Becoming a Researcher

Gender Equality Promotion Center, Kyoto University

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2016 – 2020

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The Kyoto University Gender Equality Promotion Center was established in 2006 as the Kyoto University Center for Women Researchers. It assumed its current name in 2015. As part of its activities, the center has published the *Tachibana* newsletter for 15 years, with 95 issues having been produced as of March 2021. The newsletter includes a regular feature titled "Becoming a Researcher," in which female faculty members who are currently active at the university describe their career paths.

In the articles, the researchers write frankly about what prompted their decision to become a researcher, and what is interesting or challenging about their work. They describe turning points in their life, and how they have been able to sustain their career as a researcher. Not only undergraduate, graduate, and research students who wish to become researchers, but also female high school students and the general public can enjoy reading these interesting articles. So far, articles by 82 female faculty members have been published.

A brochure compiling 22 of the articles with English translations was issued in March 2010, followed by a second brochure compiling the 23rd to 54th articles. Both brochures were well received, and a new brochure compiling the 55th to 82nd articles has now been published. As the articles were written by female faculty members from different generations and different fields, they provide readers with insight into a broad cross-section of the current research environment at Kyoto University.

Kyoto University's five-year Gender Equality Action Plan, originally scheduled for 1995 to 2020, has now been extended for an additional year. With the cooperation of the university's faculties and departments, we will further enhance our support programs as we work towards the next action plan.
We ask for your continuing support.

Kyoko Inagaki
Director, Kyoto University Gender Equality Promotion Center.
Executive Vice-President for Gender Equality, International Affairs, Public Relations, and External Affairs (University Fund Administration and Alumni Affairs)

Contents

Miho Ishii
(Associate Professor, Institute for Research in Humanities)

Saying Goodbye to the Super-Positive Model

Given that the purpose of this booklet *Tachibana* is to spotlight and encourage women researchers, and that the series I am contributing is titled "I AM GOING TO BE A RESEARCHER!" one vaguely assumes that a positive, energetic piece about me leading a busy but rewarding life, finding fulfillment in my academic career, homemaking, and parenting, is expected—a picture of a lively, sparkling female academic successfully juggling career and family life: a "super-positive" model, if you like.

But, if the main readership of the booklet is young women researchers, wouldn't they find it rather suffocating to be presented with such an idealized example, much in the way we find slogans like "creating a Japan in which all women shine" somewhat patronizing and burdensome? Endless career demands, self-reviews and assessments, essay writing and presentations; housekeeping, parenting and caring for elderly relatives; our lives are already jam-packed with "to-do" items without more expectations weighing us down. I have decided, therefore, to at least keep this little essay free of endorsements of the "super-positive" model.

I work in cultural anthropology. What awaits women researchers can differ considerably depending on whether their areas of specialty are *rikei* (math and sciences) or *bunkei* (humanities and social sciences). Cultural anthropology is probably distinct from many other *bunkei* subjects in that it requires long periods of fieldwork. Most students experience a year or so of fieldwork as part of their doctoral programs. I did fieldwork in a Ghanaian agricultural community for a total of about 15 months in and around 2000. My research topics were indigenous religion, including rituals pertaining to spirits and magic, and the relationships between members of multi-ethnic societies. I was provided with lodging at the house of the local priest (*okomfo*), and conducted research on religious practices while exploring nearby farmlands and forests on foot to learn about the villagers' day-to-day lives.

Like many fellow doctoral students back then, I was 26 or so, the age when my

friends and acquaintances were increasingly getting married. Countless "Just Married" postcards arrived (redirected from Japan) at my address in Ghana, where I was spending day after day studying magic and rituals in a village without electricity or running water, at times enduring torrential rain, or suffering malaria fever. The almost surreal contrast between my situation and the beaming newlyweds pictured on the postcards definitely left me asking, not without a degree of self-pity, "What on earth am I doing?"

Still, I did manage to eventually turn in my doctoral thesis, and was accepted to study at the University of Amsterdam as a JSPS Postdoctoral Fellow. My only, yet major, problem was that the study-abroad period offered coincided exactly with my period of pregnancy and childbirth. To complicate matters further, my husband, also an anthropologist, was set to spend the same period studying in India. For lack of any other choice, I decided to go ahead and give birth in the Netherlands, in the meantime asking my husband to travel between the Netherlands and India. Although my Dutch sojourn turned out to be more "giving birth abroad" than "studying abroad," it did result in a number of deeply memorable encounters. Marleen, a postdoc at the University of Amsterdam, was like me a Ghana scholar. She used to bring her infant daughter to research meetings, where she and her Ghanaian husband took turns to keep the baby happy. Birgit was already a distinguished scholar at the relatively young age of 43. She had a 9-year-old son, and was pursuing her academic career while fighting a chronic illness. She told me excitedly about the big birthday party she threw for her son, then gave a small sigh and said, "It's tough work, though!" It felt to me as if I could share—possibly because I was going to be a mother, too—the feelings of another person, away from research work, and these are moments I still recall fondly to this day.

I gave birth to my eldest daughter in the Netherlands, and had my second daughter in Japan six years later. For the last decade or so, I have taken my daughters with me on my field trips. This may sound like I am leading the life of an ultra-positive woman coping perfectly with work and motherhood even when I am out in the field, which is not the case. My daughters are accompanying me to keep their often careless mother out of harm's way. At times kicking and struggling, at other times tottering, I go through my days as a researcher, perhaps until retirement age. At least for me, fieldwork is when I can reflect on myself—not my role but my simple self—seeking momentary refuge from the endless loop of the struggle to balance career and family life.

Yoshiko Takahashi
(Professor, Graduate School of Science)

Becoming a Researcher – Bread Roll? –

Immediately after earning my degree of Doctor of Science in 1988 (at Kyoto University), I left Japan. I stayed in France for three years, and another three years in the U.S., before finally returning to Japan six years later. Before I departed from Japan, women used to be told openly that if male and female job candidates had the same capabilities, men would be employed. I left the country, feeling "I'm fed up with this male-oriented society! I'll never return to Japan!" In fact, I did not return to Japan during the three years of my stay in France (although the main reason was simply that I had no money to do so.)

When I returned to Japan six years later, however, I found that the situation had changed completely (if only superficially). I heard many voices asserting that many more women should be employed and many more talented women should be discovered. Although such voices would have been unbelievable in the past, I certainly heard them here and there. However, I felt that the trend was something weird, and found the reason later. It was around that time that I began to frequently hear the phrase "role model" in katakana English. However, since I was not familiar with the phrase, I was not sure what it meant and I guessed that it was probably something like a mold (deduced from the term "model") used for baking a "bread roll (instead of "role")." It was also from those days when people in Japan began to use katakana English words very frequently.

My specialty is developmental biology. The purpose of this academic field is to understand how one fertilized egg develops into a brain, a heart, arms, and legs etc. Developmental biology is integrated biology, and those engaged in this field aim to clear up the mystery of body formation with consideration given to the functions of cells and internal organs even at DNA and gene levels. Of note, the renowned iPS cells are an example of success achieved based on developmental biology. Watching cells working diligently in a developing embryo (a fetus in the case of human), I

feel successive excitements.

Thanks to one of my teachers at high school, I learned to have a passion for biology. After enrolling at the Department of Biological Science, the Faculty of Science, Hiroshima University, located five minutes away from my home in those days, I found that the department differed from my expectations. As a member of a club of the university, "Wander Vogel", I often skipped classes and went to the mountains. Meanwhile, I encountered *Life in a Test Tube* and *Society of Cells*, both written by Dr. Tokindo Okada, who served as a professor at Kyoto University in those days. Captivated by the attractiveness of animal developmental biology, I began to study at Dr. Okada's laboratory.

I had never lived alone until then. So, I obtained the ultimate freedom in life in Kyoto. After beginning to study with Dr. Okada, I felt that I was suddenly connected to the world. I researched on cell differentiation using ES cells (based on which the research of iPS cells was conducted 20 years later), and enjoyed my days at graduate school for five years. In those days, however, it was very difficult even for men to find jobs, and it was almost hopeless for women to do so. It was that time when Dr. Nicole Le Douarin visited Kyoto from France to be awarded the 2nd Kyoto Prize. Since she was a friend of Dr. Okada, I had an opportunity to talk with her. While talking, she invited me to work as a postdoctoral fellow in her laboratory. Deeply moved by her invitation, I accepted the offer on the spot before thinking about it even for five seconds. Neither the Internet nor e-mail was available in those days. However, it is not that bad to make a choice in life by intuition, and to continue to do one's best until the end resolutely and earnestly.

Contrasting with that I was the only woman at my graduate school in Japan, about 70% of the members of Dr. Le Douarin's laboratory were women. In addition, I experienced Latin culture for the first time in my life, making me feel as if I were on a different planet. Of my three years in France, the first half was miserable due to difficulties in a new project, and I could have few chances to talk with Dr. Le Drouarin. However, in the second half, my research proceeded like a rocket jet, and it was well appreciated by her. I could finally enjoy discussions with her, which inspired me a lot. Accordingly, I was able to learn the true greatness of biology.

At the beginning of this essay, I referred to "something weird," but what was it? I guess I felt a dark shadow lurking behind the superficial call for many more women to be employed. Subsequently, that shadow has generated a new distortion in society, and what is worse, it is now becoming difficult to say something critical about the distortion. If the result is the STAP cell scandal, the weirdness that I felt

might have been a forecast of a distorted society that would eventuate 20 years later. However, there is no specific remedy that could instantly change the nature of Japan's male-oriented society, which has been maintained for more than 800 years in the history of our country. The important thing is, while accepting more or less the distortion in society, to maintain a critical mind against the distortion. At least, I do not want to call Dr. Le Douarin, who is like a mother to me, a "role model," which sounds very superficial in katakana English. She is a woman whom I will continue to admire for the rest of my life.

Yukiko Konishi
(Associate Professor, Graduate School of Science)

The Path to a Researcher and the Life-Work Balance

For eight years since I come to Kyoto University, I look forward to reading this column every issue. I am particularly interested in the following two points: (1) why and how the authors have come to pursue their careers as researchers, and (2) how they balance work with family commitments. Now that my turn has come to write this column, I would like to write about these points.

Let me start with (1). When I was a high school student, I was attracted to the theory of elementary particles. So I majored in physics in a university and after graduation, entered a graduate school. I was luckily assigned to a desired laboratory. However, this was when I confronted difficulties. There, students read textbooks on the field theory and the string theory in seminars during the first year of the master's program. Subsequently, they had to find research themes by themselves. This was hard for me. Though I could barely understand basics of the theories, it was almost impossible to read latest treatises. I spent those days filled with uneasy impatience while my classmates made steady progress. I sometimes overate due to stress and often woke up in the middle of the night because of anxiety. I would have been depressed if my sister did not live with me. Going out with her provided me a refuge from the reality. In the laboratory, a senior researcher kindly offered to join his research, so that I was able to complete my thesis and earn a degree.

Later, I often gave a thought to what caused me to stumble. Probably one reason lay in the way I studied. I studied only topics covered by the lectures when I was an undergraduate. I should have learned mathematics and started studying the field theories, in view of the future research. In addition, I never participated in student's voluntary seminars. So I did not have an experience in deepening my understanding through discussions with others. Another major reason was that my communication skills were low. If I had opened my heart and consulted my advisor and my classmates, I might have been able to find the research direction more easily.

By the way, around the time I obtained my degree—and this may hold true still now—, there was a severe job shortage in the field. It was difficult not only to

become a university faculty member, but also to gain a postdoctoral position in Japan. Therefore even excellent researchers went to overseas to get jobs. Under such circumstances, no wonder it was impossible for me, as someone who had been left behind by their peers, to find a postdoctoral position. Being in a tight corner, I asked Professor Kyoji Saito of the Research Institute for Mathematical Sciences (RIMS) whether I could join his laboratory as an intern (a position something like a research student). He and his laboratory members warmly accepted me. I cannot thank them enough. During the three years in RIMS, I was greatly stimulated by the seminars held every Saturday and able to complete a few research articles. After that, I became a JSPS postdoctoral fellow and then I was hired by Kyoto University in the Department of Mathematics in 2008.

Now I move on to (2). I grew up witnessing the estrangement between my parents. So I had believed, ever since I was a teenage girl, that marriage was a system in which women were disadvantaged. Of course, I knew intellectually that this claim is not true in general. But it was not until I met a married female researcher at RIMS that I really understand there exist happy married couples.

A few years later, I married one of my collaborators. As is often the case with marriages between researchers, my husband and I have been living separately since we got married. When I became pregnant four years ago, we discussed the matter and decided that our child will live with me in Kyoto, since it is difficult to find nursery schools in Tokyo, where my husband works. Each weekend, he comes back to Kyoto to do household chores and take care of our daughter. Though she misses him on weekdays, it cannot be helped.

I realized that after having a child, I do not have enough time for work. For instance, in the early evening, even if I could finish a job within another half an hour or so, I have to stop working and pick up my daughter at nursery school. I have been cutting corners with my housework as much as possible, by using time-saving household appliances and making use of a home delivery service for meal ingredients. Nevertheless, the things I need to do have more than doubled compared to when I was single. In addition, I cannot work at home, since my daughter is eager to play with me and never left me alone. I hope that I will be able to read papers side by side with her working on her homework when she grows up a little.

On rare occasions when I participate in seminars and conferences, I get depressed because I feel like Rip van Winkle. I feel as if I were back in the days when I was a bad graduate student. However, unlike before, now I do not feel unnecessarily anxious, probably because I enjoy spending time with my family.

Sayuri Kimoto
(Associate Professor, Graduate School of Management)

Reviewing My Life to Date

I have long been a reader of this section, which contains various messages from many female faculty members. When I was requested to contribute to the section, I first did not know what to write, since I am not completely sure yet about what to do as a researcher and educator. However, after reading past contributions once again, I was encouraged to find that there should be a wide variety of researchers, which made me decide to accept the offer.

I specialize in geomechanics, which is part of the field of civil engineering. In addition, two years ago, I began to give lectures both at the Graduate School of Engineering (Geomechanics, Department of Civil and Earth Resources Engineering) and the Graduate School of Management. Celebrating its 10th anniversary this year, the Graduate School of Management is operated as a business school characterized by the integration of the humanities and sciences, with lectures being provided by faculty staff of economics and engineering (mainly civil engineering). At this school, I am in charge of new classes associated with my field (e.g. energy problems and disaster prevention engineering), and I am now trying to expand to other fields. In this contribution, however, I would like to review my life as a researcher of the ground.

