relationships within the international community. Next, he raised the question of who would take the lead in the event of a pandemic such as the new coronavirus in a globalized world. He mentioned the structural factors of the Global Health Architecture (GHA) and the interests of the GHA as factors that could address this problem. In response, it is natural for the member countries of an entity such as the WHO to give too much priority to their own interests, which would be detrimental to the functioning of collective security. To some extent, we should be prepared to compromise when we join an organization. In fact, even the UN Security Council miraculously functioned properly only when Iraq invaded Kuwait in 1990. Regarding the example of what to do about countries that cannot obtain vaccines, we

believe that if we provide free assistance, a new problem will arise, namely, the free-rider problem. If we assist countries that do not have economic strength, we are providing aid to countries that contribute little to the overall organization, and there is a possibility that more countries will try to take advantage of the “efforts” of these assisting countries. It is also necessary to consider the possibility of countries relying on such aid and not striving to grow their economies, thereby having little purchasing power.

This brings us back to the overall structure of the GHA. Do we need a country or an organization to take the leadership in the first place, knowing that it is not going to change quickly due to the interests of the participating parties and the other issues involved? It makes sense to be consistent and act, but I think that spending too much time there could delay a quick response in the relevant areas. I believe that organizations such as the WHO should take the lead on issues that threaten the entire world, and that each country or organization should act on micro-level issues where appropriate. I believe that communication, one of the key items in Professor Feinberg’s “Ten-C’s,” would be necessary in such cases but that bringing the situation to a state of cooperation or collaboration would be a waste of local energy in achieving an early response. In other words, having a global medical system might sometimes be a waste of local organizational strength. I fear that the global medical system could sometimes even be detrimental to individual patients.

Professor Fineberg’s lecture:

Regarding the seven mega-challenges facing humanity (global warming, economic disparity, declining birth rate, environmental pollution, technological innovation, health disparity and conflict), all the contributing factors are closely related. Therefore, there is a need to look at each issue in isolation and then consider its relevance and impact on other issues.

I also found the question of whether competition or collaboration is appropriate for science interesting. In terms of competition, economic development and ideological conflicts were mentioned, but I believe that science grows dramatically when there is competition. For example, during the Cold War, as a result of intensified competition in science and technology between the East and West camps, science and technology developed and eventually mankind took off into space. In an environment without competition, the incentive to develop is reduced, so competition is considered a prerequisite for responding to the mega-challenges. However, it can also be said that cooperation is essential to truly solve the mega-challenges. Therefore, I believe that science and technology should be developed through competition and efficient cooperation in the utilization phase.

Professor Mikoshiba’s lecture:

I was aware of light and shadow out of “light, shadow and darkness” regarding discoveries and their significance in science, but I was reminded of the various ways of looking at things. I was also interested in the concept of dynamic equilibrium in the field of cranial nerves, which is related to my own research. It might be for the field of philosophy, but where does a “person” come from to become a “person”? We recognize that we are the same “person” even though our cells are constantly being replaced. However, when a limb is amputated due to illness or a traffic accident, can we say that it is the same “person”? We believe that the concept of dynamic equilibrium is applicable to such a question. This concept is expected to change in the IT society in the future, especially with the introduction of chips that connect to the brain, which Elon Musk and others are developing, and we therefore believe that a change in the concept of “person” is inevitable.

Regarding the idea that the parties involved should be responsible for the discoveries made through their research and the technologies thus developed, the professor said that science can develop things in either a positive or negative direction, that there are many

issues to be addressed and that there must be responsibility when things are misused without bad intentions on the part of the researchers. It made me think that there are many issues. If we demanded responsibility for the results of research, the development of science would be curtailed, and there is even the possibility that excellent human resources would be delegitimized and give up research for fear of responsibility from the possibility of misuse. In the first place, is it such a bad thing to be interested in something and do research on it? Human development has been fueled by intellectual curiosity and a certain "greed" that has greatly improved the standard of living and lifted some parts of the world out of poverty. However, humans are also a part of nature, and the impact of our development on the environment is immeasurable. In the end, however, it seems to me that we are simply altering our human-centered way of thinking in accordance with the trends of the times and the findings of scientists, while keeping it in place for our own convenience.

Professor Yasui's lecture:
I agree with what you said about the polarization of medicine. Indeed, nowadays we often hear about preventive medicine as a "gateway" or the treatment of intractable diseases as a "last resort." In the future, efforts such as those we currently employ will not be sufficient to cover social security costs in a super-aged society, and preventive medicine is increasingly important in curtailing huge medical costs. In fact, Keio University has relocated and empowered its Center for Preventive Medicine to Azabudai Hills, and its focus on preventive medicine can be seen.

Next, regarding the digital biomarker, I think it is beneficial in that it enables us to wear multitasking sensors on a daily basis, acquire data, detect abnormalities early and notify nearby medical institutions, which can then respond to the problem as soon as possible. In fact, I wear an Apple watch, which is heavier than a regular watch, and there are stories that an irregular heartbeat can be detected by a smartwatch and lead to early treatment. We believe that many patients and their families would prefer to wear a smartwatch for medical purposes because of the peace of mind that comes with early detection despite the inconvenience. In addition, the accumulation of daily data can be expected to provide customized medical care that is best suited to each individual. However, there are still concerns about future predictions based on the creation of personal avatars. Even sensors developed for medical use can produce erroneous data. There are many issues that need to be addressed, such as reducing the margin of error, ensuring that the public accepts the technology and establishing laws regarding the handling of personal information, but I believe that this is an important science and technology in a time when the working population will be in short supply.

Professor Koizumi's lecture:
When I was shown the murals of ancient Greece, I was amazed that the basic ideas of that time were not so different from those of today. From there, we have progressed over the years, passing the age of Descartes, the age of elemental reductionism and finally arriving at overarching integration theory, which I believe is essential for understanding and solving the various problems of modern society.

Professor Reisch's lecture:
The lecture was about the lack of ethical analysis of people in public health today. I was not aware of the relationship between philosophy and matters similar or related to public health, so I found it difficult to see the need to deepen applied philosophy. In public health, if a few people are disadvantaged when some policy is introduced for the sake of the majority, it is difficult to say that the human rights of those people are being respected.

For example, considering the fact that thermal power generation has recently become a major energy issue, as it provides a stable and inexpensive energy supply, while at the

same time emitting sulfur dioxide and nitrogen oxides that kill more than 1,000 people every year, it is clear that while there are many people who benefit from its advantages, there are also many people who suffer damage. We believe that security cannot be considered a matter of complete security unless the small number of people who benefit and are harmed are simultaneously considered.

In addition, I found it interesting that the professor mentioned in the transdisciplinary talk the ethical position of animals. I believe that this issue will surely arise when thinking about ethical aspects, and because it is an interaction it cannot be separated when considering the security of the earth and must be based on the idea of coexistence.

Finally, I would like to thank you for the opportunity to participate in this symposium. The valuable talks by the professors gave me many opportunities to think. I would like to continue to develop from my knowledge gained at this symposium.