

Kyoto University

Research Activities

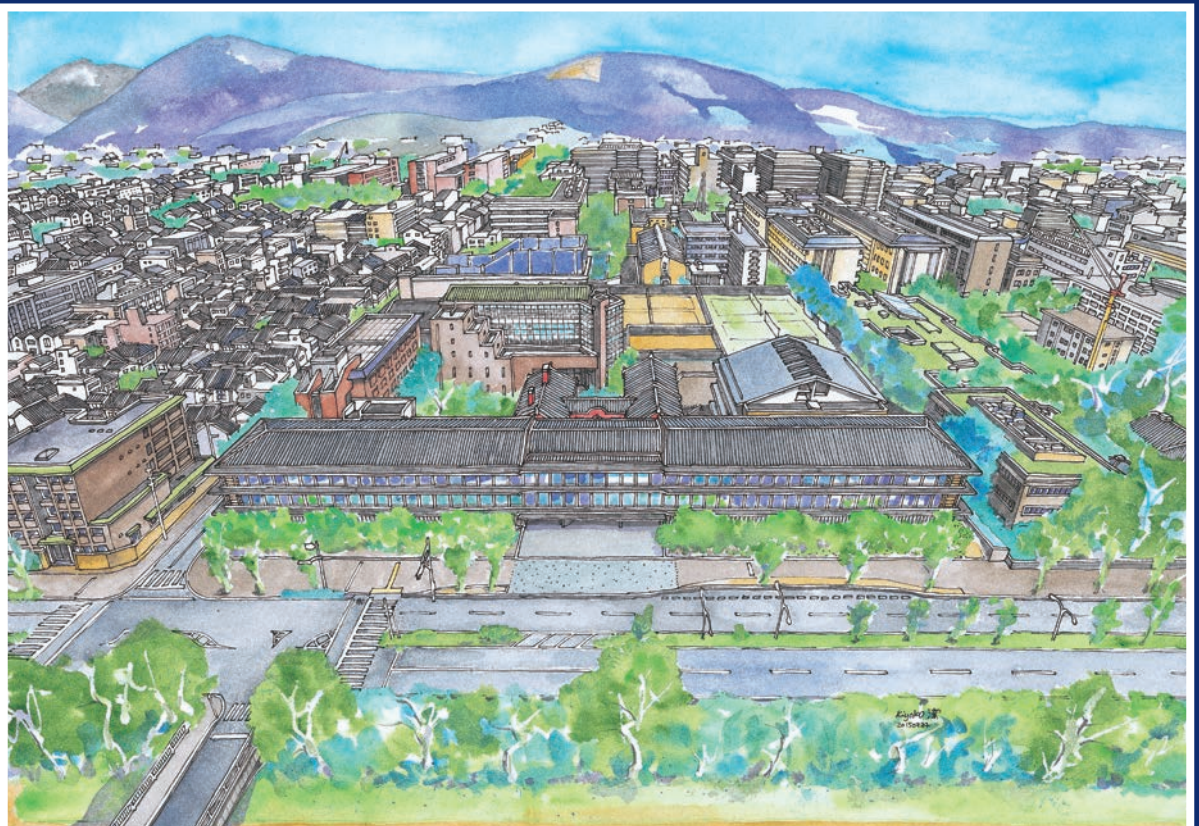
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KYOTO JAPAN

Special Feature:

Why Research *Kokoro* Now?

Issues in modern society from the perspective of *kokoro*



京都大学

Research Activities

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Cover:



The Inamori Foundation
Memorial Building

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Kyoto's Legacy of Psychological Scholarship

Kyoto University has long been one of Japan's main centers for fundamental research in the field of psychological studies. The origins of that legacy lie in the work of scholars such as Kitaro Nishida, founder of the internationally renowned Kyoto School of philosophy, and pioneering psychopathologist Shinkichi Imamura. Other leading lights include Kinji Imanishi and Junichiro Itani, who became the founding fathers of primatology through their post-war studies on Japanese macaques and chimpanzees, and Hayao Kawai, the noted Jungian clinical psychologist, who made a major contribution to the practice of clinical and analytical psychology and its diffusion throughout the nation. The journal *Shinrigaku Hyoron* (*Psychological Review*), which collects and publishes Japanese psychology research, the international psychology journal *Psychologia*, and *Primates*, the world's first journal devoted entirely to primatology, were all founded by Kyoto University researchers. The lineage of outstanding researchers in psychology fields continues at Kyoto University to this day, and the current generation is highly active throughout a broad spectrum of related fields.

Kyoto University researchers typically transcend the boundaries of their own specific fields, freely adopting and utilizing diverse areas of scholarship and methodologies for the advancement of their research. My mentor Junichiro Itani created ecological anthropology, which could not be restricted to any single specific field, such as anthropology, ecology, or sociology. Masashi Murakami, who followed Shinkichi Imamura as a leading psychopathologist, traversed neuropsychology, child psychiatry, forensic psychiatry, neurochemistry, neurophysiology, and histopathology and fostered the skills of many other leading scholars in those areas. This particular quality of Kyoto University continues into the present. In 2007, we founded

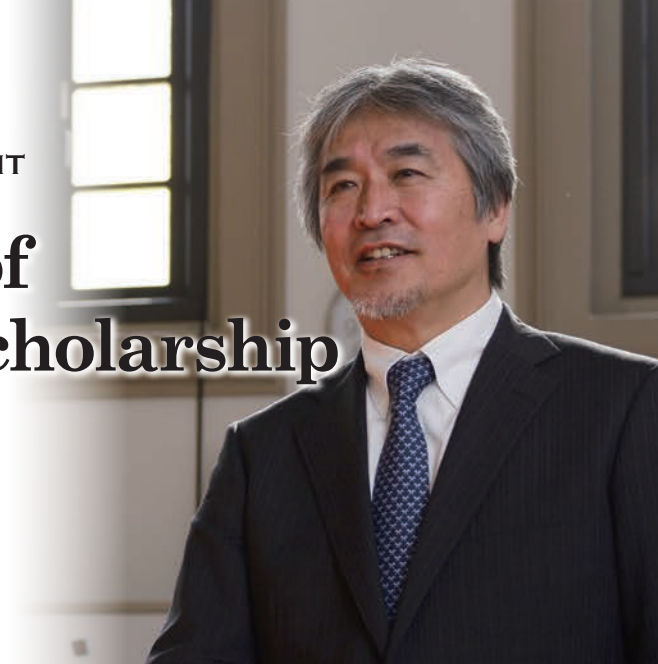
the Kokoro Research Center to integrate research from diverse academic fields. Then, in 2010, we established the Unit for the Integrated Studies of the Human Mind, which brought together researchers from thirteen of the university's academic faculties to collaborate and work together.

Thanks to economic growth and the development of science and technology, the environment in which we live today seems far more materially abundant than that of our parents' or grandparents' generations. But what about our psychological condition? Recently, Japan confronts an increasing number of issues and incidents rooted in psychological problems or deficiencies. It is now ever more important for us to gain a comprehensive understanding of the workings of the mind from many different perspectives.

This issue of Research Activities introduces Kyoto University's research into psychology and the mind. The articles herein represent just a small sample of the research that is being undertaken on our campuses, but as you turn these pages, I am certain that you will be impressed by the diversity and creativity that you will find. I hope that you will find the research presented in this volume to be of interest, and that some of our readers may even be inspired to join us in our endeavors.

December 2015

Juichi Yamagiwa
President, Kyoto University



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



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*¹⁾, 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’s²⁾ 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

LINE³⁾ 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.

Pioneer of Clinical Psychology in Japan

The Broad Achievement of Hayao Kawai



Prof. Kawai at the bank of the Rhine river
in Switzerland during his time studying
at the C. G. Jung Institut (1963)

At the beginning of his academic career, Kawai studied mathematics in Kyoto University's Faculty of Science. He soon realized, however, that he was not cut out for a scholarly career in mathematics, and, as he enjoyed teaching children, he decided instead to teach mathematics as a subject in high school. Through counseling his students as a high-school teacher, he began to realize his interest in learning about human beings. This led him to take up the study of psychology while maintaining his career as a high-school teacher. At that time, the field of psychology was focused on experimental or behavioral psychology, and placed much weight on objective data obtained by

experiments. Kawai was not satisfied with that approach, and began to study the Rorschach test as a means of gaining more insight into human psychology.

One day, Kawai found a possible error in a book on the Rorschach test written by Bruno Klopfer, a professor at the University of California, Los Angeles (UCLA) and a leading authority on projective techniques. Kawai sent a letter to Klopfer to inquire about it. Klopfer acknowledged his mistake, remarking that Kawai was the first person to notice it. This was the beginning of a relationship between the two scholars that ultimately led to Kawai studying under Klopfer at the UCLA on a Fulbright Scholarship. Influenced by Klopfer, who had a detailed knowledge of analytical psychology, Kawai also gradually became interested in that area. Klopfer arranged for Kawai to undergo training analysis under the Jungian analyst, Joseph Marvin Spiegelman.

In those days, it was rare for Japanese scholars to study abroad, and his experience in the US had a great impact on Kawai. His childhood during the prewar and wartime periods, when the majority of Japanese people leaned towards militarism, had instilled in Kawai a feeling of resistance against the illogicality and ambiguity of many Japanese at that time. He acknowledged himself as a rationalist and a lover of things Western: he loved Western philosophy, dramas, stories, music, and movies. The thoroughly rational thinking that he encountered in the US, however, gave him a strong cultural shock, and

Hayao Kawai (1928-2007) is a Jungian psychotherapist, clinical psychologist, and the most influential figure in the history of clinical psychology at Kyoto University, and also in Japan.



Prof. Bruno Klopfer, a leading researcher in the field of Rorschach tests, whom Prof. Kawai studied under.

made him ponder over his identity as a Japanese. The experience left Kawai feeling torn between the two cultures.

Around that time, he had a dream, which he related to Spiegelman in a training analysis session. In the dream, he picked up a Hungarian coin, and was surprised to find that it was embossed with the image of a Xian, an immortal being from Chinese religious lore, who has achieved divinity through devotion to Taoist practices and teachings. At first, Kawai could not understand what this dream meant, but through talking to his analyst, he identified the association of Hungary as being a Western country affected significantly by Eastern culture. Upon hearing this, Spiegelman suggested that the dream meant that Kawai would gain something important from a fusion of Eastern and Western cultures. Just as this dream suggested, Kawai went on to develop his thought by drawing on the knowledge and culture of both the East and the West.

After studying in the USA, on the recommendation of Klopfer and Spiegelman, Kawai spent three years training to be a Jungian analyst at the C. G. Jung Institut in Zurich. He graduated as the first Japanese to become a certified Jungian analyst. In 1965, he returned to Japan and began to energetically promote the concepts and techniques of analytical psychology. He was employed by

Kyoto University's Graduate School and Faculty of Education in 1972.

