

# Why Research *Kokoro* Now?

Issues in modern society from  
the perspective of *kokoro*



Advances in technology and economic globalization have brought about many changes and completely new experiences in human society. There is an increasing need for the human mind to orient itself in this new situation. In April 2015, Kyoto University, with support from Japan's Inamori Foundation, launched the Kyoto Kokoro Initiative, a project focusing on the Japanese concept of *kokoro*. The Japanese word *kokoro* has a range of related meanings, often translated variously as “mind,” “consciousness,” “heart,” “spirit,” “soul,” among other interpretations. In truth, however, there is no accurately corresponding English term. This Kyoto Kokoro Initiative aims to explore the concept of *kokoro* and its various connotations in an effort to help us orient our hearts and mind in increasingly complex and changing modern times.

To commemorate the launch of the Kyoto Kokoro Initiative, a symposium was held at Kyoto Hotel Okura on September 13, 2015. Over 400 participants gathered to discuss their understanding of *kokoro* and share their ideas on the important role that our understanding of the concept might play in the future.

This article will present a summary of the discussions held during the symposium's five lectures. The lecture topics were as follows:

## ***The Structure and History of Kokoro***

**Shin'ichi Nakazawa** *Chief and Professor, Institute for Primitive Science, Meiji University*

## ***The Historical Internalization of Kokoro and Interface***

**Toshio Kawai** *Professor, Kokoro Research Center, Kyoto University*

## ***“Kokoro” and Social Design in Post Growth Era***

**Yoshinori Hiroi** *Professor, Faculty of Law, Politics and Economics, Chiba University*

## ***The Implicit Process and “Personal History”: Perception, Evolution, Social Brain***

**Shinsuke Shimojo** *Professor, Division of Biology and Biological Engineering, California Institute of Technology*

## ***The Origin of Kokoro: From Empathy to Ethics***

**Juichi Yamagiwa** *President, Kyoto University*



## Unity and Exclusivity: Contradictions regarding the Human *Kokoro*

**Nakazawa:** The term “historical layer of the *kokoro* (psyche)” was mentioned by Prof. Kawai during his lecture. He stated that Jung’s “layers of the old psyche” were formed approximately 50,000 years ago during the “mental big bang” and the development of shamanism. I believe that animism is more essential than shamanism, and therefore I am interested in how humans developed this belief in the context of evolution. Animism relies on an awareness of the deep connection between humans, animals, and plants, and this type of structure of *kokoro* allows for the development of metaphorical linguistic ability. Therefore, animism represents the oldest layer of the human *kokoro*, and at the same time forms the basis of the modern human *kokoro* (psyche). In particular, this historical layer plays an active part in the *kokoro* of the Japanese population. By turning objects such as trains, pears, and

taxies into *yurukyara*<sup>1)</sup>, the distinction between humans and objects is blurred. In other words, the “historical layer of the psyche” is alive and working.

**Yamagiwa:** Borrowing Dr. Steven Mithen’s<sup>2)</sup> opinion, animism was developed prior to the appearance of language. The ability of humans to manipulate the relationship between two objects (e.g. using fire) exists as a step in the previous stage; however, the emergence of language is the real turning point.

**Shimojo:** Animism occurs during the early stages of development, as observed in that children who are beginning to learn words make remarks such as “the stone is hurting” when they witness an adult kicking a stone. Words, like music, can both express emotions and describe things and facts symbolically; however, animism tends to disappear as the latter function develops. There is a complex relationship between evolution and development, but they may be related and seemingly consistent in this regard.

1) *Yurukyara* is the Japanese term for mascot characters representing certain regions or groups, etc. The mascots are often “humanized” versions of animals, plants, or inanimate objects. For example, Kumamon the bear, who serves as the Kumamoto Prefecture mascot, or Funassyi, an anthropomorphized pear who unofficially represents the city of Funabashi in Chiba prefecture. Such *yurukyara* are popular among Japanese people of all generations.

2) Dr. Steven Mithen is pro-vice-chancellor (international and external engagement) and professor of archaeology at the University of Reading. Dr. Mithen has authored a number of books including *The Singing Neanderthals: The Origins of Music, Language, Mind, and Body* and *The Prehistory of the Mind: The Cognitive Origins of Art, Religion and Science*.

**Yamagiwa:** The concept of niche construction was discussed during Shimojo's lecture. I believe that niche construction, as performed by humans, is one type of goal borne out of environmental factors. In this case, however, do you believe that the nature of humans will change as modern society moves further away from the natural environment and a higher value is placed on the social environment? In addition, I feel that the social environment is changing rapidly.