When I considered what I would do after high school, I was influenced by my father, who specialized in architecture, and also by the ongoing construction of the Akashi Kaikyo Bridge in those days near my hometown of Kobe. However, I finally decided to take an examination for the civil engineering course out of my intuition that civil engineering would be fun, and my desire to obtain tangible expertise for my future career. Also, I had the dream of studying at Kyoto University. Students in the civil engineering course begin to study at a laboratory in the fourth grade. Well before doing so, I had already decided to select a laboratory related to soil (the ground). I studied soil mechanics for the first time when I was a third-grade student, but the theory was so complex that I needed to study more to understand it.

Moreover, I was attracted by the fact that the subject requires not only understanding the theory but also acquiring experience. Accordingly, I selected "soil." My mentor professor in those days was Dr. Fusao Oka, who continued to provide me with so much guidance over a long period of time. Right after I became a fourth-grade student, he asked me in the laboratory why I had decided to study soil mechanics. Although I do not remember my answer, he said "Becoming a soil researcher is similar to becoming a soil physician. You need to learn about the characteristics of the soil at each site." His remarks made me feel that my selection was right. Even today, there are many things that I cannot understand about soil, which never makes me tired.

I have been with the laboratory for 18 years, including my days as a master's and doctoral course student and subsequently as a faculty staff member. I did not expect at all that I would spend such a long time at the laboratory. Most students in those days at the Graduate School of Engineering, as well as students today, began to work after completing their master's degree. When I considered my future career in the second year of my master's course, I tried to find employment at a private company where I could demonstrate my own expertise, but things did not go as I hoped. Around that time, Professor Oka advised me that studying to complete a doctorate would be another option. I feel that he suggested that path not because I was an excellent student, but because he just wanted to show that he would welcome me if I wanted to study at his laboratory. Anyway, I was excited with that option, and decided to go on to graduate school, following my heart.

After completing my doctoral course, I became a faculty staff member. There were times when my research did not procced so well and I worried whether I was cut out for being a researcher. I owe what I am today to my excellent encounters with Professor Oka and other splendid faculty staff and students, as well as my continuing to study without losing interest. Presently, I spend more time giving lectures and working on various projects both inside and outside the university. Furthermore, I am given a wide variety of opportunities regarding research, education, and social activities. Even now, I have many problems to consider, such as the future direction that I should take in my research, and what an ideal faculty staff member should be like. My problems will never end; however, I feel that it is important to absorb everything and continue. I would like to continue to work hard every day and reflect on myself without forgetting to appreciate everyone around me.

I have never feel dissatisfied with my position as a woman. On the contrary, I

feel that I have been provided with many opportunities. However, the number of women at conferences and academic meetings is still small. Although I have gotten used to the fact that I am in the minority, I still sometimes feel somewhat awkward. If many more women were engaged in my field, it follows that there would be many more opportunities for them to fully demonstrate their capabilities. With the recent widespread use of the coined word "*dobojo* (civil-engineering girls), " I hope that many more female researchers and engineers will work in this field.

Lina Koyama
(Associate Professor, Graduate School of Informatics)

The Day When We Will Not Be Called "Female" Researchers

When I was asked to contribute an article on the way of life of a female researcher to I'm Going to Be a Researcher!, I thought, "Oh, not again about being a female researcher!" I was requested to write about what had made me worry and how I had thought about various things during and after my graduate school days to pursue my career as a researcher. Although what I am going to write from now on might be slightly different from that request, I believe that what made me feel "Oh, not again" deeply concerns my career as a female researcher, and I thus would like to focus on that point.

First, let me write a little about myself. I spent my school days at the Faculty and Graduate School of Agriculture, Kyoto University. Afterwards, I became a postdoc at two organizations: the Graduate School of Natural Science & Technology of Kanazawa University and the Arid Land Research Center of Tottori University. Currently, I serve as an associate professor at the Biosphere Informatics Laboratory in the Department of Social Informatics, Graduate School of Informatics, Kyoto University. This laboratory, where research is conducted on a wide variety of living things, differs from many other laboratories in the Graduate School of Informatics in that data are collected mainly through fieldwork. Actually, I myself carry out field research on living things both at home and abroad. Since I was employed as an assistant at this laboratory in 2004, my status has changed to assistant professor and then to associate professor, although I have been at the same laboratory for as long as 12 years.

When I was a student or postdoc, was I strongly aware of myself as a "female" student or researcher? The answer is, "Not that much." I began to recognize myself as a "female" researcher, and to be asked to provide comments and contribute from the perspective of a "female" faculty member, only after I became a faculty member at the Graduate School of Informatics. In those days, I was the only woman in that position.

When I was a student, partly because there were many female students and faculty members around me, I seldom thought about the percentage of female students and faculty members. I know that currently, of more than 100 faculty members in total at my graduate school, there are only three women. The percentage of female students at the graduate school is 12.5 percent, approximately half the figure of Kyoto University as a whole. After I became a faculty member, I began to frequently think about the ratio of males to females.

Immediately after I became a faculty member, the graduate school appointed me, the only female faculty then, to serve as a contact person for harassment counseling. I was requested to attend the meetings that the graduate school organizes for female students in order to listen to their requests regarding improvement of their environment and to promote interaction among them, thereby aiming to increase the number of female students and faculty members. Some of the requests presented in such meetings have been acted upon, including the installation of shelves in restroom stalls and the provision of rest areas only for women. Moreover, there was a case where harassment was handled appropriately thanks to the cooperation of female students who had gotten to know each other at one of the meetings. Furthermore, the graduate school also holds meetings for female faculty and staff. Since the number of female faculty members is very small, it is natural that most attendees are female staff, but anyway, women can present their opinions regarding improvements in their environment. In any event, women are treated decently in a wide variety of aspects.

However, I did not expect that I would be frequently asked to contribute to publicity work, including delivering short addresses and giving presentations as a female faculty member and female researcher both inside and outside the graduate school and university. Some of those who make requests say things like, “We’re looking for people who will talk about XX. If possible, we’d like to have female speakers.” By selecting female speakers arbitrarily, they try to bring the ostensible ratio of male and female speakers closer to 1:1.

I’m not always asked to be involved in such publicity work, and the burden placed on me is not so considerable as to make me complain that I’m always forced to handle the same issue. However, I provide comments repeatedly from the perspective of a woman, making me ask myself: “Even if I accept this offer, will it really be of some use for present or future female researchers? If my acceptance serves just as a token indicating that women are at work, will it have the opposite effect to what is expected? Above all, is it really OK to set a goal of benefiting ‘female re-

searchers'?"

I feel that I can assert such things thanks to the efforts made by female researchers and staff in the past, when their number was much smaller than it is today, and when they were treated in an unexpected manner and experienced unexpected opposition. Added to these are efforts by those working in various organizations, such as the Kyoto University Gender Equality Promotion Center, in order to improve the situation. I also need to mention that I personally happen to have no serious problems now regarding how to strike the best balance between my career and marriage, childbirth, and parenting, which is a big problem in all fields including research.

Still, I believe that the ultimate goal should be to ensure that there will be no need to emphasize the gender of female researchers, and that female researchers will no longer be asked to provide comments from the perspective of women. I do not mean to make light of the necessity of improving the environment so that graduate students can conduct research regardless of gender. I also do not mean to say that it is unnecessary to disseminate proper messages toward people outside the university and academia, including those who would like to study at graduate school in the future. I would merely like to indicate that we need to remember what lies ahead of such things, namely the ultimate goal. My job is research and education, and my gender has nothing to do with what I do as a researcher and educator. I accept various requests made to me as a "woman," simply because I hope that my acceptance will be of some use in realizing the day when we will not be called "female" researchers.

Tomoko Kuwabara
(Professor, Graduate School of Education)

I've "Ended up Becoming" a Researcher!

I have long been a fan and reader of this section, *I'm Going to Be a Researcher!* According to many of the researchers who have contributed to the section so far, what they are doing now is not the result of their long-time efforts to realize their dreams, and they did not expect that they would have reached where they are now. I am impressed that they reviewed their lives and said that they owed what they were not to their own efforts but to support from others.

Similar to the other researchers, I also never expected that I would lead the life I am leading today. In addition, I also feel that the encounter with my respected professor (Prof. Hayao Kawai) made me what I am today.

Specializing in clinical psychology, I now engage in counseling and psychotherapy. When I was a high school student, however, I did not even know that there was such an academic discipline. In high school, I was in the science course, so I took a university entrance examination for the science course, but I failed it. My respected teacher in high school said to me, "You were born to become a Japanese language teacher." Actually, my grade in Japanese was extremely good. After all, after shifting my academic discipline to the humanities, I became a university student majoring in Japanese literature.

However, I still had no idea what I really wanted to do, or any interest in class at university. One day, I watched a documentary on autism on TV, and was truly impressed with a new world that I hadn't known of before. The next day, I went to a library to look up the word "autism." (More than 40 years ago, few people knew about the disorder.) This led me to encounter the phrase "clinical psychology."

I decided to go to a professor who I thought might specialize in clinical psychology, in order to receive some advice. I still remember very well that I tried to knock on the door of the professor's laboratory, but felt some hesitation and left there. However, there was a large mirror on a stair landing on my way from the laboratory. Looking at myself in the mirror, I decided to turn back and knocked on the

door without any hesitation.

The professor was a woman. After I told her that I wanted to pursue a career in the field of clinical psychology, she said, "You want to get married in the future, don't you? You also want to have a child, right? If so, you'd better not try this field." Although her reply made me hesitate a bit, I asked her for further advice. It was then that I learned that to study clinical psychology, I needed to go on to graduate school, and that in the case of Kyoto University, I needed to enroll in the Faculty of Education. Consequently, I took the entrance examination once again and began studying at the Faculty of Education to pursue my career in the field of clinical psychology.

Immediately after enrolling in the faculty, I belonged to an autism research club with my strong motivation, and began engaging in care and education for children with autism. However, things didn't work so well. In the TV program I watched, children began speaking 45 minutes later (it was a 45-minute program), but in my case, none of the children began speaking even one year later. Feeling devastated, I began thinking that I was not cut out for that field.

Although I attended a clinical psychology class taught by Prof. Hayao Kawai, I could not understand in those days how excellent his class was. As a student originally trained in a scientific discipline, I thought that I could obtain some clear logic to indicate a specific therapy for a specific symptom, but I couldn't do so. (Unlike medicine, the study of the human mind requires an approach that places more emphasis on "relationships"; accordingly, the study has a different logical system. In those days, I did not yet understand these things.)

Even after that, while continuing to engage in psychotherapy, the question of why I was doing it was always lingering inside me. In my private life, I expected I would get married, have and raise a child and become a mother, and regarded those as a matter of course. The reality was, however, quite different.

Education-analysis is a type of training in which a psychological counselor takes counseling to consider themselves. I received such training in Switzerland, and over many years after that, I gradually came to understand why I worked as a psychotherapist and why I led such a life. It was Prof. Hayao Kawai that continued to support and guide me during those years.

The other day, when I tidied up a closet of my parents' home, I found a collection of graduation writings by students at my elementary school. To the typical question of "What Do You Want to Be When You Grow Up?" my answer was "I want to be a woman researcher." The fact that I wrote "a woman researcher," rather than

simply “a researcher,” makes me feel the atmosphere of the olden days.

What I am now, though, is not the result of my strong determination to become a researcher. However hard you think about your future, things will not go as expected. I feel, though, that each person has their own path to take, and follows the path with support from many people. I was not just “going to be a researcher” but have “ended up becoming” a researcher!

Hanako Ikeda
(Associate Professor (Kyoto University Hospital))

Research and Encounters with People

I enrolled in the Faculty of Medicine with a firm determination to become a physician from the pure motive of helping those in need. While joining in a club camp held in summer when I was a second-year student, I got interested in research after listening to a sixth-year student talk about her fun experiments at a laboratory. In addition, Prof. Akira Kakizuka of the Graduate School of Biostudies, who was an associate professor in those days at the Department of Pharmacology (under Prof. Shuh Narumiya), talked to me about how fun research was in an easy way so that even a student like me could understand. He also offered me work as an assistant for graduate school students, and I decided to give it a try. In those days, I enjoyed DNA sequencing, plasmid construction, and cDNA screening, which I studied in my the class ofy formolecular biology class, and I was absorbed in such experiments. Afterward, I began to research the mechanism of the onset of a neurodegenerative disease. A little while after conducting an experiment using cultured cells, I found a very interesting phenomenon while observing the cells with a fluorescence microscope. Among the cells, there were dying cells in which fluorescent masses existed. I still remember that I reported it to Prof. Kakizuka in excitement. For about one year after that, I dedicated myself to the research on the phenomenon, until a paper on it was finally compiled. While deciding my future career course, there was a time when I was in two minds whether to pursue fundamental medicine (researcher) or clinical medicine (physician). However, I finally decided to pursue a career as a clinician (ophthalmologist) because of the following reasons: I did not have the capability to succeed as a great researcher who could help many patients; as a clinician, I might be able to help the patient in front of me at the time; and I wanted to communicate with people (patients).

Sharing joyous moments together with patients, I led a fulfilling and happy daily life for a few years after becoming an ophthalmologist. In the field of clinical medicine, it is often the case that you work as an intern outside your university hospital

for a few years, before returning to your graduate school to earn a degree. Accordingly, without thinking deeply about it, I went to Dr. Masayo Takahashi, who was working at Kyoto University in those days, to obtain some advice. She told me that the laboratory of the late Dr. Yoshiki Sasai at the Center for developmental biology (RIKEN), Kobe, needed someone who would engage in research involving differentiation inducing of retinae using ES cells. I thought that it might be too late to begin to work at a fundamental medicine laboratory and hesitated a little. After speaking with Dr. Sasai, however, I decided to go to RIKEN and try my best once again in the field of research for a few years. Of course, I suffered many difficulties, but once I began to conduct experiments, I began to enjoy my daily life, and again appreciated the joy of encountering phenomena that were known only to me in the world.