When Kawai returned to Japan, the country's clinical psychology was at an early stage in its development, and almost all counseling was based on Rogerian concepts and techniques. Although the predominant therapeutic technic in analytical psychology is dream analysis, Kawai was afraid that it would be seen as unscientific and suspicious if he introduced this technique first, and so he began his diffusion of analytical psychology in Japan by introducing "sandplay therapy." Sandplay therapy is a therapeutic technique in which the client places miniature models in a sand box, freely playing with the sand box and the miniatures as the therapist watches on.

Kawai thought that it would be more persuasive to show the visible therapeutic effects of sandplay therapy, rather than therapy pertaining to invisible stuff of dreams. He also intuitively thought that this technique, which does not rely on words and appeals directly to the senses, would be suitable for Japan, with its traditions of assigning souls even to inanimate objects, and cultural traditions like *nihon teien* (Japanese landscape gardens) and *kado* (the Japanese art of flower arrangement). Therefore, instead of translating the original German term *Sandspielttherapie* (sandplay therapy) directly, Kawai used the Japanese term *hakoniwa*, which refers to a traditional form of play in Japan involving the creation of a small landscape by arranging various miniatures in a small shallow box.



Prof. Kawai in the waiting room of analyst Dr. Joseph Marvin Spiegelman (1960)



Sandplay therapy, pioneered by Prof. Kawai, spread to become a well established psychotherapy practice throughout Japan (The Asahi Shimbun)

As he had anticipated, *hakoniwa* therapy was very well received, and sandplay therapy has now spread and become an established psychotherapy practice in Japan. This is evidenced by the fact that the Japan Association of Sandplay Therapy now has over 2000 members. The practice has continued to progress steadily, and the accumulated study results produced by Japanese sandplay therapy have garnered international praise. Honoring Japan's contribution to the development of sandplay therapy, Dora M. Kalf, who was the inventor of the technique, even suggested that *hakoniwa* be adopted as its international name.

With sandplay therapy, analytical psychology gained wide acceptance in Japan. Moreover, it can be said that Kawai was not just spreading analytical psychology, but also clinical psychology and psychotherapy. Until then, the common attitude in Japan was that mental troubles and worries were not to be spoken of, and external help should not be sought. It was considered normal for those who suffered from such problems to bear them by themselves, and it was therefore difficult for people to seek professional help. Through Kawai's activities, however, psychotherapy and its effectiveness became widely known. In making psychotherapy and counseling more accessible, he made a great contribution to Japanese society.

During this period, Kawai was also making

efforts to establish an education and licensing system for psychotherapists in Japan, including the establishment in 1980 of the Psychological Educational Counseling Center, which was affiliated with Kyoto University's Graduate School of Education. The center was the first domestic fee-charging counseling center in a Japanese academic institution, and it also doubled as a training facility for undergraduate students. Kawai also played a leading role in establishing the Foundation of the Japanese Certification Board for Clinical Psychologists in 1988, and the Japanese Society of Certified Clinical Psychologists in 1989.

By the time he retired from Kyoto University in 1992, Kawai had educated an impressive number of clinical psychologists, and his students have

spread throughout Japan and educated subsequent generations in turn. It is no exaggeration to say that he built the foundation for clinical psychology and psychotherapy in Japan.

Kawai's intention was not to simply introduce Western psychology to Japan, as he did by introducing techniques such as sandplay therapy. His personal experience gave him a keen understanding of the cultural and psychological differences between Westerners and Japanese, and he believed that western clinical psychology and psychotherapy, which were based on explicitly on verbal expressions, could not be effectively applied to Japanese people without modification. He therefore aimed to develop a form of psychology



Prof. Kawai delivers a lecture to commemorate his appointment as an adviser to the Picture Book and Children's Literature Research Center (1992)

and psychotherapy that did not necessarily rely on words, and was more applicable to Japanese people.

The key feature of his approach to psychotherapy is considered to be the therapist's role as "the stage for the drama," rather than "a player," and thereby offering a transformative "container" for clients. He sometimes expressed this in the paradoxical phrase, "trying as hard as possible to do nothing." This approach does not mean that the therapist does nothing, but rather waits, with confidence in the self-curing power of the client (or their psyche). It is based on the belief that if one can trust the client and do nothing, rather than nothing—or something detrimental—occurring, something meaningful will occur and a creative process should begin.

Kawai was, first and foremost, a practicing psychotherapist, but his enthusiasm and fascination with what occurs during psychotherapy led him to be very proactive in widely publicizing the fruits of his psychotherapy experiences. He wrote many books aimed at a general readership on various subjects, including educational problems, child-raising, children's literature, as well as clinical psychology. He was also active in communicating with scholars in other fields. He interacted with philosophers, mathematicians, brain scientists, scholars of Japanese literature, novel writers, and picture book writers, among others. He influenced a great many people—by either directly meeting with them, through teaching, or indirectly through his works. The broad scope of his activities, going far beyond the narrow academic field of clinical psychology, was acknowledged when he was appointed director of the International Research Center for Japanese Studies from 1995 to 2001. He also served three terms as chief of the Agency for Cultural Affairs from 2002 to 2007.

Among his varied output, his writing on Japanese culture, which draws extensively from his studies of Japanese myths and folk tales, is highly appreciated for its critical and creative viewpoints. A particularly valuable component of these works is his theory of "the center-empty structure" as the "deep structure" of Japan.



This theory describes the way in which various contradictory opposites, such as the masculine and feminine principles, function around an empty center while maintaining balance, and without being integrated into the center principle because of such "center-emptiness."

Kawai obtained this idea from his analysis of the structure of Japanese myth, which has several triads of gods, one of which does almost nothing and is little mentioned. The theory is not only applicable to Japanese culture, but can also be effectively applied to thinking about the human psychic structure in general. As far as we can tell, Kawai may have been attempting to express the core theory of psychotherapy through developing this center-empty structure theory.

Kawai spent his lifetime energetically exploring culture in general, questing for the human psyche. It can be said that he bridged various fields: between the West and Japan, between psychotherapy and society, between clinical psychology and other fields of science and the humanities. Inheriting Kawai's passion, the clinical psychology scholars of Kyoto University continue to study human psychology in order to develop and deepen the theory of psychotherapy.

Author : **Kotaro Umemura, PhD**

Research Fellow, Kokoro Research Center

WEB kokoro.kyoto-u.ac.jp/en/staff-en/2014/04/kotaro_umemura.html



International Academic Activities of Kokoro Researcher of Kyoto University

INTERNATIONAL ACADEMIC EXCHANGE

Culture and Clinical Psychology Perspectives for the KOKORO Well-Being Studies



On June 14, 2015, Kyoto University's Kokoro Research Center held an international workshop titled "Culture and Clinical Psychology Perspectives for the KOKORO Well-Being Studies" at the university's Inamori Center. Organized by Dr. Toshio Kawai and Dr. Yukiko Uchida, this closed international workshop focused mainly the Japanese sense of agency, and brought together the two fields of cultural psychology and clinical psychology for in-depth discussions among researchers from the United States and the Kokoro Research Center.

In the first part of the workshop, cultural psychologists shared the results of recent research that strongly underlines the importance of taking culture into consideration in clinical research. Dr. Yulia Chentsova-Dutton from Georgetown University, JSPS postdoctoral fellow Eunsoo Choi, and Dr. Andrew Ryder from Concordia University discussed the significant cultural differences in negative emotions such as depression. Dr. Yukiko Uchida from Kyoto University and Dr. Vinai Norassakunkit from Gonzaga University

examined how cultural change in Japan is affecting the Japanese sense of agency and adjustment by examining the rather neglected topic of *hikikomori* (social withdrawal).

The second part of the workshop consisted of presentations by clinical researchers from the Kokoro Research Center. Dr. Toshio Kawai examined a recent increase in autism spectrum disorder (ASD) in Japan, and suggested that a lack of sense of agency may be accountable for this phenomenon. Dr. Yasuhiro Tanaka gave insight into the unique characteristics of Japanese ASD patients by analyzing their drawings of landscapes, which are associated with a traditional Japanese way of relating to nature. Finally, Dr. Chihiro Hatanaka compared Rorschach and Room-Drawing tests across two different cohorts of Japanese college students (2003, 2013), providing evidence to support the assertion that today's Japanese youth have a relatively weak sense of agency.

In addition to the main presentations, graduate students and a visiting scholar also presented their



work in a “data blitz” session, which added diversity to the workshop. Discussions among presenters from cultural and clinical areas throughout the workshop were constructive, presenting opportunities for collaboration in promising new

research topics. The success of the event has led to the planning of another workshop for researchers from the Kokoro Research Center and the United States to be held in the near future.

Author: **Eunsoo Choi, PhD** JSPS postdoctoral fellow, Kokoro Research Center

WEB kokoro.kyoto-u.ac.jp/en/staff-en/2015/03/eunsoo_choi.html



HAPPINESS STUDIES

Kokoro Studies on Happiness

Report of the International Conference of GNH.

The 6th International Conference on Gross National Happiness (GNH) was successfully held in Paro (Bhutan) 4th-6th November 2015. H.M. the Fourth King of Bhutan Jigme Singye Wangchuck first advocated the concept of GNH, which is a basis of Bhutanese policy and culture, and appreciated by many countries. Since 2004, six conferences have been hosted in several countries in collaboration with the Centre for Bhutan Studies and GNH Research (CBS). During the 6th conference, more than 100 eminent scholars, officially invited by CBS, presented their papers



in front of an audience of 700. From the Kokoro Research Center (KRC), Dr. Seiji Kumagai (*Uehiro* Assoc. Prof.), Dr. Yukiko Uchida (Assoc. Prof.) and Dr. Shintaro Fukushima (Collaborative Research Associate; Assist. Prof. at Aoyama Gakuin Univ.), as invited speakers, gave oral presentations from the points of view of religious psychology, cultural psychology and social psychology. It was thus a good opportunity to introduce KRC's *kokoro* (mind) studies to international academism.