**Shimojo:** If niche construction is correlated with the ability of animals to change their environment, then the potential for change is high in the case of humans. Reduction of body hair, for example, might also be a result of it, considering that humans acquired traits such as digestive enzymes for milk constituents and malaria resistance in a relatively short period of time as a result of niche construction.

Previously, in a newspaper article, I addressed an issue as to what the characteristics of the "X-men" (i.e. a new human race) could be, and formed the following science fiction scenario. The plasticity of the human brain is limited to a critical period by neurotransmitters. For example, Japanese adults trying to learn English cannot distinguish the "L" and "R" sounds; however, Japanese children raised in an environment

where English is the native language can learn to distinguish them to be fluent in English. This difference depends on whether the individual is exposed to a language during the critical period or later. The on/off state of the critical period is controlled by the on/off state of neurotransmitters. Therefore, slight mutations in these regulatory genes may, in principle, maintain the neural plasticity beyond the critical period, thus enabling adults to distinguish "L" and "R." This ability is not limited to distinguishing "L" and "R," and could allow a person to adapt to new technologies, such as computers and the Internet. Indeed, this plasticity of learning might be the critical characteristics of the superhuman species. This could be an example of extended niche construction in the human.

**Hiroi:** In terms of acceleration, the interval between events is gradually getting shorter, with *Homo sapiens* appearing approximately 200,000 years ago, the mental big bang happening 50,000 years ago, and agriculture about 10,000 years ago. The human race has undergone drastic changes in the past 300 years, and especially the last 100 years. Considering this accelerated pace of changes to the human race, the appearance of a superhuman race may not be merely a concept from science fiction. However, at the same time,



Yoshihiro Hiroi, Professor, Chiba University (left) and Shinsuke Shimojo, Professor, California Institute of Technology

it can be said that the basic principles of being human do not change as we become superhuman.

The most memorable thing about the lecture by Yamagiwa was his statement that, although there are benefits to creating human communities, intercommunity antagonism increases as unity is maintained within a community. I believe this is a universal phenomenon. Initially, humans developed language, and thus became able to build communities beyond the family. However, antagonism between groups with different languages began and evolved into religion, and later, religious groups eventually began deep-rooted conflicts. If these expansions and conflicts continue, will it eventually consume a community as large as the Earth?

**Yamagiwa:** Indeed, America in the 1970s probably thought that the people of Earth would band together in an era where space travel was possible, strengthening a worldwide unification through encounters with extraterrestrial life and migration into space. However, this did not happen. Ethnic conflicts intensified and religious conflicts increased, leading to complex conflicts all around the world.

**Nakazawa:** Just as Christianity and Islam expanded globally in the past, the global economy is poised to do the same. The global economy encourages a flow of resources and labor that surpasses borders, and this will likely continue in the future. On the other hand, local quarrels continue to escalate all around the world. We are seeing the contradictory progress of both globalism and nationalism.

**Shimojo:** From a social psychology perspective, unity within the social group and antagonistic behavior against an external group are two sides of the same coin, and cannot be separated.

**Yamagiwa:** This topic straddles both biology and culture, but the main criterion that separates biological populations is food. There is a clear boundary that separates populations based on what they eat, and this criterion separates even modern cultures. However, sex in *Homo sapiens* has surpassed these boundaries. Until the age of the Neanderthals, reproductive isolation gave birth to different species or subspecies depending



on the region. This changed with the increased mobility of *Homo sapiens* and a strong sex drive, to the point that subspecies differentiation is not possible. This is a characteristic worthy of special mention.

**Nakazawa:** There are many stories of incest in various mythological stories around the world. This suggests that incest is fundamental to human desire, and could indicate that humans are creatures with a strong desire for incest. Considering this view, what about gorillas?

**Yamagiwa:** Gorillas and monkeys strictly avoid incest, especially between mother and son. This is rooted in care during infancy; if intensive care is provided through early developmental period, upon reaching sexual maturity the child will avoid mating with their caretakers of opposite sex. Consequently, in a small population, an individual must leave the community when they reach sexual maturity if there are no suitable partners other than their own parents (caretakers). This is the force that pushes an individual out of a population. This is probably the most important factor contributing to the departure of young female gorillas from their groups. Thus, animal society may be driven by avoidance of incest.