After completing my dissertation, I was busy working as an ophthalmologist at a hospital in Shiga Prefecture. It was around this time that I was asked by a professor of the ophthalmology department in those days to return to Kyoto University to restore the department's fundamental research, and also to be a role model for female physicians. I was again in two minds, but I decided to return to the university and contribute my services to the department. While conducting medical examinations as a physician, I always felt like doing something somehow against incurable eye diseases. Therefore, I decided to conduct research on neural protection. Honestly speaking, it was tough to secure time for research, while raising my child, examining patients, and training students. I could not generate a favorable result in the form of paper so soon, and the hard days continued. However, I was able to use a research assistant under the university's female researcher support system, and my excellent graduate students worked very hard. Thanks to these, a favorable result is finally being generated today. The other day, I received a Kyoto University Tachibana Award for Outstanding Women Researchers. I am truly pleased that I was recognized for having worked as hard as possible despite the limited time I had available.

As you see above, what has enabled me to research is that I was blessed with wonderful opportunities to encounter the wide variety of people who supported me. Of particular note are the senior student who got me interested in research; Prof. Kakizuka, who taught me about the basics of research and led me to conduct research on neural protection; Dr. Sasai and professors at the ophthalmology department who provided me with an opportunity to perform research at RIKEN; and the professor of the ophthalmology department in those days who offered me to work

again at Kyoto University. If you cherish your ties with people and put out your antenna to take every possible opportunity, it will help you not only in your research but also at the crossroads of your life. Another thing that I need to mention is that what has made it possible for me to continue till this day is the understanding and cooperation of many people, including my family and all my coworkers regardless of the length of their careers. With my sincere appreciation always in my mind, I would like to continue my research so that I can pass on the support that I have received so far to as many patients as possible.

Keiko Kanamitsu
(Professor, Graduate School of Letters)

Tada Kurue
– Just Get Enthusiastic

I chose this path as a first-year senior high school student: when I gazed at a bright moon illuminating the night sky in winter, the idea of studying classical Japanese literature at a faculty of letters happened to come into my mind. Looking back now, I am not sure why I suddenly came up with such an idea. However, it is certain that at that time I was caught by a sense of the transience of life for no particular reason—just as are many other people at such a young age (I guess)—and thought that, since life is uncertain even tomorrow, giving up doing what you like is a waste of life. If I had known that I would survive as long as thirty years after that, I might have chosen a different path.

It is also very unlikely that I had a completely clear future vision of what it would be like living as a "scholar," when deciding to enter graduate school. I decided to do so just because I wished to prolong the pleasure of studying at university, in which I was greatly interested. However, pleasure was not all I experienced during my two years in the master's program. Since I was gradually becoming aware of the difficulty of research, I suffered severely when writing my master's dissertation, though I was able to lightheartedly write my graduation thesis as I liked. I was unable to draw a straight connection between the materials I had collected. I almost gave up submitting my dissertation, and searched for literature by just following my own interests, without expecting that I would happen to discover a material which would provide the missing link for my dissertation as a whole—this might seem too good to be true, but it is a true story.

I thus managed to complete my master's dissertation. The first thought to hit me when I was admitted to the doctoral program was, "I'm allowed to do what I like for three years." Although I was not completely free from worry over my future, it seemed useless for me to be worried now, so I became determined to do what I liked without being worried for my three remaining years as a student. From the

day after I was admitted to the doctoral program, I thus confined myself in the library to devote myself to annotating literary works. I was in supreme bliss during that period, fervently reading classical works without being under the pressure of writing papers (though I knew I actually had to write some).

However, I was unable to continue having such overoptimistic thoughts for very long. Since a turn of fate made a university decide to employ me, I had to give up my student status. I certainly felt grateful for that, but a problem emerged: as it happened, my new employer required me to submit my doctoral dissertation to my graduate school by the following year. Because I completely relaxed, viewing writing a doctoral dissertation as a future tale, I was just thunderstruck by the requirement, before beginning to feel pressed. What I pulled out as a last resort then was the annotations I had enthusiastically made. Although they were just a kind of carefree personal memorandum, I read them again, and organized and developed them, ending up with a doctoral dissertation in a style that was sufficient.

That is how I became a scholar. Writing this way, it might seem that I just did what I liked, and sometimes overcame challenges as a result of inspiration, desperation and coincidence, without making a considerable effort or having any noteworthy worries. I believe, however, that I probably put in a great effort and had serious worries at that time. But I don't remember such things, though I don't know why. What I can say from my experience to those who aim to be a researcher now, or who are wavering between the path of a researcher and something else, is probably this: You may have many worries, but your worries will become such old memories someday that you will not be able to remember them. Therefore, I hope that you seriously face your immediate worries, being free from fear. At the same time, I hope that you fully enjoy what you can enthusiastically.

Nani shozo / kusunde / ichigo wa yume yo / tada kurue

(quoted from *Kanginshu*)

As expressed in this medieval ballad meaning, "Why do you look so sober? Life is a dream, so just get enthusiastic," it is no use to just frown due to your worries. I don't dare hope that everyone can share a sense of the transience of life expressed in the phrase, "*ichigo wa yume yo* (life is a dream)," but if you can "get enthusiastic to do what you like" ("*tada kuruu*"), you have an indispensable talent for being a researcher.

Shoko Sakai
(Associate Professor, Center for Ecological Research)

A School Hater Evolving into a Researcher

When I was a child, I did not like school, which might have some relation to the fact that I spent my first three years of elementary school at a very small overseas Japanese school. In junior high school, I did not like having restrictions imposed on my clothing and belongings, nor did I like having them inspected, and I also hated the idea that my daily schedule had been fixed by others. I found it painful being forced to attend boring classes, to take notes of what was written on the blackboard even though it was already in the textbook, and to behave like everyone else. I went on to attend a high school well known for its atmosphere of freedom in my prefecture. I skipped classes I did not want to attend as often as possible, so I was only able to barely graduate from high school. When I told my mother, "I'm not going to school today," she would often say something like, "Then why don't we go to a museum together?" and would accompany me out.

At Kyoto University, however, I was allowed to attend only the classes that I wanted to take; nobody said anything when I was absent, and nobody cared that I was different from everyone else. Every time I found an interesting professor, I visited his/her laboratory, accompanied him/her on field research, worked as his/her part-time research assistant, or attended his/her independent seminars. Unlike in my junior and senior high school days, I spent much of my time actually at the university.

I was interested in microbiology when enrolling in the Faculty of Science, but I selected ecology as my graduation research field. This was partly because I felt that microbiology was more competitive than macrobiology. Moreover, different researchers in macrobiology studied different organisms, despite belonging to the same laboratory, and I thought that this approach would suit me better. The theme on which I was working as a part-time research assistant became my graduation research theme, meaning that I could no longer receive part-time payment.

When I entered the university, I had not decided to become a researcher.

However, I found my campus life and research, as well as the researchers and graduate students I encountered at university, so interesting that I went on to graduate from school without hesitation. In my grad student days, I spent nearly two full years at a newly established field station in a tropical forest in Borneo. My supervisor visited me only once every two or three months, sometimes contacting me by fax. In the first year of my master's course my research did not progress at all, but I did not feel any impatience, probably thanks to my ignorance. I simply strolled around the rainforest every day, a time I now look back on as very luxurious.

After obtaining my degree, I stayed at the Smithsonian Tropical Research Institute in Panama for two years. Afterwards, I was selected as an overseas research fellow of the Japan Society for the Promotion of Science, and then worked at the University of Tsukuba, before returning to the Center for Ecological Research as an associate professor.

My late 30s was a turning point in terms of both my career and my private life. For my research, I moved to the Research Institute for Humanity and Nature (RIHN), and served as a sub-leader and then a leader of a project involving about 70 researchers. Although I had long been engaged in research in ecology as a form of fundamental biology, I led an interdisciplinary project about environmental problems, which moreover involved social scientists. In my private life, while working on this project, I got married and had two children. During my second maternity leave, I underwent a final project evaluation as the project leader, and I moved back to Kyoto University. At that time I experienced many difficulties, but I received generous support from many people around me.

After the turning point, I began considering deeply what I wanted to do in my limited future time, while I simply followed my interests in conducting my research. In the discipline of ecology, a wide variety of new technologies are continually being introduced, ranging from remote sensing to molecular biological techniques and data analysis techniques. I personally do not have any specific skills; I am neither smart nor good at field work. Although I have many concerns and ideas that are vague, without enough clarity to explain here, I still believe that step by step I am making progress.

In concluding, I would like to refer to what I often think about nowadays. Compared to the past, Japanese society today shows consideration toward balancing the male-female ratio among researchers and developing systems to assist women in childbirth and parenting roles. However, both in society at large and in the academic world, strong preconceptions of gender roles still exist: parenting

done by women and leadership roles taken by men. In addition, this belief is reinforced in practice every day. For example, in the superhero TV series that my two sons enjoy watching, the team leader is always male (though the number of women on a team is increasing slightly these days). There is a preconceived notion that women are not supposed to assert themselves, and I feel that this is the biggest factor behind Japan's low position in international gender gap rankings and the gap between wanting to become a scientist in the future among elementary school boys and girls. If researchers are expected to make new discoveries through skepticism of established theories and conventional wisdom, they should at least be a little freer from such biases than others. Spreading the message that such preconceptions are best eliminated is another important role that researchers and universities can play.

Kaoru Kitajima
(Professor, Graduate School of Agriculture)

What Do You Want to Be When You Grow up?

Earlier this year, I read a news piece on a survey that asked young boys about their future career aspirations, the results of which showed that the most popular was to be a "scholar/doctor," followed by a baseball or soccer player. This made me upset because the article did not mention anything about career aspirations of girls. As I prepared for this essay, I checked the source of the article, and found how the girls had responded in the same survey. For girls, "to operate an eatery" was the most popular choice, and to my dismay, becoming a "scholar/doctor" was not anywhere in the top ten.

Even when I was a 4th or 5th grader, I had a strong belief that within-gender variance in people's ability is greater than the mean difference between men and women. By then, I also knew that I wanted to be a scientist. In fact, the path that led me to be become a researcher began even earlier than that.

My parents met at their work place, where my father was a petrochemical engineer and my mother was an English typist with a high school diploma. That was during the economic boom of late 50's to 60', when their company was building a large-scale petrochemical "kobinat" (= factory complex) in the Seto Island Sea area. After they got married, my mother left the company to be a housewife. I remember a photograph of approximately forty couples from the same company who had just married in the same year as my parents. I grew up in company housing, mingling with their children. I was a shy child; when I wanted to join a group of kids playing outside, I would just hang around quietly until someone would invite me to join in.

I began to gain confidence, however, once I entered elementary school. I found that learning was fun and easy. Perhaps, the academic foundation had been laid by my parents (usually my mother, rather than my father who worked late at night) who read a lot of books to my brother and me.

When I was a fourth grader, our family moved to Ichihara City in Chiba Prefecture due to my father's relocation to a new factory complex being

constructed in the Keiyo district. At that time, Ichihara City was a rural area with a lot of rice paddies. On my way home from school, I remember picking and taking home peas left on the vine after harvesting. It was an environment remote to the stress of entrance exams for middle schools, etc., and I don't remember ever being told to study by my parents.

With the exception of PE, my grades were head-and-shoulder above those of others. As such, no adults were silly enough to constrain my academic trajectory just because I was a girl. During my classes I was so bored that I killed time doodling in the margins my notebooks. In math classes, I completed all of the exercises in the textbook for the entire academic year within the first rew months. So, with permission from my teacher, I studied additional math books during the class. The math teacher was also my homeroom teacher, a male teacher feared by any boy students for his disciplinary strictness. At my middle school graduation, he told me, "Don't just be an ordinary person." That encouraged me. On the other hand, a female chemistry teacher had said that a chemist would not be a good career choice for women. According to her, women should avoid exposures to dangerous chemicals in order not to compromise future child bearing. I did not agree, although I did not openly oppose. Even today I find it regrettable that any teacher would hold such a view. In any case, by that time I had already made up my mind to become a biologist.

My high school was an elite school, but it had a 1:1 ratio of boys and girls. I had lots of fun, enjoying extracurricular activities such as the tennis club (to challenge my lack of athletic ability) and the Japanese classic group discussing *The Manyōshū*. The only awkwardness duing my high school days was the challenge of getting along with fashion-conscious Tokyo girls.

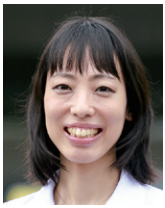
The year I entered the University of Tokyo was the first when the number of female freshmen exceeded two-hundred. I had to run around between classes to find women's toilets, because there were so few of them on campus those days. But, I thoroughly enjoyed my university life, as I realized that I could comfortablly express myself among male students.

I do not recall facing much gender discrimination in my university days. But, a good friend of mine, who had also atttended the same high school and wanted to be a mathematician, was told that "women cannot make good mathematicians," by professors during an entrance exam interivew for the graduate program. She was greatly offended, and changed her career path to be a medical doctor and moved to a different university. As a high school student, she was solving university-level

calculus as a hobby. To this day I wonder how she would have excelled as a mathematician.

I ended up studying in the US, out of the siple curiosity about how I might perceive things differently if I was to think and communicate in English. Then, I just followed a series of opportunities to be a researcher, and after 29 years in the US, I returned to Japan and began working at Kyoto University.

The key attributes of successful researchers are essentially the same for men and women. Some of my mottos are: “Being different from others is an advantage,” “Be assertive and question authorities,” and “See and explain the truth that others cannot.” By the way, a hobby of mine is to invent dessert recipes from whatever ingredients that happen to be at hand. The results often don’t look pretty, but they are always delicious.



Karin Kato
(Assistant Professor, Department of Anesthesia, Kyoto University Hospital)

At first, I wanted to become a doctor or a ballerina

Until my final years of junior high school, I wanted to become either a doctor or a ballerina. At that time, however, I was not very physically robust, and often absent from school for long periods. In my physical education classes, I wasn't able to participate in activities like gymnastics or long-distance running. I remember many trips to the hospital. My mother, who was employed as an administrative staff member at Kyoto University and also took care of the housework, told me how difficult it was for a woman with a family to also work outside the home. Hearing that, I thought it would be best to obtain a reliable qualification, and decided to become a doctor. Or so I thought, in a vague way, as a second grade elementary school student.