Group photo of Dr. Uchida (center), Dr. Kumagai (center), Dr. Fukushima (right), and young researchers with Bhutan's Prime Minister

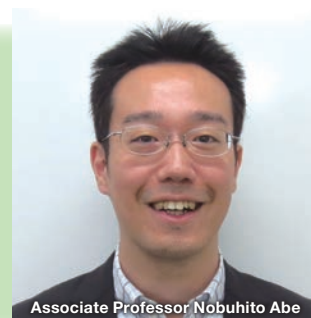
AWARDS & HONORS

Professor Shinobu Kitayama and Associate Professor Nobuhito Abe Honored by JPA

Professor Shinobu Kitayama of the University of Michigan, a Specially Appointed Professor at Kokoro Research Center at Kyoto University, received a JPA (International Contribution) Award for Distinguished Research. Professor Kitayama received his BA (1979) and MA (1981) from Kyoto University and his Ph.D. from the University of Michigan (1987). He was formerly an associate professor at Kyoto University (1993-2003). Professor



Professor Shinobu Kitayama



Associate Professor Nobuhito Abe

Kitayama is a pioneer in cultural psychology and cultural neuroscience. His research on cross-cultural differences in the self, emotion and social cognition has had an enormous impact in social and behavioral sciences. He has authored more than 110 peer-reviewed research articles and 50 book/chapters, and his work has been cited over 30,000 times. Most notably, his paper with Markus on culture and the self, published in *Psychological Review* in 1991, is one of the most frequently cited papers in the long history of this journal. He received a John Simon Guggenheim award in 2010, and a Scientific Impact Award from

the Society of Experimental Social Psychology in 2011. He was also inducted into the prestigious American Academy of Arts and Sciences in 2012.

Associate Professor Nobuhito Abe at Kokoro Research Center is this year's winner of the JPA Awards for International Contributions to Psychology Award for Distinguished Early and Middle Career Contributions. This award is given in recognition of excellence in research that contributed to international communities of research in psychology. Nobuhito Abe has made major contributions to the cognitive neuroscience of human honesty and dishonesty.

COMMUNITY SOCIAL WORK »

Learn, no matter how old you get and be active throughout your entire life! From Kyo-machiya

Getting back mutual aid and relationships of the good old days! Finding a coordinator for various consultations regarding town life!



1. State of activities

In October 2014, the “project for the development of a mutual aid and self-help improvement program for the prevention of isolation,” a life-learning retreat, was held for the citizens of Kyoto. This study aimed to prevent poor health and disorders and activities associated with residential isolation and improve education for mutual aid, neighbor support, and self-help. The learning program is provided in a three-step system (beginner, intermediate, and advanced course), with the beginner's course offered from 2014 to 2015. Each course is provided as a three-week program consisting of six lectures. One program includes approximately 25 participants. The beginner's course aims to enable participants to think independently regarding a better life for themselves and plan behavioral changes. The

program contains the following six points: rehabilitation according to physical pain (the orthopedic surgery field), nutrition, thinking from frail until end-of-life care (the geriatric medicine field), mindset to lead a healthy life (psychology), saving, asset management, and inheritance (finance and law), and necessities to receive care (welfare). Lectures are conducted by various institutions within and outside the university such as medical, psychology welfare, financial, and legal centers using inter-facility and multidisciplinary

cooperation. Following lectures, participants and lecturers can intermingle and obtain advice regarding daily life. In this project, interaction between lecturers and participants is considered important, and the creation of new interpersonal relationships through an interactive learning style is considered important. To date, three beginner's course programs have been completed by approximately 70 graduates. The mean age of graduates was >70 years of age.

2. Background, social significance, and ultimate goal

Japan is first in the world to enter into an unprecedented super-aged society, which has caused major changes to communities and the family unit. In the past, there was sufficient

interaction among multi-generational cohabitants and residents who lived near one another. The means to solve the issues of daily life concerning caregiving through mutual aid and self-help could be found within the community. However, presently we find elderly-elderly households, single households, and elderly parent and single child households with a smaller family unit. Such households have fallen into a financial crisis because of difficulty finding employment. Furthermore, they appear reclusive and characterized by loneliness, poverty, and self-enclosure. For example, these families are isolated without any relatives. Therefore, when issues arise in daily life with health, finances, or caregiving, the issue is locked away without resolving it, after which it worsens. The worst-case scenario, where an individual dies alone, is occurring more often. Briefly, mutual aid in local communities and self-help is limited. This results in a vicious circle with three aspects including the body, the mind, and social activity (social participation), which causes



Staffs

Project leader: **Sakiko Yoshikawa, Aya Seike**

Project member: **Tomoki Aoyama (Dr), Kenichiro Shide (Nutritionist), Hidenori Arai (Dr), Satoshi Tanaka (Bank clerk), Tatsuya Takagishi (Bank clerk), Shuji Koyama (Lawyer), Atsushi Kubo (Administrative post), Takaaki Gomi (Administrative post) and Eisuke Kumano (COE of Amita Holdings), Taiga Suzuki (Assistant) and so on.**

Learning program of a life-learning retreat

Lecture style : Classroom lecture and roundtable discussions

Domain	
Medical science	maintain strength through exercise that can be done every day
Medical science	be unaffected by disease through nutritional management that can be done everyday
Medical science	maintain good condition through the prevention of aging and sickness
Psychology	wisdom in living with a healthy heart
Saving	preparation for old age?
Welfare	what is caregiving?



Various discussions (one stop service consultation in the field of medical care, psychology, law, and welfare)

difficulty in living a happy life with good mental and physical health.

In Japan, in the past, there were strong ties in the local community, and mutual aid was strongly rooted in daily life. In such communities, individuals maintained their own health and daily life while helping others, and numerous people were happy to help. These were so-called town leaders. In the present project, under the concept of “remembering the good old days in Japan,” we will provide education on how to lead an autonomous life, how to be watchful and attentive to others, and how to be happy to help while learning regarding the three aspects involving the body, mind, and social life. If permitted, I also hope that the graduates will become counselors for local residents. Although such local resident counselors will receive an informal position, they will cooperate in the coordination of interpersonal relations and individual and social resources (informal and formal). They will also function as a human resource close to the hearts of local residents, providing advice with regard to daily life. Furthermore, I believe that it will also help improve the elderly individuals’ sense of self-efficacy and purpose in life, thereby creating new values for elderly individuals.

Sprawling Kokoro Research Network Around the Globe

CUL-PSY

Knowing Culture, Knowing the Mind

Psychological research on how culture and the mind work together.



Cultural-Kokoro Network (Culture-KoNet) represents an international collection of cultural psychologists and social scientists who are pursuing questions related to culture. Researchers at Culture-KoNet study how culture and the mind work together. Researchers (including graduate students) are engaged in empirical research in cultural psychology to investigate how cultural settings shape people's emotions, cognitions, motivations and relationships, and how these in turn shape the culture from which they emerged. In addition to conducting research, we also act as a liaison and as a research base for

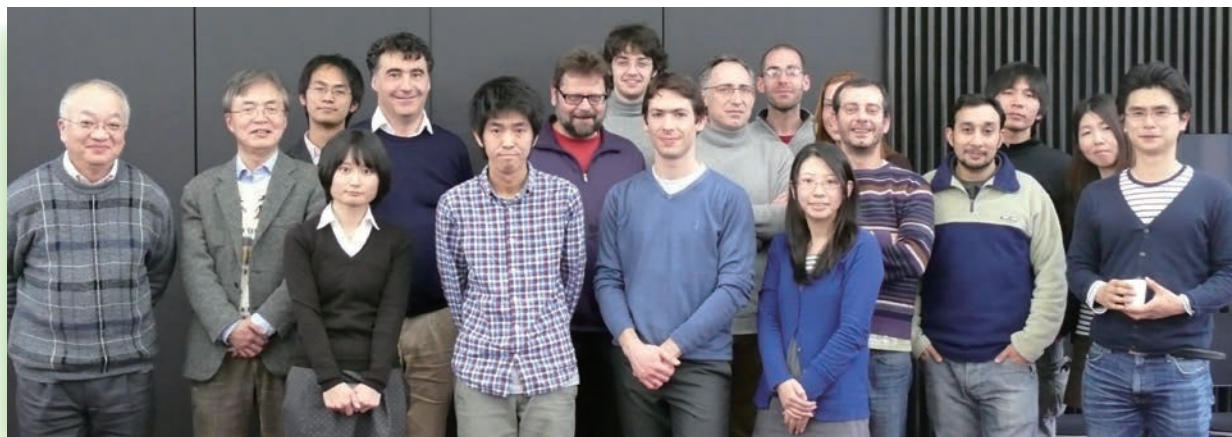
researchers from around the world to collaborate during both short and long-term visits in Kyoto. We work together on both basic research and applied problem-solving related to the interaction of culture and the mind.



WEB kokoro.kyoto-u.ac.jp/en/cultureko_net/index.html

Developing a New Model for Working Memory

Synaptic plasticity and the importance of balance between excitation and inhibition.



Working memory (WM) is the central function for adaptive and intelligent behavior. Electrophysiological evidence supports the notion that the WM involves a self-sustained activation of a neural population in a dedicated cortical network. Despite extensive investigations, the mechanisms by which WM networks stay in an active state are not yet fully understood. The goal of this joint research project was to present and validate a new theoretical framework to account for WM mechanisms. The working hypotheses were that: (1) temporal irregularity and diversity of spiking patterns of neuronal activity are significant features and (2) short-term synaptic plasticity plays a primary role for keeping the WM

network in an active state. We anticipate that the results of our research could significantly advance our knowledge of the computational underlying of WM function and the patterns of neuronal activity that support it. The research was undertaken through interdisciplinary collaboration between a group of experimentalists at Kyoto University (led by Prof. Shintaro Funahashi) and a group of theoreticians at Paris Descartes University (led by Prof. David Hansel). The research, which was undertaken in two periods from 2010-2012 and from 2013-2015, was supported by the Japan Society for the Promotion of Science (JSPS) and the French National Centre for Scientific Research (CNRS).

The Inamori Foundation Memorial Building



The Kokoro Research Center is located in the Inamori Foundation Memorial Building on the east side of the Kamo River. The Kyoto Prize Library, which is dedicated to providing information and exhibits about the Kyoto Prize and the Research Resource Archive Audio-Visual Station, which provides multimedia information on Kyoto University's education and research activities, are located on the building's first floor, and are open to the general public. The building was donated to Kyoto University by the Inamori Foundation in 2011.

Painter: **Kiyoko Yamaguchi, PhD**

Alumnae of Kyoto University kiyoko-yamaguchi.com/



Kyoto University's Organizations for Kokoro Research

COMPARATIVE COGNITIVE SCIENCE

Interdisciplinary Approach to Understanding the Human Mind

The WISH Project and the Unit at Kyoto University.



On December 12, 2010, Psychologists at Kyoto University formed the “Unit for Advanced Studies of the Human Mind” under the “Center for the Promotion of Interdisciplinary Education and Research”. The Unit serves as a national center for the promotion of the WISH Project (WISH stands for “Web for the Integrated Studies of the Human Mind”). The WISH Project was designated as a national project by the Science Council of Japan (SCJ) in March 2010. It is a collaborative undertaking between several distinguished Japanese research universities and institutions that aims to promote an interdisciplinary approach to understanding the human mind. It happened to play a key role in founding the WISH Project and the corresponding Unit at Kyoto University. At present, the Unit consists of sixty-six psychologists from eleven faculties of the university. Following the SCJ’s recommendation, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) financed the purchasing of equipment for the WISH Project’s research in two cutting-edge fields: comparative cognitive science (CCS) and cognitive neuroscience.