## Open when Closed and Closed when Open: the Paradox of Reading the Human *Kokoro*

**Nakazawa:** The thing that came to mind when I listened to the lecture by Kawai was that the human *kokoro* (psyche) opens when we try to close it. Being “open” means that an individual connects spiritually with non-human entities. In order for this to happen, however, we must presuppose that the *kokoro* was previously closed. Even Zen Buddhism teaches to “close your *kokoro* first, so that it can open.”

**Kawai:** That is exactly what I meant. On the one hand, young people in modern society are moving towards a “closed” state through the popularization of IT and the ability to connect with anybody in the world through the Internet. For example, middle and high school students in Japan often form small groups or castes of about ten members. Therefore, I believe the paradox of “open” versus “closed” is an important point when thinking about human *kokoro* (psyche), and I think that this point is worthy of further consideration.



Toshio Kawai,  
Professor, Kyoto University

**Shimojo:** Today’s lecture by Kawai discussed how human society was initially an “open” system, but then became “closed” through the establishment of modern individualism, and psychotherapy historically stemmed out of this, as one among a variety of methods for seeking mental connections between individuals. The Internet society of recent years has allowed individuals to connect with anybody, making the population seemingly more “open,” but I do not believe that this is the same as the original “open” state. Although there may be other reasons, the need for psychotherapy has increased in the younger generation, in contrast to the older generation that needed it less. Having said this, however, how is the current “open” different from the “open” in the past?

**Kawai:** That is a difficult question. Originally, communities were built on words and religion that were tangible, but that may not be the case anymore. However, this may be similar to the worldviews of popular religions.

**Nakazawa:** I think the concept of the Golden Ratio applies in this case. This refers to the program that determines morphological order in the natural world. The shape of leaves, where and how branching occurs, and the structure of flower petals are all dependent on Fibonacci numbers (2, 3, 5, 8, etc.). The Golden Ratio, derived from these numbers, is the constitutive principle of the natural world. The physical space created by such ratios is closed. The leaves of a plant close and forests eventually close, even as they expand. On the other hand, the physical space created by additive constitutive principles (such as the sequence 1, 2, 3, 4, 5, 6, 7, etc.) can extend indefinitely. Currencies are basically additive in nature; therefore, wealth can increase indefinitely and expand. The human *kokoro* (psyche) is constructed of both additive portions as well as portions based on the Golden Ratio. A *kokoro* that can open after being closed is indeed constructed based on the Golden Ratio of the organic world. Economics is additive, *kokoro* is the Golden Ratio, and this is likely the central issue.

**Kawai:** I can agree with that explanation. The natural communities of the past were microcosms.

**Yamagiwa:** With a deity in the middle.



**Kawai:** Yes. On the other hand, a variety of adverse events may be occurring because modern Internet society and the global economy are “fields” that cannot be naturally closed.

**Yamagiwa:** In the past, there were no tools like the Internet to connect individuals; therefore, these individuals, although they lived separately, were connected through family or religion. On the one hand, even though communication between individuals is easy now, the instances of communication exist as individual interactions and there is no central force that draws people together. I feel that this is the biggest difference between communities of the past and modern Internet society. Having said that, we cannot escape from modern Internet society. Therefore, we must look for and use its advantages. The question is, how we can use those advantages?

**Hiroi:** When I look at the younger generation today, I feel that there are two vectors. The first is the vector that includes bullying incidents on

LINE<sup>3)</sup> or in Internet communities becoming closed, village societies. The second vector includes the maturation of loose relationships between individuals of the young generation that surpass the boundaries of age or region of residence. Considering this second vector, I found reasons for positive hope regarding Internet society. Recently, IT-related companies have moved their offices to underpopulated areas of Japan, encouraging regional revitalization. By tying IT together with non-virtual places or physical factors such as in the examples given, I believe some positive outcomes can be obtained.

**Kawai:** Although we would like to continue our discussion, we are unfortunately limited by time, and I think we have come to a good stopping point. Thank you very much.

**From the Editor** The Kyoto Kokoro Initiative aims to clarify the psychological state of humans living in this century and disseminate this new understanding widely throughout society. For more information, please visit the official website of the Kyoto Kokoro Initiative at the following URL: <http://kokoro.kyoto-u.ac.jp/en/KyotoKokoroInitiative/index.php>

3) LINE: A communication application developed for smartphones and personal computers by the LINE Corporation, a Japanese subsidiary of the Korean IT company NHN. The application enables text chat and telephone calls to be made for free. It is widely used by young people, such as high school students.