At that time, influenced by my twin sister, I began taking ballet lessons. I found that I also enjoyed that kind of physical pursuit. I went on to attend various different dance and exercise classes, including jazz dance and aerobics. I enjoyed dancing, and so naturally I began to envision a future as a ballerina. However, while I was still in junior high school, my teacher advised me during career counseling to choose a vocation which I could continue for a long time. I therefore decided to become a doctor, as that was a career with longevity.

Discovering my calling during clinical training

The male-to-female ratio in Kyoto University's Faculty of Medicine is the same as it was in the past: 80 percent male and 20 percent female. Although there are university-track schools for male students, such as Nada High School in Hyogo Prefecture and Todaiji Gakuen High School in Nara Prefecture, there are few schools at that kind of academic level for female students. I struggled, therefore, when deciding which high school's entrance examination I should take. In the end, I chose a public high school in Kyoto because the commuting time was short and would not interfere with my studies. While continuing my ballet lessons five days a week, I studied until my pen chafed the skin off my fingers.

During my time as a student at Kyoto University, I joined the ballroom dancing circle, performed in shows, and auditioned for a theater company. Although my studies in the Faculty of Medicine were very demanding, I pushed myself to try various things, as I thought it would be my last opportunity.

After passing the National Medical Practitioners Qualifying Examination (NMPQE) and obtaining a medical license, I had the opportunity to train as a junior resident. At that time, a new clinical training system had just been introduced that enabled us to experience several different departments during the training period. It also allowed us to select the medical institution at which we would like to train. I undertook my clinical training at Nishi Kobe Medical Center. Through my experience there, I learned how rewarding it was for me to work as an anesthesiologist, to the extent that I could talk about anesthesiology for hours!

An anesthesiologist is generally required to perform three functions: provide anesthesia in the operating room, oversee the respiration and circulation of seriously-ill patients in intensive care units, and provide pain management. During operations, an anesthesiologist will utilize various technologies, medicines, and their knowledge to perform tasks such as ventilating only one of a patent's two lungs, blocking certain nerves, providing general anesthesia, or regional anesthesia—for example to only the lower part of a patient's body. In the event of an emergency, the anesthesiologist becomes the key person in in the operating room, coordinating the medical team's efforts. An anesthesiologist never knows to which department they will be called or when, and so they must have an understanding of all areas—respiration, circulation, cranial nerves, medicines… I think of an anesthesiologist as a craftsperson—a specialist at saving people's lives.

The current situation regarding anesthesiologists and the way women work

Anesthesiologists are currently in chronically short supply. I think that the reasons for this are factors such as the low awareness of the field due to its short history, the growing need for anesthesiologists in diverse situations (for example providing sedation outside the operating room), and surgery becoming an increasingly necessary treatment in our aging society, in which one out of every three people will suffer from a malignant tumor. The three pillars of universities which have medical departments are education, research, and clinical practice. The topic of my research is the control of infectious diseases during the perioperative period. I devote as much time to my research as I can, although it is limited by the demands of clinical practice and being a mother. One of my concerns is promoting hand

hygiene among medical staff. I want to educate people about how the risk of infection during surgery can be dramatically reduced by simply ensuring that medical staff keep their hands thoroughly clean.

Compared to other medical fields, anesthesia has a relatively high ratio of female practitioners. The working hours of an anesthesiologist are clearly defined, and it is possible to have a nine-to-five schedule. Anesthesiologists work with only a small number of different drugs, which makes it easy to adjust to a new workplace. On the other hand, however, it is difficult for us to take long-term leave for maternity or childcare due to the strict system governing medical specialists in Japan. Even if we have a young child, we are sometimes required to serve as a duty doctor. Little by little, I hope to raise awareness of such issues, just as do with my efforts to promote hand hygiene.

Hisayo Yamane
(Associate Professor, Graduate School of Agriculture)

I decided to enroll in the Kyoto University's Faculty of Agriculture partly due to the influence of my surroundings and partly through a process of elimination.

"You're conducting research on fruit trees?!"

"You've become more talkative than you used to be!"

Whenever I attend a class reunion for my old school in Shimane Prefecture, my old classmates are frequently surprised by the person I have become. Although my grandfather did some agricultural work as a hobby, I was not raised in agricultural family. As a child, I was not particularly sociable. I liked plants, and devoted myself to my own interests. It seemed to me, therefore, that I had more of an aptitude for the study of science fields, rather than the humanities. However, I did not want to work in a field in which I would have people's lives in my hands, so when I thought about what I could do that would benefit others, I decided to enroll in Kyoto University's Faculty of Agriculture.

There was only one high school in the area in which I lived. All of the junior high school students who wanted to study at a university were told to enter the high school's science and mathematics course—regardless of the academic field they wished to pursue. Although there were some female students in my class, only two of us intended to enroll in an undergraduate science program at a university. At that time I did not have a particular university in mind. I decided to apply for Faculty of Agriculture at Kyoto University based on the advice of my high school teacher, who, during my second and third years, advised me to enroll in a high-ranking university, and also due to the influence of some particularly ambitious classmates. In retrospect, that teacher's advice may have laid the foundation for my life.

As a student at Kyoto University, I devoted myself to archery and research

I would like to say that, after enrolling at Kyoto University, I devoted myself

completely to my studies. In reality, however, I devoted myself to archery. I had never tried archery before, and viewed it as a pastime for university students. I was attracted to the archery club by its recruitment drive, which said that many new students take up archery, and that if I practice hard, I might be able to compete in the Japan National Intercollegiate Archery Championship. I had ups and downs in my pursuit of archery. To my surprise, however, as a first-year student, I came in second at an archery tournament for newly enrolled students in the Kansai area. Then, in my second year, I took part in the Japan National Intercollegiate Archery Championship. It was really in the spring of my fourth year, after I had retired from my club activities, that I began to devote myself to research.

Unlike today, the Faculty of Agriculture was heavily departmentalized, and laboratories were divided according to different types of produce. I was affiliated with the Division of Agriculture, which focused on research into crop production. The faculty members lectured on their specific area of expertise, such as rice, vegetables, or fruit trees. We cultivated crops to conduct experiments for our research. At that time, I greatly enjoyed everything I experienced. Cultivating fruit trees (pomology) was particularly appealing to me, as I had never had a chance to do that before. I had a strong feeling that I wanted to pursue that area.

I was unsure about becoming a researcher. What made my mind up was the research theme of my master's course, which was cutting-edge and interesting. I ran experiments over and over again every day, until late at night. Whenever I presented my research outcomes at academic meetings, the other participants were very interested. This made me feel that if I worked a little harder, I could generate even more interest in my research. Through this process, I became more and more absorbed in my research.

The merits and demerits of being a female researcher are fifty-fifty. We should follow our own path

Currently, in addition to research on the elucidation of dormancy regulation mechanism in fruit trees, which I have pursued for a decade, I am also conducting commercial research on how to grow more delicious blueberries and lychees. To get results from research into fruit trees, you first have to grow them correctly. In addition, if you fail to obtain any data from the trees when they bear fruit, you have to wait another year until they bear fruit again. In that sense, if research progress is determined by the number of academic papers produced, you are placed at a disadvantage as a researcher. Also, in my case, the demands of being a mother often limit

my time. I believe this is also experienced by female faculty members in other fields, too. Currently, I'm focusing on doing what I can. Female researchers who want to focus on their research might need to take certain measures, such as officially reducing the number of classes they teach. On the other hand, however, I think there are some grant programs specifically for female researchers. I think, therefore, that the merits and demerits for female researchers are split fifty-fifty, although that could be overly positive assessment.

Recently, the Japanese word "*nokejo*" (literally "agriculture girl") has been coined to refer to the increasing number of women specializing in agriculture. I'd like to encourage young female researchers to cultivate their own individuality based on their own values, and to follow their own path without being swayed by those around them.

Chika Obiya
(Associate Professor, Social Coexistence Department / Center for Southeast Asian Studies)

My interest in the Silk Road paved the way to becoming a researcher

During my childhood, I would have been very surprised to learn that I would become a researcher in the future. During my elementary school days, I was very active in sports and school club activities, including swimming, the marching band, and portball, and during junior high and high school, I was very keen on tennis. I had never thought about research as a future career, but I had been learning English since the lower grades of elementary school, and was more interested in foreign languages. In the future, I hoped to have a career that used foreign language skills—such as working as a translator.

As an impressionable high-schooler, I used to read books such as Inoue Yasushi's novels set in historical China, and I was fascinated by the Silk Road. At that time, NHK, Japan's national public broadcasting corporation, was running a documentary television series about the Silk Road. It was the first time that a foreign film crew had been granted entry to certain archeological sites in Dunhuang and other areas. I enrolled a university of foreign languages, and majored in Russian. Initially, I wanted to study Spanish, but for unavoidable reasons, I had to choose Russian. Considering my current field of specialization, that choice was an important crossroads in my life.

Among my fellow students in the Russian course, there was one student who enjoyed reading Russian literature and one who was interested in socialist ideology. I began studying Russian without any background knowledge, but I quickly came to love the beautiful sound of the language. After studying the novel *Takir* by the Russian author Andrei Platonov in one of my classes, I became interested in Soviet Central Asia, and wrote a thesis on the Basmachi Movement, an uprising against Soviet rule by the Muslim people of Central Asia that occurred after the Russian Revolution.

My career during the tumultuous era following the collapse of the Soviet Union

I wanted to learn more about the Central Asia, and so I enrolled in graduate school after spending one year as a research student. That period saw the genesis of new approaches to research, such as research into Central Asia from an Islamic point of view and research on modern history using materials written in Central Asian languages. I was inspired by these new approaches, and began pursuing research on modern history in Central Asia.

Witnessing the changes that followed the collapse of the Soviet Union also had a big influence on my career. There was greatly increased international interest in the former Soviet regions—not just Russia, and even though I was not an expert on those countries, I was able to find work writing about them for reference books, etc. After that, I became a researcher at the newly-established Embassy of Japan in the Republic of Uzbekistan. According to my job description, I was political and economic analyst, but the ambassador actually put me in charge of culture and public relations. Learning as I worked, I organized events introducing Japanese culture and other projects. The network I built up during this period has been of value to my current research.

After coming back from Uzbekistan, I worked for the Japan Center for Area Studies in the National Museum of Ethnology, where I was in charge of organizing research collaboration to address global issues. Based on that experience, I developed my current research focus, which is the issues faced by Uzbekistan during the post-independence nation building process, with reference to the history of socialist modernization in Central Asia after the Russian Revolution.

Live a full life inside and outside of the lab

My current interest is the modernization process in Uzbekistan and other Central Asian countries. In recent years, based around the central theme of the Islamic veil, my studies have explored the history of the women's liberation movement in Central Asia, the Islamic revival and women, and gender issues in the modern period. I was also involved in a project to develop the Turkistan Collection, a database of historically valuable materials compiled by Russians during the Russian Imperial Period. The best part of research is connecting the dots between fragments of information and facts, and revealing new meanings. Such moments provide me with excitement and a sense of fulfillment. I am also very happy when students in my classes express an interest in my research on Central Asia.

Balancing work and family life is always a difficult issue for female researchers. Although I wasn't particularly young, I had a baby around the time I started working on the Turkistan Collection database project. I decided to dedicate more time to child-rearing during my baby's early years, rather than traveling around for fieldwork. Thanks to the kind support of my colleagues, including others with experience of raising children, I managed to continue my research. Currently, as a member of the Center for Southeast Asian Studies' gender equality promotion committee, I am working to create an environment in which every faculty and staff member can balance their work and family life more easily, and implementing public relations activities to promote gender equality. The support systems and services for child-rearing improve every year. Although it is difficult to juggle research and a family, I hope that researchers can continue their work while taking care of their children. I always treasure the words of a female researcher who was my senior "Be sure to live a full life inside and outside of the lab."

Hiroko Matsuo
(Program-Specific Associate Professor, General Student Support Center)

An Unexpected Career

After graduating from Hokkaido University, I was employed by Recruit Co., Ltd., and was engaged in work relating to HR payroll system, HR development and performance assessment for 6 years. After leaving the company, I worked at Kyoto University Career Center as a professional staff for 7 years. At the last year at Kyoto, I decided to try to get an academic position. I got some interviews and passed the exam of Kochi University. It was a big turning point of my life. I worked at Kochi University for 2 years, while I got some research grants. April 2017, I came back to Kyoto University and I have been providing career education and guidance at the university's General Student Support Center. My career is not typical in academia. I am lucky to be where I am today.

Student Days: Research and Snowboarding

My degree discipline is behavioral science. I wanted to study cognitive psychology before a lab assignment guidance at 3rd grade, but I changed my mind and decided to belong to Otsu lab*. I got a great impression of Prof. Otsu's instruction and thought "It's my study. I decided. It sounds really exciting to use real data and statistical software." I started to study behaviormetrics. I engaged in a reanalysis of "*The Bell Curve*" for 4 years and got my master's degree of it. This research is a kind of social stratification study in sociology. In "*The Bell Curve*", the authors argued IQ is a most powerful determinant factor of every social success. I reanalyzed "*The Bell Curve*" with the same data (hundreds of thousand!!) and different methods. Finally, I concluded "Generally, IQ cannot predict social achievements. But for minority group, IQ is still a powerful determiner." I am grateful that I learned the basics of statistical analysis during my college life.

* Prof. Tatsuo Otsu is currently serving as the Deputy Manager of Testing and Research, Deputy Vice President of the National Center for University Entrance Examination.

In addition, I enjoyed winter sports, especially alpine snowboarding in Hokkaido. I had never tried skiing before college because I grew up in Hyogo,

where has no snow. But there are beautiful snow and amazing ski courses in Hokkaido. I got absorbed in racing and teaching snowboarding. I obtained a snowboard instructor's license and made many memories with students through snowboarding lessons. While my college days, I spent almost half of each year in ski resort areas. I feel that I had done everything of snowboarding and have not done it again since I left Hokkaido.

Connecting the Dots

After my graduation, while I was working at Recruit Co., Ltd., I wanted to be involved in publishing section, but, contrary to my hopes, I was assigned to the HR system consulting section. However, my experience of data processing at the university proved very useful in my job. I felt I could connect the dots looking backward. I was also able to apply my knowledge of statistics to other areas of my work, such as personality inventory development and HR consulting. That feeling of "connecting the dots" provided me with a lot satisfaction in my career.