For the study of comparative cognitive science,

the equipment included four huge cages to house chimpanzees and bonobos. Two are located at the Primate Research Institute at Inuyama and two are at the Kumamoto Sanctuary. The cages have allowed us to study the minds of those evolutionary cousins. In total, Kyoto University keeps sixty-nine chimpanzees and six bonobos (the only bonobos to be held in Japan). The relationship between chimpanzees and bonobos is comparable to the relationship between *Homo sapiens* and *Homo neanderthalensis*. The study of these living hominids is essential to understanding the evolutionary basis of the human mind.

For the study of cognitive neuroscience, MEXT provided the WISH Project with three functional magnetic resonance imaging (fMRI) machines for brain imaging. The machines are located at Kyoto University, the University of Tokyo, and Hokkaido University. In this way, the Unit of Kyoto University has played a leading role in promoting the study of psychological sciences nationwide. In recognition of these collaborative efforts, Prof. Toshio Yamagishi of Hitotsubashi University and I were both honored with the Japanese government’s Person of Cultural Merit award in 2013.

Author : **Tetsuro Matsuzawa, PhD**

Professor, Primate Research Institute / The founding director and the Organizing Committee Member, Unit for Advanced Studies of the Human Mind

WEB www.kokoro-kyoto.org (In Japanese)



The Kokoro Research Center of Kyoto University

Studying the Human Mind and Heart from Cognitive Neuroscience to Himalayan Buddhism.

Cognitive and Affective Psychologist Prof. Dr. Sakiko Yoshikawa has served as Director of the Kokoro Research Center since its establishment in April 2007. The Center promotes scientific research on mind and consciousness, from the disciplines of psychology, neuroscience, cognitive science, cultural and humanistic studies.

The Center's Foundational Principles

1. **Interdisciplinary Research:** Coordinating holistic and multidisciplinary approaches, the Kokoro Research Center addresses the nature of consciousness and the ways that the human mind can conceive and confront the future.
2. **Wide-Ranging Research:** Kokoro Research Center spans three basic research areas: (1) Mind, Brain, and Body; (2) Emotion, Communication, and Interaction; (3) Consciousness, Values, and Life. In addition to specific research on each of these areas, it builds a framework for integrated research, to understand mind from multiple broad-ranging perspectives transcending traditional academic disciplinary boundaries.
3. **Solution-Oriented Research:** The Center aims at solutions of problems concerning mind and consciousness, such as of stress, depression, burnout, miscommunication, and ethical decision-making.
4. **International Research:** The Center promotes fruitful interactions between researchers and specialists both nationally and internationally, providing an open forum for the larger academic community.
5. **Community Outreach:** Collaborating with local organizations and industry, the research and education of the Center address the concerns and expectations of the local community, while disseminating an understanding of scientific knowledge about the mind, brain, and consciousness.
6. **Interdepartmental Collaboration:** The Center serves as a nucleus to strengthen interdepartmental cooperation and collaborative cross-campus research projects about mind and consciousness.

Research Areas

The Center features three major research areas:

1. **Mind, Brain, and Body:** Researchers in this area analyze brain functions in order to understand the neural mechanisms regulating attention and decision-making, growth of self-consciousness, display and control of emotion, and impediments to psychological development. We use our MRI (functional neuroimaging) facilities to study how humans make ethical judgments, and also research



developmental disorders using psychotherapeutic perspectives, to better understand relations of mind, brain, and body.

2. **Emotion, Communication, and Interaction:** Researchers in behavioral and cognitive sciences focus on nonverbal aspects of facial expression, gestures, and interpersonal behaviors, to better understand mental processes regulating the expression and control of higher-level social feelings such as altruism, morality, and cooperative interaction. This unit also supports multidisciplinary projects involving cultural psychology and clinical psychology, and fieldwork studying the happiness quotient of local communities in Japan and abroad.
3. **Consciousness, Values, and Life:** Researchers in this area analyze ethics and morality, world-views, life-and-death, self-and-other, primarily from cultural and historical perspectives, with an eye to the vision they may provide for contemporary society and the future of humankind. Specific research projects include studies of patients' and families' Sense of Coherence, coping styles, burnout, and of classroom influence on criminal and suicidal behaviors. In cooperation with the Royal Centre for Bhutan Studies, we also conduct the Bhutanese Buddhism Research Project, researching Tibetan/Bhutanese Buddhism and its socio-psychological effects.

The Center dedicates its work to serve a broader society. For this purpose, the Center aims to become a locus of academic creativity, fostering collaborative and cooperative research projects, building on international as well as national scholarly networks. To publicly disseminate the activities and results of its academic research, it conducts public symposia, workshops, seminars, and conferences.

WEB kokoro.kyoto-u.ac.jp/en/index.html

Cutting-Edge Kokoro Research

PSYCHIATRY Psychiatry in the Future

Intersection of the humanities and natural sciences.

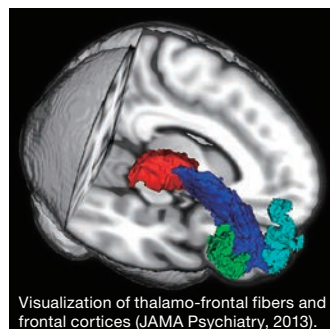
By applying neurobiological and psychosocial approaches flexibly, we aim to achieve a multi-faceted understanding of psychiatric disorders. Using high-resolution magnetic resonance imaging (MRI), the Neuroimaging Group is attempting to elucidate neural correlates of various neuropsychiatric conditions, including schizophrenia, depression, and gambling disorder. The Psychopathology Group focuses on eating disorders, dissociative disorders, and psychiatric issues of epilepsy. In collaboration with brain surgeons, the Neuropsychology Group is investigating neural correlates of cognitive and behavioral sequelae after brain damage. The Child and Adolescent Psychiatry Group is investigating relationships between phenotypes and neurocognitive functions in autism spectrum disorder.

There is very active collaboration among these groups, and as a result, our department is a leading clinical, research, and educational center of psychiatry.



Toshiya Murai, MD, PhD *Professor, Graduate School of Medicine*

www.med.kyoto-u.ac.jp/en/organization-staff/research/doctoral_course/r-061/
www.kuhp.kyoto-u.ac.jp/~psychiat/



Visualization of thalamo-frontal fibers and frontal cortices (JAMA Psychiatry, 2013).

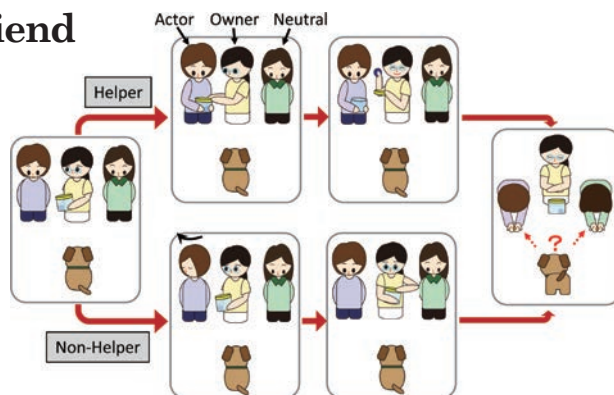


The psychiatric department building.

COMP-COG Your Dog is Your Real Friend

Third-party affective evaluation by dogs.

Dogs, known affectionately as “humans’ best friends,” carefully watch social signals from humans. Do they do so just for their own interest? Or do they monitor people even in situations irrelevant to their own benefit? We gave dogs a simple test in which they watched as their owners tried unsuccessfully to open a container. The owner requested help from an actor sitting nearby. In one situation, the actor helped the owner by supporting the container. In another situation, the actor refused to help by turning away. After these interactions, the actor and a neutral



bystander simultaneously offered treats to the dog. The results showed that the dogs’ choice of who to receive the treats from was random in the former condition. However, they avoided taking food from the actors who refused to help their owners in the latter condition. In other words, the dogs avoided the people who behaved negatively to their owners. This is the first report to indicate that dogs make affective social evaluations in situations irrelevant to their immediate benefit, and it provides important clues to improving relationships between humans and dogs.



◀ A book based on this research, *Gokai darake no “inu no kimochi”* (Tokyo: Zaikaitenboshinsha, 2015), was published last spring.

Kazuo Fujita, PhD

Professor, Graduate School of Letters
www.psy.bun.kyoto-u.ac.jp/fujita/



PSYCHOANAL Is That Absence Truly a “Loss”?

How does one experience the eternal absence of a significant other?

Today, the word *kizuna*, which means “bond” in Japanese, is increasingly commonly used. This may be due to an increase in the number of people who have experienced the loss of a significant other because of major earthquakes and other natural disasters, high suicide rates, or other reasons. This situation is defined objectively as “loss.” What I am presenting here, however, is the question of whether such an experience is perceived by the person concerned as the loss of a truly important object. After the eternal absence of a significant other, which is objectively regarded as a “loss” and perceived as a “true object loss,” one must undergo long and rigorous mental processes called “mourning work.” Working through this mourning work healthily ripens one’s mind.



However, failure in such work can awaken or trigger serious mental disorders, and a broad spectrum exists between absolute success and absolute failure. “The experience of absence,” which is my research field, demands detailed investigations based on the practice of psychoanalysis in clinical situations.

Kunihiro Matsuki, MD, PhD *Professor, Graduate School of Education*
www.jpas.jp (Japan Psychoanalytic Society)



Kunihiro Matsuki,
Theory of Absence
 (Sogensha, 2011)

COGNITIVE Why Are People Honest or Dishonest?

Brain mechanisms underlying honesty and dishonesty.



An example of my recent findings (modified from Abe & Greene, 2014, *J Neurosci*). Responses to rewards in nucleus accumbens were associated with individual differences in (dis) honesty.

is an important and longstanding question for anyone whose well-being depends on the trustworthiness of others or themselves. My experiment links honesty or dishonesty to the operations of familiar neurobiological systems: the mesolimbic reward pathway, and the prefrontal control system.

Nobuhito Abe, PhD *Associate Professor, Kokoro Research Center* nobuhitoabe.com/



EDUC-PSYCH Global Communication, Deep Learning, and Critical Thinking

Formulating ways to realistically and effectively cultivate essential skills in students.

In the past twenty years or so, there has been a lot of talk about the importance of cultivating 21st century skills in students. However, little actual research has been undertaken on how to effectively develop such skills. I am leading a new research project to investigate effective ways to cultivate particular 21st century skill sets that are vital to Japan and other countries. These skill sets pertain to competencies in communicating effectively in the increasingly globalized environments in which we now operate, learning more deeply with true understanding rather than just rote memorization, and being able to think critically in dealing with the overwhelming



amounts of information that is available to us through the Internet and other forms of media. Through this research, we intend to make a significant and visible Japanese contribution to current international efforts in 21st century skills education development.

Emmanuel Manalo, PhD *Professor, Graduate School of Education*
www.learning-strategies-project.org



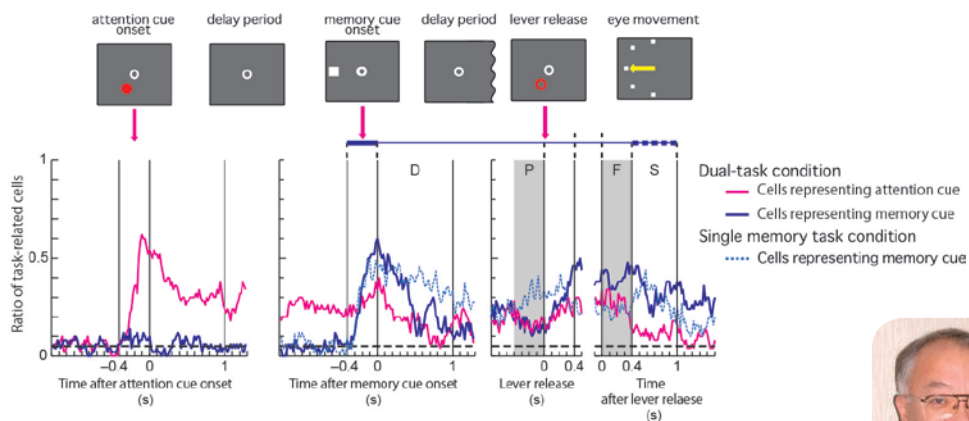
It is crucial that children today develop skills that will enable them to communicate across different cultures.

Neural Mechanism of Dual-Task Interference

Why can't we perform two cognitive tasks simultaneously?

Talking on a cell phone while driving a car often causes difficulties in performing either action. This effect is called dual-task interference. Although this effect is thought to be caused by cognitive capacity limitation and it is shown to be related by the prefrontal cortex, the neural mechanism of dual-task interference and neural correlates of capacity limitation were previously not known. To investigate this, Dr. Kei Watanabe and I analyzed prefrontal activities while monkeys performed an attention task and a memory task simultaneously. We found that prefrontal neurons decreased the monkey's ability to represent task-relevant information in proportion to the increased demand of one task. This result provides direct evidence that the simultaneous overloaded recruitment of the same neural population by two tasks causes the interference.

Temporal changes of the ratio of task-related cells along a dual-task trial



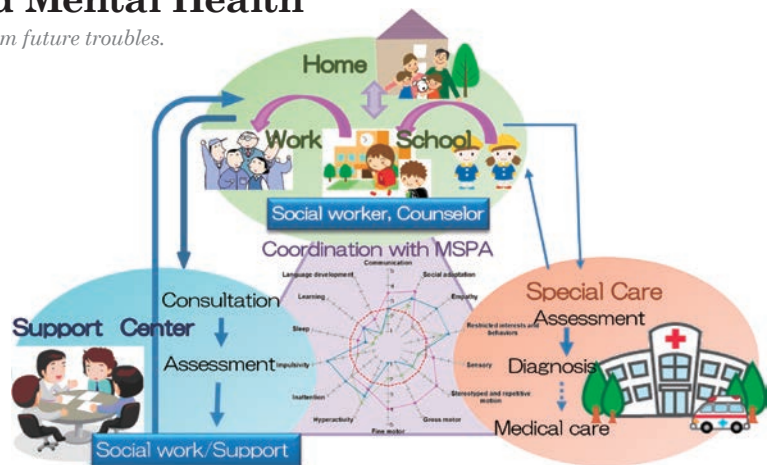
Shintaro Funahashi, PhD *Professor, Kokoro Research Center*
www.pfc.kokoro.kyoto-u.ac.jp/eng/index.html



Autistic Traits and Mental Health

Knowing yourself may prevent you from future troubles.

Mental health is related not only to one's current environment but also to character, development and environments from childhood. We study those relationships from various angles, and divide the factors into constant and variable parts. By coping with the variable parts after having recognized the constant parts, we aim to devise preventive measures against future troubles. Autistic traits can affect interpersonal relations even below the threshold of diagnosis. Therefore, we work on elucidation of the autism mechanism



and related disorders using electroencephalography (EEG,) near infrared spectroscopy (NIRS), functional magnetic resonance imaging (fMRI), and various cognitive and behavioral tests. Furthermore, we are conducting an international comparison of mental health, and building a social support system to help persons with developmental disorders throughout their life stages.

Yasuko Funabiki, MD, PhD *Associate Professor, Human and Environmental Studies*
www.h.kyoto-u.ac.jp/staff/134_funabiki_y_0_e.html

COG-SCI Constructive Developmental Science

Revealing the principles of human development from the fetal period.



Body movement measurements of an infant and a caregiver within a social context, detected by a motion capture system (Upper Figure); Human fetal yawning (24 weeks GA, Bottom Figure).

Compared to most other animals, humans are born in a relatively premature state. However, human newborns do possess an elaborate capacity to process information about both the external world and their own bodies. Our research team has extended our knowledge about infancy by showing that there is a clear continuity in human sensorimotor development from prenatal to postnatal life. For example, we investigated cerebral responses in full-term neonates and preterm infants at a term-equivalent age, and found that preterm infants follow different developmental trajectories from those born at full term. Further important progress is anticipated. In 2012, I took charge of leading a constructive developmental science research project, which is supported by a grant-in-aid from the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT). This five-year interdisciplinary research project integrates robotics, medicine, psychology, neuroscience, and *Tohjisha-kenkyu* (person-centered, peer-supported research). Our aim is to foster a new understanding of human development and its disorders, comprehensive diagnostic methodologies, and truly appropriate assistive technologies.

Masako Myowa-Yamakoshi, PhD

Professor, Graduate School of Education

www.educ.kyoto-u.ac.jp/myowa/en/index.html devsci.isi.imi.i.u-tokyo.ac.jp/about?lang=en



PHILOSOPHY Spiritual Study Course in Seven Volumes

Comprehensive research into the mind, body, and soul.

I have compiled and edited a “Spiritual Study Course,” which is composed of seven volumes. “Spiritual study” is a comprehensive form of academic research, in which the mind, body, and soul are considered as a single whole, and various methods are used to examine the purpose of life and how to live. The first volume is titled “Spiritual Care.” To give a specific example of my reasons for developing this volume, I thought that we should address how best to live through and overcome the post-Great Eastern Japan earthquake era and society.

In addition, over the past seventeen years since the Great Hanshin Earthquake of 1995, I believe there has been a progression from “mental care” to “spiritual care.” In Volume 2, “Spirituality, Medical Care and Health,” I touched on the concepts of “mental care” and “spiritual care” to examine caring for the body, mind, and spirit as a whole. Volume 3, “Spirituality and Peace,” deals with the issue of “social care,” or rather, “human relations and group care.” It looks at the relationships between spirituality and religious dialogue, global ethics, mutual help, and the public arena that transcend religious conflicts and clashes of civilizations.

In Volume 4, “Spirituality and Environment,” the life, position, and behavior of humankind in an ever changing global environment are identified, and the

sacredness of the environment and dimensions of transcendency are examined. The fifth volume, “Spirituality and Education,” questions the link between education, which refines the process of fulfilling self-discovery and building relationships with others, and spirituality. I hope these questions can offer some clues as to how the “future of the mind” should be.



Toji Kamata, PhD *Professor, Kokoro Research Center*

kokoro.kyoto-u.ac.jp/en/staff-en/2011/02/toji_kamata.html

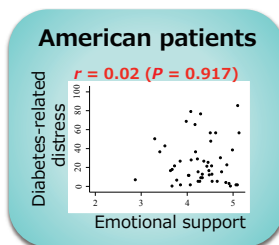
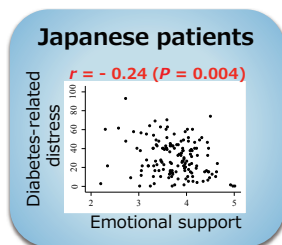


Prof. Kamata's series of books, A Course in Spiritual Studies (BNP, 2014–15).

Vol. 1: *Spiritual Care*
Vol. 2: *Spirituality and Health*
Vol. 3: *Spirituality and Peace*
Vol. 4: *Spirituality and the Environment*
Vol. 5: *Spirituality and Education*

MED Emotional Assurance: A Key to Care

The connection between emotional support and diabetes-related distress.



tended to report less diabetes-related distress in Japan, while those did not in the United States. Emotional assurance in an interdependent cultural context (as exemplified by East Asian cultures) may benefit patients more than emotional assurance in an independent cultural context (as exemplified by North American culture).

Kaori Ikeda, MD, PhD

Specially Appointed Assistant Professor, Graduate School of Medicine www.metab-kyoto-u.jp/



OMP-QJF-SCI Bringing Zoology back to the Zoo

The zoo as a research and education tool.

The roles of modern zoos can be described in four keywords: conservation, research, education, and recreation. Kyoto City Zoo, the second oldest zoo in Japan, underwent a full renovation in October 2015. To take advantage of this renovation, I am promoting research and educational activities in the zoo. My research topic is cognitive abilities in zoo primates: chimpanzees, gorillas, gibbons, and mandrills. I used a computer-based method to allow them to demonstrate their intelligence. The research, conducted in the zoo, is open to all visitors. They have the opportunity to see the animals engage in the cognitive tasks, and witness their intelligence. The zoo also has potential as an educational tool, particularly for junior and high school students. We have developed several scientific programs to pique their interest.



Masayuki Tanaka, PhD *Specially appointed professor, Wildlife Research Center / Director, Center for Research and Education of Wildlife, Kyoto City Zoo* www5.city.kyoto.jp/zool/



CL-SCI What Makes a Woman a Mother?

Two types of psychological process during maternity.

We conducted semi-structured interviews with females during pregnancy and childbirth about their feelings about biological maternity before pregnancy (FBMBP) and their practical experiences of biological maternity (PEBM). As a result, contrary to general belief, PEBM had no linear relation to FBMBP. The relation between PEBM and FBMBP was found to be dependent on the individual, but had two types as follows:

- 1) The women who had negative FBMBP realized the essential secret of life behind existence itself through their experiences of fetal movements or delivery pains, which generated awareness in each of them about becoming a mother as a supporter, not as an owner, of her child who had his/her own life.
- 2) The women who had positive FBMBP experienced fetal movements or delivery pains at a realistic and physical level, which generated awareness in each of them about becoming a mother who has a solid connection to her child.