There is the idea in "The Happenstance Learning Theory (HLT)," which is that we should engage in exploratory actions to get something good from unplanned events. My own career has developed without a plan, and I hope to continue enjoying the unexpected events in my life whenever they occur.

My Research and Future

My research focuses on the recruitment of new graduates and career development for university students. Japan has a unique custom whereby most companies recruit new graduates at same time of the year: as soon as the students graduate from university. Accordingly, the new graduates all begin job hunting at the same time, and they do so without knowing which positions will be assigned to them once they are hired. Also unique to Japan is the fact that recruitment activities are largely controlled by government, university and business federation. This hiring system persists more than 100 years. I aim to find out why the system is so deeply rooted in Japanese society, and why it is so robust. I also want to learn about the ways in which university students develop their careers after they have gone through the employment process. I hope that the results of my research will enable me to provide suggestions for the improvement of employment and recruitment procedures in Japan.

In recent years, social movements led by women have been gaining a great deal of influence internationally. I think about my duties and responsibilities through these social movements and their influence. I hope that I can contribute to the realization of a society in which each and every person enjoy working.

Rio Takeuchi
(Associate Professor, Institute for Liberal Arts and Sciences)

Books that have inspired my research.

My field of specialization is sociology, but it is difficult to summarize sociology concisely. Sociology is the study of a wide range of social issues, social phenomena, and the social life of human beings, and it takes a variety of approaches from different perspectives, including education, culture, history, and industry.

I have been engaged in two research topics. One is related to nationalism and "civilization." In my doctoral thesis, I analyzed how modern Japanese society has been seen through the eyes of the West. I focused on the craze for "*Bushido"*, which was typical in the boom of the book titled *Bushido: The Soul of Japan*, which was written by Inazo Nitobe. The English version of *Bushido: The Soul of Japan* was published in 1899, through which the concept of "*Bushido*" was developed as form of a kind of "gentlemanship" specific to Japan. I analyzed Nitobe's motivation for writing the book, his strategy, and the pitfalls or dangers inherent in that strategy. In the course of my research, Ryunosuke Akutagawa's novel, *The Handkerchief* (*Hankachi*), provided me with some insight. *The Handkerchief* includes a character who is a caricature of Nitobe. At the end of the story, the character is seized with an inexplicable anxiety. An analysis of the nature of the anxiety inferred by Akutagawa provided me with a hint about Nitobe.

Another of my research projects is an analysis of the "domestic novels" written by Kuni Sasaki during the Taisho period to the early Showa period. I am trying to interpret the images of children and families portrayed in his novels from the perspective of cultural sociology. I came across Sasaki's work when I was a first-grade elementary school student. My father was a researcher, and the bookshelves in my house were filled with all sorts of books, one of which was Sasaki's novel, *Hard Days of a Fellow Student (Kushin no Gakuyu*). I was a child when I read the book, but I still remember being engaged by its liberal atmosphere and sophisticated humor. As an adult, I studied Kuni Sasaki from the perspective of critical biography. I found that although his domestic novels are full of humor, he was a very serious person who was not prone to joking, and who had a pessimistic mindset and view of

human nature. His background is very complex, and I intend to explore it further in the future.

Times of indecision

I am not someone who decided to become a researcher in my youth. After enrolling in the Faculty of Letters, I met motivated and talented students, including one who was good at creating beautiful rhyming sentences in English, and one who could eloquently express the philosophy of Kitaro Nishida. I thought that these students were well suited to the Faculty of Letters, but not me. However, such friends introduced me to many excellent books, movies, and lots of good music, and I spent a great deal of time enjoying those things.

I often felt a lack of direction in the course of my research. However reading the book *Introduction to Japanese Romanticism (Nihon Romanha Hihan Josetsu)* by Bunzo Hashikawa was a turning point for me. Through that book, I learned that the things that concern us existentially are actually highly constrained by our generation and by society. I was also inspired by his ideas about the relationship between literary trends and society, and his observations on the dark side of human nature. Until that time, I really just enjoyed reading novels, but from that point onwards, I gradually became more interested in analytical thinking.

Becoming a researcher naturally requires considerable effort (and I am still in the process). However, such efforts do not always succeed, and therefore, I cannot recommend that path to everyone. I am currently raising my child and also struggling to continue my research within the time constraints that presents. Thanks to support of those around me, I can continue my research. The gratitude that I feel towards those people inspires me to do the best I can.

Yasuko Funabiki
(Professor, Graduate School of Human and Environmental Studies)

With the words of my mentors in my heart, I follow my own path.

"Even if you are ten years behind everyone else, you must follow your own path. Don't fall over each other trying to get ahead." Those words from my professor have motivated me throughout my life. When I was a university student, we had to decide which department we wanted to enter in the autumn of our sixth year. But at that time, I felt that I needed more experience, and did not decide upon a field of specialization. I wanted to value my family life as well as my studies. I was very lucky, therefore, that my professor understood and respected those feelings.

Since that time, I have been following my own path. In graduate school, I engaged in research on dementia, but in the course of my research, I became interested in the mechanisms of "learning," which is a process prior to "forgetting," and I went to the US to pursue that line of study. I started researching the cognitive system by teaching birds a song, and observing the process of how they forget it. Through that work I came to realize that "learning" is an extremely difficult part of the development process. During my stay in the US, I gave birth to children, and I also became interested in the differences between Japan and the US in terms of the environment for children. In the US, the social support system for parents and children was well-established, and public awareness and understanding regarding disabilities was also very high. That made me wonder how things compared in Japan. That inquiry was the starting point for my current research. The number of researchers studying dementia was increasing at that time, and so I decided to undertake research on social support for children after returning to Japan.

Every decision is a step towards "now."

Society's provision of support for children comprises many different aspects, such as support that can be provided by the state and support in the form of education. When I thought about all of the different aspects, I concluded that support for children's psychological wellbeing was the most essential, and that is why I decided to take a psychiatric approach. I think it is first necessary to understand the difficult

situations faced by each child. Parents, who have a child with a developmental disability, disease, or other problem, are always worried about their future. To relieve those worries, it is not enough to provide support to their children only while they are young. It is also necessary to consider the difficulties that they will face when they become adults. In order to improve the support that is currently available, I decided to begin by studying psychiatric medicine to provide adults with better mental and medical support.

At first I was affiliated with the geriatrics department. After returning to Japan, I transferred to the psychiatry department and focused on child psychiatry, and now I am engaged in research at the Graduate School of Human and Environmental Studies. I have often been asked, "Why do you keep changing direction?" But for me, these shifts were not changes in direction. Each choice I have made connects to the next. My research on dementia led to an interest in social support for children, which in turn led me to study psychiatric medicine.

The four research projects in which I am currently involved aim to create a support system for people with developmental disabilities and elucidate the brain mechanism of autism. In the course of my research, I have been examining the current system, in which medical, social, and educational support are provided separately. My aim is to develop a comprehensive integrated support system, deepen our understanding of autism and other problems, and prevent common issues that arise due to misunderstanding and miscommunication.

Research is not something that yields immediate and gratifying results; it is a long and sustained effort to discover the truth. I believe that is the true and valuable nature of research. In my field, it is difficult to arrive at clear-cut answers, as there are many different cases. However, I will continue to make my steady and persistent efforts in the hope that I can help even one person to have a better life.

Asli Colpan
(Professor, Graduate School of Management)

My love of studying gave me the chance to come to Japan

"Go to your room and study!" I think that many people heard this from their parents when they were growing up. In my case, it was the complete opposite. The thing I enjoyed most as a child was rushing straight home to do my homework. I was an unusual case in that my parents often had to tell me, "Don't study too late!" My favorite subjects were mathematics, chemistry, and physics, because I enjoyed finding the solutions to problems through logical thinking.

My love of studying stayed with me into adulthood, and when I entered university, I chose to enroll in the textile engineering faculty. One of the reasons for my choice was that it was a very popular field of study at that time, and—I am embarrassed to say—another reason was that someone I liked also wanted to enter the same faculty. Although the reasons behind my choice were rather frivolous, I applied myself very earnestly to my studies. As a result of my efforts, I was selected for an internship program at a textile machinery company in Japan.

The internship was my first experience abroad. During my time in Japan, I was struck by the way that the trains were always on time, and by the way that people dedicated themselves to doing something once they had made a commitment. As something of a perfectionist myself, I felt at home in Japanese society, which seemed to be composed of perfect systems. After my internship I wanted to keep working for the textile machinery company, but I was told that I would first need to learn the Japanese language. Undeterred, I decided to apply for scholarships to continue my studies, and vowed to return to Japan again in the future. I enrolled in a master's program at the University of Leeds, and after that in a doctoral program at Kyoto Institute of Technology.

Choosing to study business administration—looking beyond writing theses

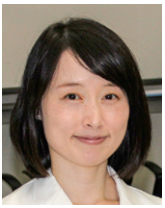
I first began studying business administration at the University of Leeds because I was dissatisfied with the engineering course there. Only a few students were enrolled in the course, and most of the content was material that I was already

familiar with. My yearning to study something new led me to business administration. The business administration program had a large number of students enrolled, and I enjoyed the competitive environment. I dedicated myself to business administration research, but the scholarships that I had been awarded at both the University of Leeds and Kyoto Institute of Technology were both in engineering fields. The University of Leeds understood my eagerness to pursue business administration, and allowed me to continue receiving the scholarship. However, Kyoto Institute of Technology did not have a graduate school of business administration, and so I held a research position at Kyoto University while I was enrolled in Kyoto Institute of Technology's Graduate School of Engineering.

I am currently engaged in theoretical and empirical research on the resilience of diversified business groups, with a focus on their strategy and governance. Referring to business history resources and employing econometric analyses, I have been studying the ways in which business groups have developed and why they have become so diversified—for example an automobile manufacturing company that expanded its business into the fields of finance and cosmetics. I am also engaged in understanding the performance outcomes of these organizations.

The field of business administration covers all aspects of corporate activity. Due to the nature of the field, research does not end with the writing of an academic paper. I think that the research process also entails making an actual impact in the business sector, for example through delivering presentations at companies, or by giving suggestions as an external director. As my research focuses on international business groups, I am always seeking to publish articles in recognized international journals. I was pleased when a book I published was acknowledged by the Harvard Business School, and in 2016, I was hosted there for a year as a visiting professor.

I am not sure whether it is a social issue or a result of women's way of thinking, but I think the number of female researchers in Japan is still small. I understand that it is very difficult to raise a child while working, as I am currently doing so myself. However, I believe that it is also of great importance for female researchers to pursue their own roles in higher education institutions.



Kanae Miyake
(Assistant Professor, Graduate School of Medicine)

Childhood experiences guided me towards a career as a doctor

When looking back on my life, “disease” has been always a formidable wall standing in my path. Throughout my childhood, I suffered from a severe illness that necessitated frequent hospital visits and often long-stays. My father, who was a medical researcher, passed at a young age due to a disease. Diseases always cause patients’ families suffering that they can do little about. I remember the fear and anxiety that my mother and family members felt while nursing me. Fortunately, thanks to medical advances, my health has dramatically improved. When I was a high school student, I met a doctor who provided me with guidance, and I was able at that time to receive advanced medical treatment. The treatment was non-invasive, and was completed in half a day. Without that treatment, I might have had to undergo surgery. That was the moment when I really became aware of the importance of medical progress. I know that medicine has limits, but I am confident that medicine has the power to transform despair into hope. In that belief, I decided to become a doctor, and aimed for Kyoto University—where my own doctor graduated. After graduating from a public high school in Gifu Prefecture, where I lived, I entered the Kyoto University’s Faculty of Medicine. My friends at the university were all very unique people, and they provided me with daily inspiration. Female students are a minority in the Faculty of Medicine, accounting for only about ten percent of 100 students. However, all of the students at the university respected each other and were very friendly, which created a good environment. I joined the university badminton club, and acquired the easy-going manner that typifies the Kyoto University.

My research topic is diagnostic imaging

It is essential to provide accurate diagnoses so that patients can benefit from the best medical treatment currently available. There are so many different diseases in the world, and even the same disease can have varying degrees and phenotypes depending on the individual. It is difficult, therefore, to provide accurate diagnoses quickly in clinical practice. That is why I decided to pursue the field of

diagnosis and engage in research on the constantly-advancing area of imaging diagnosis. In the field of medicine, diagnostic imaging rapidly developed over the past half-century, and it is widely used to diagnose different diseases. Radiologists play an important behind-the-scenes role in supporting the management of patients' health. Since my first year as a doctor, I have performed imaging diagnosis for both clinical and research purposes. It was not easy for me personally to pursue both of those purposes at the same time. However, with the support and encouragement of many different people, I am still continuing my work in both of those areas. As one of my research foci is breast position emission tomography. That research brought me the opportunity to study at Stanford University in the US, during which time I deepened many international friendships. In addition to my research activities at Stanford, I was profoundly impressed by the diverse lifestyles of my friends and colleagues, which were different from typical Japanese lifestyles. In the US, different individuals have different approaches to work and family. The culture is appreciative of diversity, and values individual differences as part of a person's identity. I was inspired by US culture, and I now try to spend more time with my family than I did before. My experience in the US also helped me to understand the importance of caring for myself and my family—regardless of how busy I am.

Hopes, dreams, and curiosity

After I returned to Japan, I had my second child, and since then, I have been very busy with clinical work, research, housework, and child-rearing. Honestly speaking, I am constantly exhausted by handling all. But, by holding strong to my convictions, and with the support of those around me, I manage to stay positive and move forward. Each day, I am acutely aware that my achievements owe so much to the understanding and support of my colleagues and family. As my children have now grown up, they sometimes express their appreciation of me. I cannot spend much time together with them, but I am truly grateful to see them growing day-by-day. There are increasing options for female students embarking on their careers. However, as Japanese society still has a limited degree of diversity, many such students may find it difficult to decide which direction take. When standing at such a crossroads, it may be best to follow your own convictions. According to the Maslow's hierarchy of needs, the greatest human need is "self-actualization." As you make efforts to become what you truly want to be, you will find that your motivation and energy increase. And if you manage to attain such self-fulfillment, a satisfied and happy life will be within your reach. I am inspired by the many people

around me who make ceaseless efforts realize their dreams. My own form of "self-actualization" is a desire to both maintain my family's health and continue my clinical work and research as a radiologist. I intend to continue my work, and hope to realize my aspirations in the field of medicine.