Himeka Matsushita, PhD *Associate Professor, Graduate School of Education*

kyouindb.iimc.kyoto-u.ac.jp/e/cD7dK



MODERN CULTURE AND THE MIND

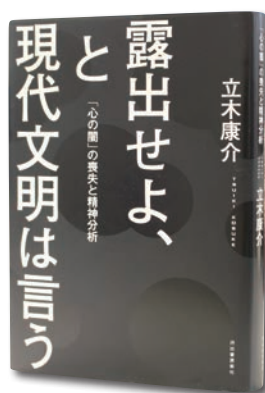
Ongoing transmutation of human mind and its socio-cultural effects.

Nowadays, people are driven to reveal their private lives and voluntarily exhibit their secrets. Our lives are filled with spectacles, and links to other people, without any physical contact, are highly sought after. When an idealization of youth, together with youth-targeted marketing, is tied up to the dominance of these kinds of human links, our sexuality will no longer be able to mature, but will be compelled to remain in a perpetual, uncertain vacillation. Indeed, the generalization of pleasure-seeking thinking, accompanied by a relative decline of the necessarily long and complicated process of desire satisfaction, seems to let us regress from sexual maturity and make our body and thoughts poorer and poorer. Deprived of its cultural “contents,” our body is now becoming just a physical body, which is also a privileged object of new management technology like biometric authentication. At the same time, the structure of “representation,” which, for a long time, has made all kinds of human “thoughts” possible, is today being demolished to make way for a tendency towards easily understandable presentations, a flood of repeated

stereotyped discourses, and a hegemony of statistical figures authorised in the name of “evidence.” On what transmutation of our “mind” do these contemporary phenomena depend? That is the subject of my ongoing research, recently crystallized in a publication : *“Exhibit Yourself,” Says Contemporary Civilization* (Tokyo: Kawadeshobo-shinsha, 2013).



Kosuke Tsuiki, PhD Associate Professor, Institute for Research in Humanities
www.zinbun.kyoto-u.ac.jp/e/zinbun/members/tsuiki.htm (In Japanese)

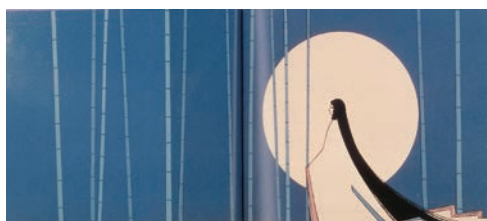


Kosuke Tsuiki,
“Exhibit Yourself,” Says Contemporary Civilization
 (Tokyo: Kawadeshobo-shinsha, 2013).

CLINICAL PSYCH The Moon as a Mirror of the Japanese Psyche

The significance of depth psychology in the modern world.

The Moon –As the mirror of Japanese psyche–



The Bamboo-Cutter's Tale
 Compiled by Sayumi Kawauchi
 Translated by Ralph F. McCarthy
 Kodansha International (2000)

People still have fantasies about the moon, even though we are now familiar with its uneven dried surface. In Japan, we have the oldest legend about the moon. In the story, *The Tale of the Bamboo-Cutter*, a princess who came from the moon returns from whence she came after shaking off a wedding proposal from the emperor. She might also have taken the Japanese unconscious psyche back there with her. Even now, when we look up at the moon, we see our inner psyche in the moon like a mirror. I am referring to the “separation” of the princess from this world, and the desire for “connection” with the people in this world that she left behind. I think this has some relation to the modern concept of psychic dissociation.

In the last thirty years, clinical psychology has become very popular in Japan, both in terms of the number of clinical

psychologists and the scope of its fields. Nowadays, clinical psychotherapists in Japan work in various areas. Actually, *society* needs psychotherapy. Through the old Japanese fairy tales, I am contemplating the significance of depth psychology, especially in the modern world.

Currently, we imagine ourselves from the outside, not just from the inside as previously. With Google Earth on the internet, we can now find the house in which we live, as seen from directly overhead. This is not necessarily all bad. From a meta-perspective, we can get an external view of ourselves. Those unable to see themselves from the outside would also be unable to recognize that the Earth is round.

However, if we let the meta viewpoint predominate, we risk turning ourselves into a passive object, namely a specimen being “seen” and “analyzed.” We are in danger of moving towards the loss of the psyche in our internal world, and the internal space that makes us human. I believe this is what happens in the modern psyche. Even in the present day, we are still searching for the princess who vanished into the moon.

Tomoko Kuwabara, PhD Professor, Graduate School of Education
kyouindb.iimc.kyoto-u.ac.jp/e/H5yD



CLIN PSY The Future of Psychotherapy Created by ASD

Psychotherapy is always revised by “illnesses of Zeitgeist.”

During the last century, psychotherapy has been revised by so-called “illnesses of *Zeitgeist*,” such as hysteria, borderline cases, and multiple personality disorder. In that sense, autism spectrum disorder (ASD) can be regarded as an illness of *Zeitgeist* today based on the loss of “psychological infrastructure.” Through my research, I try to formulate such a state of mind for their psychotherapy. Psychotherapy now has to give up its own unconditional major premises, which were formerly naturally presupposed: premises such as “personality,” “interiority,” and “subjectivity.” In my work, I have developed three “renunciations” as a means for a fundamental revision of psychotherapy: “renunciation of neutrality as our therapeutic attitude,” “renunciation of depth as our therapeutic fantasy,” and “renunciation of adaptation as our therapeutic goal.” “Psychotherapy does not cure ASD. ASD cures it.” Jungian psychotherapy should, or can, be open to the endless transformation of *Zeitgeist*. Of course, this is not a conclusion, but simply a starting point for my research.



Yasuhiro Tanaka, PhD Associate Professor, Graduate School of Education

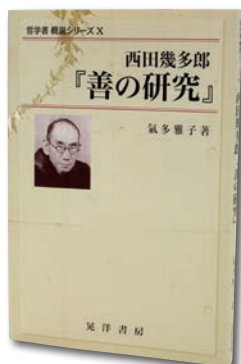
www.educ.kyoto-u.ac.jp/aboutus/kouza/sinririnsyougaku/



Psychological Diagnosis and Psychotherapy for Adult Patients with Autistic Spectrum Disorder.
Osaka: Sogensha, 2013

PHIL OF REL Thorough Consideration of Religious and Non-Religious Phenomena

The search for a new framework for understanding religions.



Masako Keta,
Kitaro Nishida's
“A Study of Good”
(Kyoto, Kôyô-shobô, 2011)

Religious studies seem to be entering a new stage of development on several fronts. Perhaps the main issue facing scholars is that the fundamental terms of the discipline are losing their potency. A principal cause of the problem with applying the received framework of ideas is, of course, the dynamic transformations taking place in the way religions function in contemporary societies. We might also point to the fact that theories and methodologies that were developed within the European academic traditions to explain these changes do not necessarily fit the situation of religion in non-European societies. Today the very foundation of our religious studies research is being challenged. I am currently engaged in a study of the Kyoto School of Philosophy, including such thinkers as Kitaro Nishida and Keiji Nishitani. Their philosophy includes a thorough consideration of religious and non-religious phenomena. I think that I may be able to find a new framework for understanding of religions there.



Masako Keta, PhD Professor, Graduate School of Letters

www.bun.kyoto-u.ac.jp/religion/rel-top_page/

DEV-PSY Can Psychology Detect Lies?

Psychological analyses of testimonies in criminal trials.

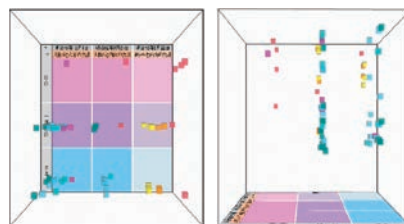
The Japanese judicial system has been criticized for relying too much on suspects' confessions. Under such circumstances, we are sometimes asked by lawyers to analyze written evidence psychologically. In such cases, we examine closely whether or not suspects and victims are telling the truth by considering chronological changes in their statements, the characteristics of human memory, and various other indicators of lies. In a recent case, an eight-year-old girl testified that she had been sexually victimized by her teacher. However, I analyzed her statements cautiously and concluded that

it was a false charge. Through a defense plea reflecting my analysis, the suspect was found not guilty in the trial. Through refining my method of analysis, I would like to contribute to the reduction of false accusations.



Tokushi Okura, PhD Associate Professor, Graduate School of Human and Environmental Studies

www.h.kyoto-u.ac.jp/staff/111_ookura_t_0_j.html



DEV-PSY Your Personality Matters?

Correlated changes in personality and physical health.

Studies of links between personality traits and physical health may be an essential component of a comprehensive understanding of human health processes and disease mechanisms. My research has found that increases in conscientious personality traits (i.e. the propensity to be self-controlled, task- and goal-directed, planning-oriented, rule-following, and responsible to others) were associated with improvements in physical health over time. Some of your personality traits partially matter to your own physical health, and by increasing your conscientiousness, you may become healthier with time. Your own mind and body are connected and work harmoniously. More interestingly, my recent findings showed that changes in your spouse's personality were linked to changes in your own physical health and vice versa. It is possible that our mind and body might cooperate with an important partner's mind and body.



Yusuke Takahashi, PhD *Associate Professor, Graduate School of Education*
www.educ.kyoto-u.ac.jp/cogpsy/member/takahashi.html



PRIMATOL Chimpanzees Meet Bonobos

In terms of social nature, humans share similarities to both of these species of primate.



Wild chimpanzees and bonobos do not meet in their natural habitats, as their habitats are separated by a large river. The Kumamoto Sanctuary houses both of these species, and they can encounter each other through a door or a window. When they first saw each other, the chimpanzees instantaneously became menacing, and started banging and kicking the wall of their room. The bonobos, on the other hand, remained calm, and sometimes made friendly gestures to the chimpanzees, such as extending their arm or showing their belly. This episode illustrates a characteristic difference in sociality between chimpanzees and bonobos. We humans have similarities to both of them, and scientific studies of the minds of chimpanzees and bonobos will help us to understand the evolutionary origins of human sociality.



Satoshi Hirata, PhD *Professor, Wildlife Research Center*
www.wrc.kyoto-u.ac.jp/kumasan/ja/members/satoshi-hirata.html

ANIM-PSY Ai-Project

Parallel efforts in both laboratory work and fieldwork on chimpanzees.

The human mind is as much a product of evolution as the human body. You can see the evolutionary basis of human cognition and behavior by comparing humans and chimpanzees, who share their most recent common ancestor approximately five to six million years ago. I have made parallel efforts in both laboratory work and fieldwork on chimpanzees. The laboratory work is known as the Ai-project which started in 1978 at the Primate Research Institute. My colleagues and I have been studying the chimpanzee mind. Please take a look at our website for details of our ongoing study: <http://langint.pri.kyoto-u.ac.jp/ai/>. A field study has been carried out in Bossou-Nimba, Guinea, West Africa, focusing on the use of stone tools by wild chimpanzees to crack open oil-palm nuts. Details of the field study can be found on the following website: <http://www.greencorridor.info/>



From the Editor Prof. Matuzawa also serves as president of the International Primatological Society, general director of the Japan Monkey Centre, editor-in-chief of *PRIMATES*, a member of the Editorial Board of *Philosophical Transactions of the Royal Society B*, and chairperson of the Scientific Program of International Congress of Psychology 2016.

Tetsuro Matuzawa, PhD *Professor of Primate Research Institute and Coordinator of the Leading graduate program for Primatology and Wildlife Science*
langint.pri.kyoto-u.ac.jp/langint/staff/tetsuro_matuzawa.html



COC-SCI The Vision Science of Invisible Things

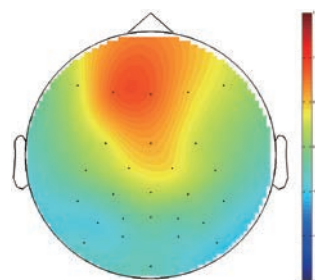
Automatic feature integration in visual working memory.

Contrary to our intuition that the sense of vision deals only with visible objects, the processing of invisible information, namely visual memory, is critical for visual cognition. Without visual working memory (VWM), we cannot maintain a sense of a continuous world. Given that VWM has limited capacity (only three or four objects), how does it make rich visual experiences possible? I have been studying the integration of visual features in VWM through cognitive neuroscience experiments,

and have found evidence for the automatic integration of non-spatial features (color and shape) in VWM, suggesting that VWM organizes such features into meaningful objects. Our research may be able to contribute to the development of visual communication technologies, such as human interfaces and data visualization.

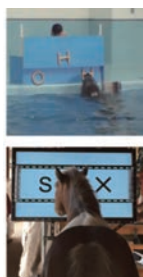
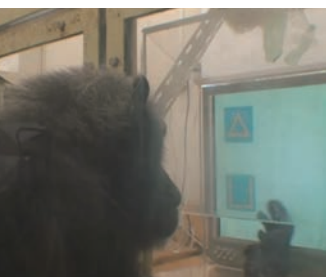


Jun Saiki, PhD *Professor, Graduate School of Human and Environmental Studies*
www.cv.jinkan.kyoto-u.ac.jp/



COCN-SCI How Have Our Minds Evolved?

Comparative approach toward understanding the evolution and diversity of the mind.



Comparative cognitive science is seeking to answer the question “how have our minds evolved?” For this purpose, it is necessary not only to investigate our minds themselves, but also the minds of other species. When we compare humans with chimpanzees, our closest evolutionary neighbor, we can infer phylogenetic constraints on the evolution of the human mind. On the other hand, when we make comparisons with animals evolutionarily farther from us, such as dolphins or horses, we can see both the convergence and diversity of the mind as a result of adaptation to evolutionary environments. At present, I am mainly interested in the visual cognition of chimpanzees, and trying to compare their visual world with that of

humans, dolphins, and horses. How do they see the world? There must be a critical difference in the reliance of visual modality between chimpanzees and dolphins, but basic perception may be shared among these species. To answer this question, we conduct computer-controlled perceptual and cognitive experiments with them. If they see the world in a similar manner, then, the next question arises: are there any differences in more complicated cognition based on vision, such as social cognition? Currently, we are studying both the basic properties of visual perception and cognition (such as attention, memory, and face perception) and higher cognitive functions (such as behavioral synchronization and social intelligence).

Masaki Tomonaga, PhD *Associate Professor, Primate Research Institute*
langint.pri.kyoto-u.ac.jp/langint/staff/masaki_tomonaga.html



MED-SCI The Meaning of Eating

Research on the psychopathology of eating disorders.

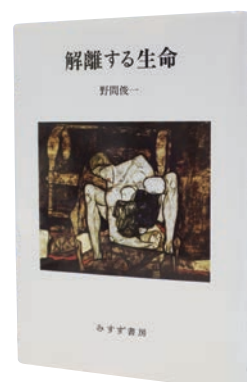
Although you might eat every day without any problems, one fifth of Japanese women in their early twenties have some eating troubles, specifically eating too little or too much.

It has been pointed out that people with eating-disorders can also have social and behavioral problems, such as compulsive buying disorders, self-injurious behaviors, substance abuse, and shop-lifting. This has led to social problems in recent years. My colleagues and I are studying the psychopathology of eating disorders from both psychological and neurobiological perspectives in order to clarify the relationship between eating behaviors and impulsivity. Hopefully, we will be able to better understand the meaning of eating in our life.



Shun'ichi Noma, MD, PhD

Senior Lecturer, Institution: Department of Psychiatry, Graduate School of Medicine
www.kuhp.kyoto-u.ac.jp/~psychiat/byouri.htm



Shun'ichi Noma, “*Kairisuru seimei* (Dissociating lives)” (Misuzu shobo, 2012)

PSYCHOL Human Memory and Brains

Investigating the brain mechanisms of human memories.

Memories for happy or sad events are kept in our mind for a longer time than memories for non-emotional events. This experience in our daily lives implies that human memories might be affected by some psychological factors such as emotion or motivation. Using functional magnetic resonance imaging (fMRI), we are trying to disentangle brain mechanisms associated with the mysterious link between memory and other psychological factors in humans. One of our recent findings was that long-term memories were enhanced by the motivation of getting monetary rewards or avoiding monetary punishments, and that interacting mechanisms between activations in the memory-related hippocampus and the reward-related regions were involved in the memory enhancement. We believe



that our research could lead to understanding human memory as a part of psychological processes from a neuroscientific perspective. This could then contribute to supporting elderly people or brain-damaged patients experiencing cognitive decline.

Takashi Tsukiura, PhD

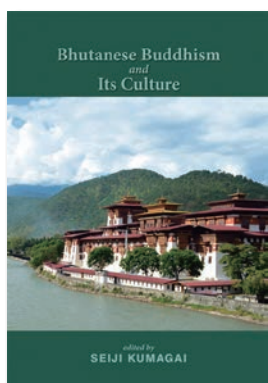
Associate Professor, Graduate School of Human and Environmental Studies

www.h.kyoto-u.ac.jp/staff/131_tsukiura_t_0_e.html



BUDDHOL The Establishment of Bhutanology

Bhutan Studies from Indo-Himalayan Perspectives.



S. Kumagai, *Bhutanese Buddhism and Its Culture* (Kathmandu: Vajra Publications, 2014)

In January 2012, I launched the Bhutanese Buddhism Research Project (BBRP) in collaboration with the Centre for Bhutan Studies (Bhutan) in order to clarify Bhutanese Buddhism, which is a basis of Bhutanese culture, society, and national policies such as Gross National Happiness (GNH). The department of Bhutanese Studies, established in Kyoto University's Kokoro Research Center in April 2012, conducts a wide range of research on Bhutanese history, culture, and philosophy from Indo-Himalayan perspectives in collaboration with international scholars. In addition, it regularly organizes international seminars and workshops where scholars of natural, social, and human science give talks, engage in discussions, and exchange academic information about Bhutan and the Himalayan region.

Seiji Kumagai, PhD

Uehiro Associate Professor, Kokoro Research Center
kokoro.kyoto-u.ac.jp/en/staff-en/2012/10/seiji_kumagai.html



CICASP Good Is Up?

A new approach to the study of language evolution.

"High" vs. "low" status, "top of the heap"—these and similar expressions are widely observed across cultures and languages. This has been described as a conceptual metaphor, which has been thought to be a language construction and thus unique to humans. A conceptual metaphor takes one concept and connects it to another concept in order to better understand that concept (e.g. the concept of space is used to better understand the concept of social rank). To better understand the evolutionary

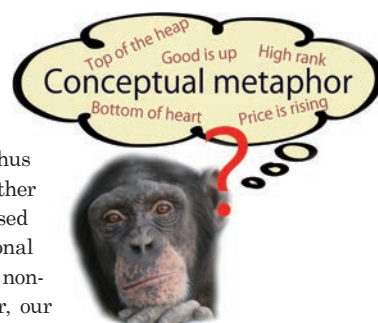
origins of this phenomenon, I am investigating whether or not non-human primates share similar mental representations. So far, our closest relatives, chimpanzees, have shown that they spontaneously map social rank and serial order onto the domain of space in a very similar way to humans.



Ikuma Adachi, PhD

Assistant Professor, Primate Research Institute

www.cicasp.pri.kyoto-u.ac.jp/node/99



INF-SCI Octopus-Inspired Robots

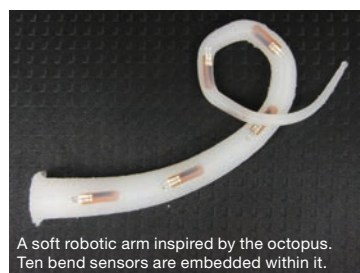
Learning control principles for soft robots.

An animal's behavioral control relies on a dynamic interaction between its brain, its body, and its environment. Some animals with soft bodies control themselves in a sophisticated manner by capitalizing on their body dynamics. The octopus is a prime example. From a conventional control perspective, the octopus's method of controlling movement and harnessing its nonlinear body dynamics is both outstanding and instructive. Accordingly, the octopus has been a rich source of ideas for designing a control strategy for soft robots. Inspired by the octopus, I



have demonstrated that soft robots' nonlinear body dynamics, once thought to be a drawback, can be positively exploited as a computational resource, and can be used to embed multiple control programs directly onto the soft materials. This approach not only suggests a novel control scheme for soft robots, but also opens up various engineering applications for the use of soft materials.

Kohei Nakajima, PhD *Assistant Professor, the Hakubi Center for Advanced Research / Graduate School of Informatics* www.kohei-nakajima.com/



A soft robotic arm inspired by the octopus. Ten bend sensors are embedded within it.

COGNITIVE-SCI Do We See the Same External World?

Perception and attention are tuned by our encountered environments.



Longer Line Search



Shorter Line Search

A visual search task involves searching for a target among non-targets. Here, the target is either the longer line (left) or the shorter line (right). Westerners demonstrate search asymmetry, where the search for the longer line among shorter lines is easier than vice versa. This is not evident in the Japanese population. However, this cultural difference in search asymmetry is reversed depending on stimulus set.

It is thought that cultural influences affect how people think and reason. However, studies often fail to replicate these findings in lower level cognitive processing of attention and perception. In this study, I used a traditional paradigm with meaningless geometric figures to investigate perception and attention (see Figure). Results captured robust cultural differences based on stimulus coding systems. Previous studies from our laboratory and others have proposed that this system is tuned by environmental factors encountered in everyday life. These results suggest that lower-level processing is not

universally decided but dependent on environmental factors. These results further reflect the need for current models of perception and attention to be revised and extended. Comparisons of perception and attention between different cultures can provide such important perspectives.

Yoshiyuki Ueda, PhD *Assistant Professor, Kokoro Research Center*
kokoro.kyoto-u.ac.jp/en/staff-en/2013/06/yoshiyuki_ueda_1.html



CLIN-PSYCH Are Today's Students Indecisive?