Yukako Oda
(Assistant Professor, Institute for Frontier Life and Medical Sciences)

I became a researcher because I like to investigate things and conduct experiments

Kyoto University's Faculty of Agriculture, where I spent my time as a student, had an easy going atmosphere, and I enjoyed doing a lot lab work with my friends there. I enjoy the process of investigating something in order to write a report, and so it struck me that I'd like to try my hand at real research. I passed the entrance examination for the university's Graduate School of Science, and after enrolling, Prof. Kazuhiro Nagata was assigned as my graduate study supervisor. I had a lot of new experiences, which provided me with a lot of inspiration. I also enjoyed conducting experiments and speaking with senior colleagues every day. The time came, however, when I was faced with a difficult choice: to continue with my research at the university, or seek employment in the private sector. The decision was difficult because I was worried about my future, but at the time I decided to seek employment in a private company, and I took up an internship. However, it then occurred to me that, ultimately, it is up to me to build the future that I want for myself, and I began to appreciate the appeal of a career in research at a university, which would give me the freedom to express my own ideas. It was that series of decisions, great and small, which led me to my current path.

The fruits of my efforts

During my time at the graduate school, I became involved in collaborative research at the laboratory of Prof. Kazutoshi Mori, and conducted experiments there. After completing my graduate studies, I joined his laboratory for one year as a postdoctoral fellow. During that time, I conducted research on endoplasmic reticulum (ER) stress response. I was fortunate to be involved in that field just as it was about to make major advances. At that time, I was conducting research under the supervision of Prof. Mikio Furuse, who was a member of the Faculty of Medicine of Kobe University. I began my research on tight junctions in cells, and that is still a focus of my research today. However, it was completely different to the field I researched in my graduate school days, and it was difficult for me to select an appropriate theme.

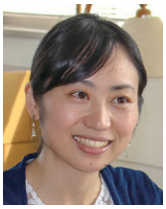
At that time, the claudin protein family was discovered, and knockout mice were produced one after another in that research area, and so I felt that the field was quite mature.

However, my motivation and efforts were not rewarded with significant results, and I sometimes blamed myself and felt dejected. I transferred to the laboratory of Prof. Fumiko Toyoshima, my current supervisor. Prof. Toyoshima welcomed me to her laboratory, and her cheerful character and the easygoing atmosphere in her lab inspired me to be more creative. When I thought about what kind of research I could do using pregnant mice that had been purchased by the lab, the first thing that came to my mind was the research on tight junctions in cells, which I had struggled with previously. I had always been deeply curious about the question of how tight junctions are formed: does a trigger factor that induces the formation of tight junctions exist in living organisms or not? Although I read many academic papers in relevant fields, the answer to that question was not clear.

Seeking an answer to that question, I conducted an experiment using a co-culture of cells that do not produce tight junctions and the amnion of pregnant mice. I trembled with surprise when I first saw the results indicating that secreted factors originating from the amnion of the pregnant mice induces tight junctions in the cultured cells. I thought that it must be some kind of error. I then went to great lengths to identify the causal factors, and found that the factors must be peptides. I then engaged in collaborative research with the laboratory of Prof. Yasushi Ishihama of the Graduate School of Pharmaceutical Sciences, and purified peptides in his laboratory. A cutting-edge mass analyzer at the laboratory enabled me to identify the factors. I would never have imagined that peptides induce cell-cell adhesion and tight junctions. I undertook that research while I was looking after my twin children, and it was thanks to the research support system at the Gender Equality Promotion Center that I could continue with my research.

Put 100% into the work at hand

I have never thought the day would come when, after talking about my research theme, people would be impressed and inspired. Peptides can potentially be used to cure inflammation and cancer, and so I am planning to launch a technology transfer project to manufacture peptide drugs. Balancing my research work with looking after my twins has been more difficult than I anticipated, but I am dedicated to my research, and endeavor to do my best in my current circumstances. I was encouraged recently when Prof. Nagata told me that I could continue my research on this theme for ten or twenty years. His encouragement inspires me to share my current outcomes with society and keep working to produce new results.



Sae Nakamura
(Associate Professor, Graduate School of Asian and African Area Studies)

When I was a student, I accepted all challenges

While I was a junior high school student, I lived in Indonesia because my father was stationed there for his job. At that time, the Suharto administration had just been overthrown, and I witnessed large-scale riots. Through these experiences in Indonesia, I became interested in social systems around the world, and the ways that people in different circumstances to myself thought and lived their lives. This may have been original impetus for me to pursue a career as a researcher in the future. When I was a student, I was curious about everything. As I wanted to play sports, play music, and be involved in volunteer activities, I devoted a lot of time to extracurricular activities, such as the female soccer club, the samba circle, and non-governmental organization (NGO) activities. I visited Sri Lanka as part of an NGO activity to support the reconstruction of tsunami-affected areas. Since then, I became fascinated with everything Sri Lankan. That interest later lead me to engage in research on Sri Lanka.

Different encounters have made me who I am today

I had several unforgettable encounters during my school days, including a biology teacher who taught me the wonders of plants, including photosynthesis of cucumbers, and a teacher who read the Bible from a gender-conscious perspective. Those two teachers' classes were very interesting, and they made me appreciate how wonderful it is to understand things on a deep level. I also gained inspiration from ethnographies, and felt that I would like to become a researcher and write such a book in the future. During the visit to Sri Lanka, which had a great effect on my life, I became interested in Sri Lankan people, food, landscape, and many other things. I felt that I wanted to visit Sri Lanka again, and that I wanted to be involved in activities to support the reconstruction of tsunami-affected areas, and so I went back there.

During my visit I met an old, married couple who approached me and spoke to me even though I was dressed rather scruffily. They kindly prepared a room for

me, with a shower and a toilet, and also provided me with meals every day. As they always took care of me as if they were my parents, I came to call them "Father" and "Mother." This was a very important encounter in my life, and I wanted to find out more about them. I began to do research on elderly people in Sri Lanka, and wrote an ethnography about homes for the elderly.

While raising my child, I sometimes wondered if I would actually be able to graduate. For a while I was unable to find a nursery school for my son, but I finally found one when he was two years old. Until then, I managed to write my doctoral theses during the times when my parents looked after him or at night while he was asleep. I told myself, "I will be happy if I can just publish a book, even if I can't be a researcher." However, I managed to continue my career as a researcher with the kind support of my professors at Kyoto University's Graduate School of Asian and African Area Studies. I am very glad that I had the determination to publish my books and continue my research. I am currently engaged in research on issues related to aging, disease, death, and care in Sri Lanka and other South Asian regions. I am conducting my research from the perspective of cultural anthropology, and examining social and cultural aspects. Looking at the region from both relative and comprehensive perspectives, and examining, from the perspective of area studies, how ecosystems, geographical characteristics, cultural characteristics, and social structures, etc., are related.

Making my research meaningful for those who have been helping me with it

I try to ensure that I understand, document, and faithfully convey what each of the local people have shared with me. Even if it takes longer, I try to make my work meaningful for the people who take part in my surveys. I am continually looking for issues that are important to the people who take part in my field surveys, and also to me, and also academically. Most of all, I want to write a book in English that will serve the local people, and after that I will return to long-term fieldwork again.

As I am employed under the discretionary working system, I am working in favorable conditions for raising children. However, the time I have to concentrate on my research on weekdays is limited, because I cannot do so once I have picked up my son form nursery school. Therefore, I sometimes work on holidays or late at night (after my son is asleep). If I continue working in this way, however, it will become exhausting for my family, so to avoid that situation, I think that I need to forget about work occasionally, and draw a clear line between my work and family life.

In addition to my husband and my son, many people, including my parents, parents-in-law, sister's family, neighbors, and baby sitters, have been helping me a lot. I will always be grateful to them, and I hope that I can keep following my chosen path. After the Sri Lankan Civil War, social structures and community relationships have undergone great changes in some areas. I hope to learn even more about Sri Lanka, including the areas that have undergone changes, and I hope to share my findings with the world.

Aiko Fukazawa

(Professor, Institute for Integrated Cell-Material Sciences (iCeMS) / Kyoto University Institute for Advanced Study (KUIAS))

I wanted to become a chemist and create new substances

While many scientists spend their childhood in nature or exploring science, I spent my early years at home with my nose in a book, which generally had little to do with science. It was during my high school days that I began to pursue my interest in science. My high school emphasized the cultivation of autonomy and an independent mindset in its students. In that environment, contrary to the conventional idiom, "the nail that *didn't* stick up got hammered down." My fellow students and I learned to think for ourselves and engage each other in frank discussions while taking part in school events, such as planning the school festival and attending debate camps. Our science courses placed a heavy emphasis on experiments, and we planned experiments by ourselves. That really helped us to appreciate the excitement of science. I gradually developed an interest in chemistry and the creation of new substances, and from around my third year of high school, I hoped to enroll in the Undergraduate School of Industrial Chemistry in Kyoto University's Faculty of Engineering. Up until that point, my attention was mainly focused on my participation in the school basketball club and other school events, and my academic level was not nearly high enough. I therefore began to study very hard to pass the faculty entrance examination. After enrolling, however, like any typical Kyoto University student at the time, I enjoyed my club activities, part-time job, and hobbies, and relied on cramming to get through exams.

A change of lifestyle—shifting my focus to research

It was during my fourth year that my easy-going lifestyle suddenly changed. In a resurgence of my initial drive to create new substances, I became a member of a synthetic organic chemistry laboratory. Up until their third year, undergraduate students conduct experiments with already-known outcomes, in order to learn basic experimental procedures and principles. Fully-fledged laboratory members, however, endeavor to synthesize new substances that no one has ever created before. The first project that I was I assigned at the laboratory aimed to synthesize and

elucidate the characteristics of a new organic compound with a silicon-silicon bond. I found the project difficult, and initially did not make good progress. That initial lack of success, coupled with the sudden change from my previous easy-going approach to my studies, began to take a toll on me—both physically and mentally. But thanks to all of the varied advice that I received from my peers and senior colleagues in the laboratory, I came to understand that I could listen to all of their different thoughts and ideas, and then find the approach that works best for me. In this way I was able to overcome the difficulties I faced. I found clues that helped me to advance my research in various sources: in the many books and articles I read, in my discussions with professors in different groups at the laboratory and senior colleagues in neighboring laboratories, and through conducting experiments. Eventually, after three and a half years, I was able to produce the outcome I was striving for.

Initially, I did not think about advancing into a doctoral program. But my enjoyment of research drove me to do so. In this way I decided on a career path as a university researcher. My current research aims to create novel organic molecules for the development of innovative materials. The creation of new substances with superior optical and electronic functions is crucial for the realization of a sustainable society, and it is also directly linked to the application of organic and inorganic materials, and so such research is being actively pursued all over the world. My own prime interest is in certain aspects of basic science. I enjoy the challenge of unexplored physical properties and functions that were previously thought to be impossible, and which have the potential to turn conventional scientific wisdom on its head. Of course, it is also important to develop materials that will make a definite contribution to the improvement of existing technologies, but my colleagues and I are looking further ahead, beyond applications that have already been proven to have potential. Beginning with the design of unique organic molecules, we are working on their synthesis and exploring their functionality.

Cherish the moment, and have fun!

After getting married and becoming a mother, my formerly research-centric life changed dramatically. My position at Kyoto University necessitates that I live separately from my husband, and so it is very difficult for me to continue dedicating as much time to my research as I always have. However, I feel a certain degree of resistance when I hear expressions like “research-parenting balance” or “work-life balance,” because, for me, research is a part of my life, and it is impossible to weigh

research work against looking after my child, as I do not want think of either one as requiring a sacrifice to the other. My first priority is the health of my family and myself, and beyond that, I try not to be too much of a perfectionist, and I rely on the helpful people and other forms of support that are available. I always keep in mind a motto I learned from Dr. Kohei Tamao, a professor emeritus of Kyoto University: "Cherish this moment and have fun!," and I try to do my best. My research has yet to produce any particularly significant outcomes since the launch of my own research group at Kyoto University, but, in time, I hope to create molecules that will stun the world by making the currently impossible possible. I want to share the excitement of my research with students and other researchers, and the tremendous joy that I feel when I create incredible new materials, and I hope to open new frontiers in the fields of organic chemistry and materials science.

Aki Yamamura
(Professor, Graduate School of Human and Environmental Studies)

I love both history and geography, so the historical geography course was a perfect fit.

I grew up in the basin of the Chugoku Mountains in western Japan. When I was a child, I enjoyed exploring unfamiliar places and creating maps in my mind based on what I found there. At school, my favorite subject was history. So I think my mind and body loved geography, but I was emotionally drawn to history. With my interests divided like that, it was impossible for me to choose one or the other while was still in high school, so I applied for Kyoto University's Faculty of Letters, which allowed me to select my specialization after enrollment.

I studied hard to enter the university, but once enrolled, I found it difficult to get along with some of the other students, especially those who boasted about how easily they earned credits, or those who bragged about the number of books they had read and paraded their knowledge like trivia experts. As a first-year student experiencing those personal difficulties, the Human Geography Course, which was a popular course at the time, was my only consolation. Through its well-organized history and geography classes, which were based on the professor's own research, the course helped me to realize the true nature of research. I found the accomplishments of creative researchers so fascinating that it gave me goose bumps, and I was delighted to discover that I no longer had to choose between geography and history, as I could study both in the university's historical geography course.

The tribulations of research, and the joys of determination

Although Kyoto University is located in the very historic Kyoto City, I chose the city of Kamakura as the topic of my graduation thesis, because Kamakura had not been studied from the perspective of historical geography, and was a blind spot for that field of research at the time. I read a huge number of records dating from the Middle Ages, and confirmed archaeological excavation data items one by one, not knowing what I would find. It was not an enjoyable task, but at the very end, just before submitting my graduation thesis, I connected two pieces of information

that, individually, I had thought to be insignificant, and I suddenly felt my thoughts racing, as if they were running up a flight of stairs.

However, completing my master's thesis was a struggle, and I was very unhappy with result. I put this down to having undeserving "beginner's luck," and began my investigations again from scratch in the first year of my doctoral program. I redid all of my investigations and rewrote every word of my master's thesis, and again, I saw a ray of light at the end of the tunnel, just as I did when writing my graduation thesis. Throwing away my pride and rewriting my master's thesis completely took solid determination and hard work. However, the experience enabled me to develop an attitude of determination and never giving up, even if I fail. It was a very meaningful experience.

The strength of fieldwork and being able to enjoy the process

Each area of Japan has its own unique historical and geographical characteristics, and its own unique appeal. My research emphasizes fieldwork, through which I personally confirm historical and geographical traces and create mental maps. Even in places where, initially, it seems that no historic landscape remains, my mental maps, which connect the past to the present, never fail to provide a clue for my research. Fieldwork, whereby we can learn from seeing, hearing, and feeling things firsthand, is full of new discoveries. I really enjoy undertaking fieldwork in different places, and especially exchanging deductions and theories with my students.

I think that research is not about results, but about the process. I am not someone who is good at working efficiently. Rather, I tend to enjoy the process. Even if I suspect a task will not relate directly to the topic of my current thesis, I focus on getting the work underway. My supervisor praised me for being proactive, rather than indecisive, even if the work ended up being useless. Therefore, I have often struggled to meet deadlines, become panicked, and ending up failing. However, even if the information or knowledge gained ended up being useless at the time, the experience has always been ultimately enriching. So, I always enjoy the process.

The difficulty of work-life balance

Recently, I devote much of my time to my elderly mother, who requires care. Spending time with my mother is very meaningful to me, and I would like to do it more. On the other hand, I like being engaged in my research, and I sometimes

feel that I am torn between the two, and there is no easy solution. I am still struggling to improve the balance between my research and the other areas of my life.

At such times, I think of the uplifting feeling I got from my human geography studies as student. Seeing my own students, who come to my classes with a gleam in their eyes—just like me at that age—and who enjoy fieldwork together, encourages me to work hard to convey the excitement and significance of geography. There is no useless experience in research—or in life. Together with the people around me, I will continue to pursue my research, and live my life, with sincerity.

Masae Ishihara

(Associate Professor, Field Science Education and Research Center / Director, Ashiu Forest Research Station)

My experiences overseas led to my concern about poverty and environmental issues.

My father worked for a trading company and was frequently transferred to different workplaces, so I spent my childhood in different locations in Japan and overseas. The three years I spent in Tanzania made a particularly large impression on me. During that time, I travelled to school by car, and on the way, poor children would approach the car to beg for food. Although I was just a child, I wondered why I was able to go to school in comfort, while these children could not, and did not even have enough food for the day. My experiences in Tanzania eventually led to my aspiration to develop agricultural villages in Africa, and to help address poverty and environmental issues.

During high school, I chose to apply to Kyoto University, where tropical research was a well-established field of study. I studied hard to pass the entrance exams, and after I enrolled, I met many inspiring teachers and senior students, and learned about various social issues. I was also fortunate to have an excellent supervisor, who guided me towards my current research. He had a strong belief that researchers should enjoy their work and explore their own original field of research, instead of being forced to follow a predetermined path of study. This approach led me to choose the several-hundred-year lifespans of trees as my first research topic.

I often climbed trees to examine them, and I discovered that throughout their life they actually move slightly every year, or every season, depending on the environment or their needs at different stages of their life. With this discovery, I became even more interested in trees, which live according to their own life cycles and mechanisms, which are different to those of humans. After I got PhD, I started to analyze long-term data on forests in Japan through the Ministry of the Environment's Monitoring Sites 1000 Project and the Japan Long-Term Ecological Research Network (JaLTER). I also visited many different forests both in Japan and overseas, met different researchers. I am currently engaged in research to reveal the mechanisms which determines tree species diversity, and how tree biology and

species diversity relate to the functioning of forests as a whole.

I have been advancing my research in cooperation with other researchers in diverse fields, and monitoring forests that have been changing due to global warming, overgrazing by deer, development, and other environmental changes. Through my work, I aim to find out the actual effects of these drivers on forests, and how we can maintain or restore flourishing forests. As I have children, I cannot travel abroad so often for fieldwork or work-related trips. However, I am trying hard to comprehensively analyze data, including data accumulated by researchers in the past, so that it can be passed on to subsequent generations. I am also working to maintain and conserve the Ashiu Forest.

I am always grateful to my family for being supportive of my life as a researcher.

I married and had a baby during my long postdoctoral period. In the early years of my marriage, I lived separately from my husband, but we started living together when we had a baby. As I was not employed in a permanent position at that time, I thought that my main responsibility should be raising my child, but my husband, who is working for a government, suggested that I should resume my research after maternity leave, so that I could continue to advance my work. I followed his suggestion, and my husband took childcare leave, which enabled us to live together in Kyoto, and then in Hokkaido.

After his childcare leave ended, my husband lived with our children in Hyogo Prefecture where his workplace was located. On weekdays, I lived separately in order to concentrate on my research, and spent weekends with my family. I am now working at the Ashiu Forest Research Station, and I live with our eldest son who attends a local primary school. My husband is living with our two younger sons. I sometimes feel bad about living separately from my husband and the children. I also worry about what my husband's colleagues think of him taking childcare leave and now working comparatively short hours. However, I hope that our kind of lifestyle will not be so unusual in the near future.

Research on forests and collaborating with various people towards a sustainable relationship between forests and humans.

Forests in Japan and in the world are facing a lot of problems, such as climate change, overgrazing by ungulates, development, and inadequate maintenance. Most of these issues cannot be solved by researchers alone. It is now

internationally recognized that addressing these issues will require extensive collaboration involving many different people from industry, government, and the general public, in addition to interdisciplinary collaboration by researchers in different fields. Recently, I launched a project to address such issues in Miyama-cho, where the Ashiu Forest is located. There are many energetic and passionate people in Miyama-cho, and I learn something new from them every day. I am excited about the new type of knowledge that is being developed in cooperation with those people, as it is totally new types of knowledge different from traditional scientific knowledge. On the other hand, as there is no established methodology for such collaboration, it may be difficult to convert our achievements into the form of a scientific paper, so I sometimes wonder about the role of a researcher, and what the responsibilities of scientists are. However, I will not give up, and will steadily continue my research with a positive mindset and a long-term perspective.

Yukako Hattori
(Assistant Professor, Graduate School of Biostudies)

Learning as much as possible to pursue my interest.

Having grown up in Fukuoka, I often played in rice fields, mountains, rivers, and the sea, and enjoyed closeness to flowers, insects, and creatures on the beach. In addition, I had a strong interest in science from an early age. This may be because my father, who was an engineer, told me about the importance of natural science and logical thinking. Having said that, I think what motivated me to become a researcher was an experience in my junior high school days. One of my friends, who was a high school student at that time, got stomach cancer. I started wondering about what the cause of cancer is, when and how cells proliferate, and what the differences between people who develop cancer and those who do not are. Although I tried to find answers to these questions in a library, I found no convincing answer. I realized that there are still many unexplored mechanisms of living organisms, including humans, and I desired to find out what they are. With that in mind, I entered the science and mathematics department of a prefectural high school and studied hard.

After entering Tokyo Institute of Technology, I loved learning biology and many other subjects such as physics, chemistry, and information science. Moreover, I was searching for what kind of research I would pursue in the future. I visited universities and research institutes in Japan and the United States, talked with many researchers and graduate students, and learned their cutting-edge research. What interested me the most was the genome—the complete set of genetic information for each organism. In those days, genomes of a variety of organisms were sequenced one after another. I was interested in studying how biological phenomena, such as developmental processes, are orchestrated by genomes. I entered the laboratory of Prof. Tadashi Uemura at the Graduate School of Biostudies, Kyoto University, and started my research using the fruit fly *Drosophila melanogaster* to investigate the molecular mechanisms by which neuronal cells acquire their individual properties.

Deciphering complex biological process through multi-omics analysis.

In recent years, techniques for comprehensive analyses of gene expression and metabolites (multi-omics analysis) have developed, which have made it possible to address biological questions that cannot be answered using conventional methods. I performed integrated bioinformatics analyses of large-scale data obtained from our original experimental systems, and carefully deciphered their biological significances. I elucidated the sensory-neuron subtype-specific transcriptional programs controlling dendrite morphogenesis when I was a graduate student. After that, our research group has launched a new research project and uncovered a mechanism for animal growth under various nutritional conditions. Many genes, tissues and hormones are conserved between fruit flies and mammals, and we hope that our findings will provide stepping stones to understand the molecular mechanisms of neural development and nutritional adaptation in humans. To extend our understanding of how nutritional environments affect animal development and life-history traits, our research group are currently studying the roles of the symbiotic yeasts and bacteria that contributes to the growth of fruit flies, and also analyzing the mechanisms regulating nutrient-dependent dendritic growth of neuronal cells.

Throughout my work, I have faced every piece of data in honesty to understand the biological meaning. I also discussed our research not only with my collaborators, but also with many researchers in diverse fields, to clarify our questions and to introduce new perspectives and techniques to advance our studies. The mechanisms of living organisms remain largely unexplored mysteries. I hope that our approach can elucidate how organisms develop through interactions with other organisms and the environments. I would like to share the fun and excitement of research with my graduate students and collaborators, and pioneer a new research field that connect multiple fields.

Child-rearing has broadened the scope of my research as well as my personal life.

I got married while I was in the master's program, and I now have two children. I realize that both research and child-rearing have expanded my world. At the request of my children, we caught insects and fish and kept them at home. In raising them, I observed the delicate interplay among multiple species of living organisms and the environments such as nutrition, temperature, and humidity. This experience had a significant influence on my current research. In addition, through my

children, I have been able to meet and share fun times with various people outside the field of science. With the support of my family and the people around me, I have been able to maintain a balance between work and family life. I don't always try to be perfect or handle everything by myself, but I prioritize my family's health, and try to live a regular life as much as possible.

There are, of course, temporal and physical restrictions, but I enjoy my life with the restrictions as a limited period of time when my children are young. The promotion of research can be affected not only by parenting but also by personal and social circumstances, but I believe that we can overcome these constraints by optimizing the system accordingly, being flexible, and resolving each issue through collaboration with others.

Yayoi Kito
(Senior Lecturer, Graduate School of Agriculture)

After much deliberation, I eventually decided to pursue a career in research

In high school, I devoted myself to participating in the brass band club. At the club, I was in a position to be involved in the decision-making process with some of the other members, and I often had a difficult time worrying about disagreements between the club members. While wrapped up in such troubles, I may have unconsciously developed a curiosity about the behaviors of my friends and seniors. At that time, I may already have developed an interest in how humans think and make decisions. At high school, when I had to choose between studying the humanities or science, I chose science without hesitation, because I was interested in food, the environment, and biology. I also had a vague desire to become a researcher in the future. Those interests led me to take the entrance examination for Kyoto University's Faculty of Agriculture, and I enrolled in its Department of Food Science and Biotechnology.

Six months after my enrollment in the university, a news report helped me to find my true interest. The date was September 10, 2001—the date on which the first cow infected with bovine spongiform encephalopathy (BSE) was confirmed in Japan. On the following day, related articles were published in many newspapers. I wanted to understand the health risks of BSE and the mechanisms by which it developed, and so I proactively gathered scientific information, including the insights of experts. However, I became more interested in people's mindsets and behaviors, and the experts' comments on those aspects, rather than the scientific information. It was at this point that I realized my real interest lay in studying food-related human behavior and social mechanisms, instead of food itself. On the day after the discovery of Japan's first BSE infected cow, the 9/11 terrorist attacks occurred in the US. At that time, with the social situation disrupting people's sense of values, I strongly felt that it was important to look at matters from comparative and objective perspectives.

In my second year, after much deliberation, I transferred to the Faculty of

Integrated Human Studies. I chose to study cultural anthropology, and decided to pursue research on human relations in the food supply process and the creation of product value. My vague thoughts about a career in research began to take a more concrete form, and I decided to pursue a career as a researcher as soon as I advanced to my master's program. By forming a concrete image of my potential career as a researcher, I developed a strong desire to work in a field in which I could study, discuss, and provide recommendations on social issues related to agriculture and food. After even further deliberation, I moved into the field of agricultural economics.

I want to contribute to society by addressing issues related to agriculture and food in Japan and other countries

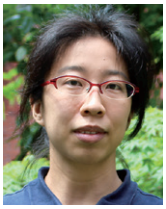
My laboratory sought to develop management science in the fields of agriculture and food by researching the influence of food systems on agricultural management and food safety systems based on agricultural management. The laboratory had a culture of proactively applying techniques and knowledge from different fields. There were many female researchers and graduate students in the laboratory, which was encouraging for me as I pursued my career as a researcher. I temporarily transferred to another laboratory, but when I rejoined my original laboratory, its culture of openness was unchanged, and it still continues to this day. Currently, research on food systems encompasses many different issues and diverse approaches. It is my belief that food systems are established and developed depending on the decisions and actions of people and organizations at various stages, and my research investigates the decisions made and actions taken to elucidate the decision-making and action-taking mechanisms. I work in the field of agricultural economy, but I also use theories and techniques from the field of social psychology to investigate the risk perception behind customers' food choice behaviors and the influence of rumors on food choice behaviors in order to study how risk communication should be practiced. While considering sustainable food systems, my recent research also examines the ways in which various actors and business operators make decisions at each stage of the food supply chain, from production to consumption. I hope to contribute to society by clarifying human food-related behavior and social mechanisms, and generating new knowledge in those fields.

I try not to be bound by perfectionism and to manage my time well

I try to manage my time well to maintain a balance between my research and

my private life. However, instead of obsessing over time management, I try to avoid perfectionism, accept my weaknesses, and go easy on myself when it is appropriate. People can be happy even if they cannot produce their best or perfect results, but having said that, I tend to demand the best of myself when it comes to research and education, so, instead, I try to be a bit more easy-going when it comes to household chores.

My long-term goal is to contribute to society through my research. I would also like to be a good influence on my students in academic and other respects, so that they can also be active in society in the future. As I continue my work, I try to maintain an interest in, and learn from, other fields of research. I listen to different ideas and put myself in their position, always checking that my values are not biased, and re-examining my position with a broad perspective.