A comparative study of psychological tests spanning ten years.

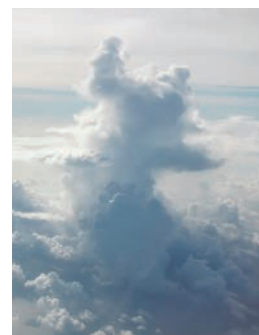
What do you think the cloud in the picture on the right looks like? You can choose your answer from: "an animal," "a person dancing," or "an explosion." As humans, we can project our inner images to outer ambiguous figures like clouds. The Rorschach test analyzes such psychological projection to illuminate our general attitude to the outer world. My research, which compared Rorschach data of students in 2003 and students in 2013 made it clear that recent university students exhibited indecisiveness. The students in 2013 frequently said, "this is a picture of A or B," rather than choosing one answer. Of course, the Rorschach test



originally did not anticipate such ambiguous answers. Do these results suggest that the young people in recent times have become indecisive?

The point to be noted is that the 2013 students did not hesitate to make such unclear answers. We can see here that Japanese society has become more interdependence-oriented.

Chihiro Hatanaka, PhD *Assistant Professor, Kokoro Research Center*
kokoro.kyoto-u.ac.jp/en/staff-en/2011/02/chihiro_hatanaka.html



DEV-SCI Baby Morals

Development of prosocial behavior in early infants.

What do you imagine about the way babies think? Are they just living in the here and now? Do they exist only to cry? No, not at all! I am studying the cognitive abilities of babies, especially social cognition. My recent studies concern prosocial behavior in early infancy. Ten-month-old babies showed sympathetic behavior to an animated agent which was aggressed by another animated agent. Human babies seem to have a kind of sense of morality from very early infancy. Other studies have shown that babies prefer fair agents, such as agents which help other agents. These findings support the view that humans are born with good morals.

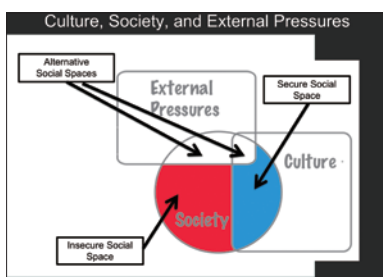


Shoji Itakura, PhD Professor, Graduate School of Letters www.bun.kyoto-u.ac.jp/~sitakura/

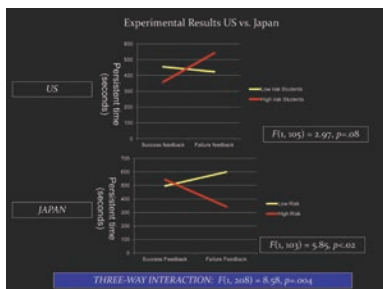


CULTURE & SOC When Society Changes Faster Than Culture

Investigating the Relationship Between Globalization and Culturally Deviant Behaviors.



Society is unable to support the pursuit of culturally sanctioned goals for everyone when society changes faster than culture



Culturally deviant motivational behaviors among young people at risk of becoming marginalized in Japan and the United States

I have been collaborating with Associate Professor Yukiko Uchida at the Kokoro Research Center in a series of studies to investigate the psychological consequences of youth marginalization in rapidly changing postindustrial societies like Japan and the United States. Specifically, we have found that increased competition due to globalization and constrained economic opportunities for young people are associated with an increasing number of young people in Japan and the United States who are rejecting their society's dominant values and consequently exhibiting culturally deviant behaviors. For example, in one study, typical Japanese have been found to be more motivated by failure than by success when engaging in challenging tasks, while this pattern was reversed for typical Americans. However, rejection of dominant cultural values within each society was associated with being *demotivated* to work on challenging tasks under the same conditions that were motivating for a typical person in that society. Furthermore, some of these people are rejecting their society's dominant values without replacing them with an alternative value system. Such people seem to be at risk of being marginalized in their own society and/or experience mental health challenges such as hikikomori or depression. These may be some of the negative psychological consequences of rapidly changing post-industrial societies in the age of globalization.

Vinai Norasakkunkit, PhD

Associate Professor, Psychology Department, Gonzaga University
web02.gonzaga.edu/faculty/norasakkunkit/



COMP COG Evolution of Music

Rhythmic entrainment and synchrony in chimpanzees and humans.

Humans actively use behavioral synchrony, such as dancing and singing, when they intend to make affiliative relationships. Such advanced synchronous movement even occurs unconsciously when we hear rhythmically complex music. A foundation for this tendency may be an evolutionary adaptation for group living, but the evolutionary origins of human synchronous activity are unclear.



I have been experimentally studying behavioral synchrony and entrainment to external rhythms in chimpanzees and humans using finger tapping tasks.

The results suggest that sensitivity and some response to external rhythms were already deeply rooted in the common ancestors of chimpanzees and humans, six to seven million years ago.

Yuko Hattori, PhD Program-Specific Assistant Professor, Wildlife Research Center / Primate Research Institute
www.cicasp.pri.kyoto-u.ac.jp/people/yuko-hattori



Addressing the Challenges of a Super-Aged Society

Action research incorporating clinical practice to improve medical care and support.



My current research comprises two main studies. The first is a project for mutual aid development and self-help improvement program for the prevention of isolation, targeting local community residents. The second is an action research project focused on alleviating the burden on family caregivers of persons with dementia, which is conducted in collaboration with Dr. Kenji Toba and Dr. Takashi Sakurai of the National Center for Geriatrics and Gerontology, as well as clinical staff and family caregivers. What motivated me to be a medical social worker (MSW) was my personal experience of caring for my grandparents, who suffered from Alzheimer's disease. As an MSW at the Kyoto University Hospital and Kansai Rousai Hospital (Acute Care Hospital) for

fifteen years, I have supported patients with various diseases and their families. However, I have never felt satisfied with my efforts, as I wonder how I can aid the many people who do not come for consultations. Despite the efforts of medical staff, those who need medical support do not always receive it. I decided, therefore, to endeavor to provide support by enabling individuals to strengthen their coping skills, and exercise their intrinsic abilities of problem-solving, self-determination, and information-gathering. It was that decision which led me to the aforementioned studies. The first project has social significance in two ways: (1) preventing poor health and disorders related to physical, psychological, and social factors associated with residential isolation, and (2) improving education with regard to mutual aid, neighbor support, and self-help. The second action research project aims to develop caregivers' abilities and basic knowledge to prevent them from feeling lost and confused amid the abundant information available on dementia treatment and care. These studies will improve the dementia care provided by both medical specialists and family caregivers, and improve the situation for all people involved with dementia. Since Japan is now becoming an unprecedented super-aged society, these studies have a tremendous social significance. Bearing this situation in mind provides me with daily motivation in my work, and in my collaborations with the various professionals and other parties involved.

Aya Seike, PhD *Associate Professor, Kokoro Research Center*

www.ncgg.go.jp/monowasure/news/20150512.html



Describing the Wonder of Human Development: A "Double Positive"

Construction of new view on human right to development.

Many mammals begin to stand and move soon after their birth. Human babies, however, start crawling at around eight months old. Human babies are born helpless, and develop very slowly. When we feed milk to chimpanzee babies, they rarely stare at us. Human infants, however, frequently stare into their mother's eyes, even when pausing to drink milk. This is an example of the way in which human infants try to relate to others and establish social relationships. Through such activities, while we are weak and in the slow process of development, each of us seeks to affirm ourselves and others in two ways. Through my activities, I objectify my individuality and its specific character. Then, when you enjoy the world that I have created by through my activities, I have satisfied my human desires, and have objectified our essential nature. In this way, I have served as a mediator between you and the whole of humanity. Therefore, I have become part of the completion of your own essential nature and a necessary part of yourself. Through the individual expression of my life, I would have directly co-created your life. Therefore, through my individual activity I directly confirm and realize my true nature, my human nature, as well as my communal and social nature. Our existence and activity can be viewed as many "mirrors" in which we see the reflection of our essential nature. Furthermore, this relationship is reciprocal: what occurs on my side must



also occur on yours. My activity is a free manifestation of life, and hence expresses a respect for life. Even if you are working at your desk alone at midnight, you are never truly alone. You, your hands, and your words are a concentrated expression of the past history and future possibility of humankind, and can open the door to our new world and become an important aid for all people.



Shinsuke Tanaka *Associate Professor, Institute for Liberal Arts and Sciences / Department of Human*

Coexistence, Graduate School of Human and Environmental Studies www.h.kyoto-u.ac.jp/staff/133_tanaka_s_0_e.html

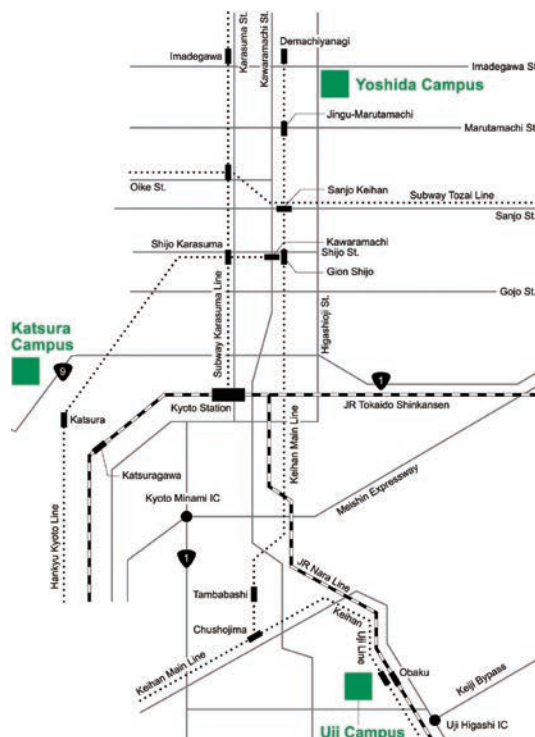
Kyoto University

Yoshida-honmachi, Sakyo-ku, Kyoto 606-8501 JAPAN

Tel: +81-75-753-7531

ku-info@mail2.adm.kyoto-u.ac.jp

ACCESS



CONTACT

Researchers: International Affairs Division

Tel: +81-75-753-2047 Fax: +81-75-753-2042

ipromo@mail2.adm.kyoto-u.ac.jp (Delegation visits)

Businesses: Office of Society-Academia Collaboration for Innovation

Tel: +81-75-753-5534 Fax: +81-75-753-5538

info@saci.kyoto-u.ac.jp

Students: International Education and Student Mobility Division

Tel: +81-75-753-2543 Fax: +81-75-753-2562

ryugak78@mail.adm.kyoto-u.ac.jp

EDITORIAL

Research Administration Office, Kyoto University

research_activities@mail2.adm.kyoto-u.ac.jp

This publication is available online at;
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