Kazue Mino
(Assistant Professor, Graduate School of Education)

Taiwan, My Motherland

In high school, I did poorly at mathematics, which before that point was actually my favorite subject, and I gave up on my dream of becoming a paleontologist. However, I enjoyed the classes for my other favorite subjects: world history, classical Chinese literature, classical Japanese literature, and contemporary Japanese literature. I also joined the history research club, and I became increasingly interested in history while writing articles and making booklets at the club. I took the entrance exam for Kyoto University's Faculty of Letters as it provides excellent history courses. I was expecting to fail, and had already decided that my second choice would be the International Christian University (ICU), which was my aunt's alma mater and was well known for its liberal arts education. Unfortunately, I did fail the Kyoto University entrance exam, as I had expected. However, I liked the ICU's campus and atmosphere, and, when I passed its entrance exam, I decided to enroll there without hesitation.

The classes at ICU were all interesting and made great impressions on me. For example, in one history class, I learnt how to deal with historical documents with bizarre content. The class on Christianity would later have a great influence on my graduate school research on intellectual history. I chose Christianity in Taiwan as the topic of my history graduation thesis. Although my mother is a Taiwanese Christian, for me, Taiwan was "a homeland I never really knew." I only occasionally visited my grandparents and relatives for short periods, and I could not speak Taiwanese. However, I was fascinated by the friendliness and outgoing nature of Taiwanese people as I communicated with my colonial-educated grandparents in Japanese, or with my Mandarin-educated cousins using gestures and a smattering of English.

My desire to learn more about Taiwan and its society beyond my linguistic and cultural limitations motivated me to select a research theme that entailed studying Taiwanese and Mandarin. I also wanted to better understand the experiences of my grandparents who grew up in the colonial era. My grandfather, who was a doctor,

and my grandmother, who was a teacher, were both fortunate in having the opportunity to receive education, and had many good Japanese friends, while I was always made to realize that even so it is also true that they had been greatly bruised by experiencing the colonial subjugation. This led to my interest in research exploring the meaning that religions and ideas can hold for people living under colonial rule or facing discrimination.

With the aim of sharing my research results in Japan and abroad

After entering Kyoto University's Graduate School of Education, I began research focusing on Campbell N. Moody, a Scottish missionary who worked in Taiwan under Japan's colonial rule. Moody and other missionaries in Taiwan were involved in the establishment of the Presbyterian Church in Taiwan. I examined how, through his encounters with Taiwanese people under colonial rule, he questioned Christianity, which was often connected with "Western modernity" at that period, and I analyzed the circumstances that led him to empathize with the anticolonial nationalistic feeling of the Taiwanese people. I also analyzed the discussions of the ministers and members of the Presbyterian Church in Taiwan, which were published in the church's newspapers and theology journals. Through my analyses, I discovered the process by which they established their own form of Christianity in the face of Japan's colonial rule and the perceived cultural superiority of foreign missionaries, as well as the process by which they cultivated a new theology, which was closely aligned with their aspiration for self-determination, social justice, and anti-colonial nationalism, by envisioning and expressing a sense of collective consciousness and a sense of responsibility specific to those who were both "Taiwanese" and "Christian."

The reason why I chose to focus on Moody and study his encounters and interactions with Taiwanese people may be related to my own predicament of feeling a deep connection to Taiwan, but never having been a member of its society, despite wishing to be. This also connects to the fact that I enjoy reading stories. As I found out during my time spent researching in Edinburgh, Scotland, I felt a strong sense of joy at entering an unfamiliar, different, and unknown world—meeting different people, seeing and hearing something new, and learning from the experience. In the future, I would like to collect more Taiwanese historical materials to further analyze the relations between Taiwanese communities, the church, and colonial rule. I will also endeavor to share my research results in English, so that I can have more interaction with researchers who speak languages other than Japanese.

Pursuing a research career, step by step

"Pursuing a career in research" was actually never been my conscious choice or determination. I have reached my current position just by consistently "doing what I need to do," although I was never so sure where it was leading. I felt very directionless until I was a master's student. I was not good at quickly organizing and expressing my ideas, and wondered whether I was really qualified to advance to a research training course. However, when I enrolled in a doctoral program after submitting my master's thesis, I felt a tremendous sense of freedom and encouragement, and was reassured that even a slow-paced person like me could pursue research in my own way by making steady progress. As I steadily advanced my research, a career path as a researcher naturally opened up for me, and I gradually become a researcher. "Doing what I need to do" means advancing the research I began and making it better. This also enables me to pay back all those people who have helped me to advance my research. As I continue my work, I never forget my feeling of gratitude towards them.

Mai Sawada
(Assistant Professor, Graduate School of Engineering)

Pursuing a career in research after several twists and turns

The introductory courses of my major subjects really began in my third year as a student. Among them, a course on geotechnical engineering interested me the most. I was fascinated by the theories that described the composition of natural materials in soil using mathematical formulae, and by the simple but well-established experimental methods of elucidating soil characteristics. In my classes, experiments were conducted in groups of approximately six students, but I wanted to do everything by myself. That wish soon came true when, as a fourth-year student, I was assigned to a geotechnical engineering laboratory, and was able to conduct experiments every day in a basement laboratory while writing my graduation thesis. The instruction I received in the laboratory was very strict, but there was a family atmosphere and the students got along well with each other, so I was able to enjoy the three years I spent there until the completion of my master's program.

After completing my master's program, I wanted to continue engaging in practical research, and so I found employment in the research institute of a major construction company. I was involved in several projects there for four and a half years. However, the job was not the best fit for me. I did not have confidence, and felt that I had come to a dead end in my work. When considering a job change, I consulted with my master's supervisor, and he advised me to return to study again. He was able to see that the only solution to my predicament was for me to make a significant personal change, and he was right. Having said that, it took a lot of courage to resign from my job and take the exam to enter a doctoral program at that time, as it was the era of the Lehman Shock and the Great East Japan Earthquake. However, I convinced myself that returning to my studies would be worthwhile, regardless of whether I end up laughing or crying in three years' time. Moreover, I felt that by doing so, I could make the necessary changes in myself.

The head of the laboratory with which I was affiliated as a doctoral student kindly accepted me into the lab and provided guidance to this strange alumna who had returned to her alma mater. Although returning to university was my own

decision, student life was totally different from the life I had known as a company employee, and I sometimes felt worried about my future and miserable. At those times, I wondered why I had chosen to start over like that. However, I realized that, with only three years left as a student, I did not have time to worry, and studied very hard. Looking back on that time now, I was very fortunate to have the opportunity to start all over again, and for the tremendous support provided by my teachers and family. Engaging in my own research and the opportunity to have frequent discussions with my professors gradually honed my abilities to plan and implement research, and I grew to enjoy it even more. I was already 32 years old when I decided to become a career researcher after so many twists and turns.

I want to show ancient landscapes to future generations

My specialty is geotechnical engineering, and my research focuses on ancient geotechnical structures. In Japan, there are many ancient earthen ruins, including tumulus mounds (ancient tombs), stone walls, and kiln sites. For example, there are more than 150,000 megalithic tombs in Japan. Recently, the Mozu-Furuichi tumulus cluster was registered as a World Heritage Site, which raised people's awareness of tumulus mounds in Japan. However, many of the sites are in a critical condition, having been damaged by earthquakes and precipitation for over 1,300 years since they were constructed.

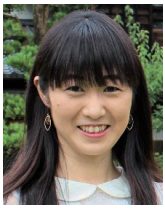
It is necessary to renovate the damaged tumulus mounds so that they will survive for future generations. We must be very careful when performing such renovation, as even if the exterior is restored to its original state, the structural conditions may become worse. It is important to identify the mechanism of the damage first, and use an appropriate renovation method based on a scientific approach. However, the damage mechanisms are very complex. For example, if a mound collapses due to rain or an earthquake, it may increase water infiltration and heat transfer into the inner stone chamber. If there are mural paintings inside, fungi growth and dew condensation will cause them to deteriorate. If the mound is covered with plastic sheets to prevent damage from rain, the appropriate supply of moisture will be disrupted and the mound will become extremely dry and brittle. It is impossible to address these problems with the knowledge of only a single academic field, and it requires interdisciplinary research projects, undertaken in cooperation between related fields, such as geotechnical engineering, architectural environment engineering, and conservation science.

Geotechnical engineering research addresses the deformation of mound

structures caused by external forces, such as water infiltration, heat transfer, earthquakes, and precipitation. Specifically, it includes investigations using boring and other techniques to understand the layered structures of mounds and the earth underneath. A sample of the mound soil is taken to test its strength and permeability in the laboratory. The mound is then modeled based on the findings, and analyses are conducted through numerical simulations of earthquakes and rainfall in order to calculate the forces and scale of deformation to which the mound has been subject. An examination of the actual causes of the damage, based on the calculated results, is then used to propose an effective reinforcement or water shielding method. I hope to contribute to the preservation of tumulus mounds as a researcher and engineer, so that future generations can "see" ancient landscapes by looking at these ruins. I hope to become a leading researcher in this field, and that my name will always be associated with it.

Steady progress leads to confidence.

Researchers can use their time with a great deal of flexibility. However, I try to wake up, start and finish my work, and go to sleep at the same time each day. Maintaining a regular schedule makes it easier to set daily goals and plan my day's work in order to achieve those goals within the time available. I feel frustrated when I do not achieve my goals, but I feel very good when I do. However, being well organized does not come particularly naturally to me. I have to make the effort to move my research forward one step at a time, and my motto is to continue taking steady steps forward. Even though I have a grand vision for the future of my research, my day-to-day work tends to alternate between hope and despair over small issues. When I cannot achieve the results I expect from my experiments, I try to identify the problem by checking, revising, or repairing the equipment and procedures one by one. It may seem like a painstaking process, but if I neglect any step along the way, I am likely to run into trouble later on, which can result in me having to redo even more work. I think it is essential to continue making steady progress, one step at a time, so that I can present the results of my research with confidence.



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Canada's countryside was the turning point

When I was a child, I lived in the countryside, surrounded by nature, where my days were spent listening to the sounds of frogs and insects and looking at mountains and the sky. The smell of muddy water and leaves always reminds me of the fun I had making "mud pies." In the museum where my father worked, old pottery and artifacts were on display, and researchers examined them one by one to uncover their history. The examination processes were exciting for me as a child. I always enjoyed immersing myself in my own world, but when it came time for me to go to elementary school, my parents sent me to study in Canada and the United States. That was a major turning point for me, as I was "a frog in the well who knows nothing of the great ocean." I still remember the first time I saw Canada from the plane, and being overwhelmed by its magnificent natural scenery. Since then, I have gradually developed a liking for jumping into the unknown.

Looking back on my high school days, I remember my teacher's smiling face as he enjoyed talking us through physics experiments. When I asked for his advice about whether I should take the entrance examination for Kyoto University, he smiled and encouraged me to do so. After entering Kyoto University, I read a lot of books that I found in libraries and used bookstores. The smell of books made me feel at ease, as, while I was growing up, there were always many books piled up at home because of my father's work. One day, as I was enjoying some great books in a used bookstore, I found an old slip of paper in an old book. It sounds like something from a TV drama, but the note on the paper was addressed "To whomever reads this book," and all it said was, "Do what you want to do." That message from someone unknown, which may have been hidden in that thick book for a long time, was very encouraging for me, as I was having some difficulties at the time.

Fascinated by trees and their world

When I was an undergraduate student, I learned that the Wood Research Institute (as it was called at the time) was engaged in scientific research on tree

species which had been used to make cultural assets, and so I knocked on its door. I was fascinated by the wealth of information that I could learn from trees, including research on Silk Road artifacts, the study of historical buildings and wooden statues, the development of new tree identification methods, and research on the isotope ratio of tree rings. Above all, I was captivated by the beauty and complexity of wood's structure when viewed under a microscope. Then, I gradually became interested in scientific research on the tree species that had been used to make wooden cultural assets, and in interdisciplinary science and humanities research to elucidate Japanese and Asian ideas about selecting the right materials for right places, and the history of those ideas. The cultural assets that my work currently focuses on are wooden statues and buildings related to beliefs and religions in East Asia, where the approach to selecting the right materials for such structures has not changed much over time. I have been collecting and analyzing data to study the relationship between humans and trees and the history of cultural exchange between Japan and East Asia.

It is thought that various cultures, such as those associated with Buddhism, Zen, and Taoism, have had a great influence on Japanese ideas about the selection of materials for wooden statues. In comparison with Japan, there has not been much systematic research on the tree species used for wooden statues in Asian countries. In collaboration with art history researchers from the Boston Museum of Fine Arts, the Philadelphia Museum of Art, and the Cleveland Museum of Art in the US, as well as from other institutions, I have been studying the tree species used for old wooden statues in East Asia to examine, from multiple perspectives, different countries' thoughts regarding the selection of materials used. Recently, a study of the tree species used for guardian deity statues held by museums in Europe and the US led to the discovery of a group of guardian deity statues that had been scattered throughout Japan and overseas. That was exciting news for art history researchers. As my research focuses on wood, I work with professional craftspersons and tradespersons such as carpenters specializing in *sukiya-zukuri* (a distinctive Japanese architecture style) and sculptors, as well as researchers in the fields of art history, archaeology, architectural history, and ethnography. So as not to become a researcher who "cannot see the wood for the trees," I am endeavoring to develop my research in a flexible, bold, and harmonious manner, learning from the words and teachings of these diverse wood experts. My aim is to engage in earnest research on my favorite trees and on the cultural assets that have been preserved by many different people, and to utilize my research results for purposes

that are of interest and concern to the younger generation and society at large.

Appreciating motherhood while pursuing the research that I love

My opportunities to travel abroad for work, and develop relationships with female researchers in different countries who have families or children like me have increased. When I worried every day about the young children I left behind in Japan, I was told that, "While their mothers are away, children learn something valuable that aids their upbringing." I was also encouraged to be told that, "Of course children are important, but they have their own lives, and they appreciate their mother's hard work. You should also value your own life." These words, which emphasize that I should value my own life as an individual human being, regardless of gender, have encouraged me a lot.

I think that in current Japanese society, even in double-income families, women still spend more time doing housework and raising children. In particular, a lot of time is spent on miscellaneous tasks. Sometimes I resent myself for not being the perfect woman or perfect wife, but I always try to laugh it off, thinking that's just the way I am. Even when I am feeling tired, I get excited when I think about my research, and I am truly happy when I receive a letter from my children, saying "Good luck with your work!" I always appreciate the fact that I can still be a mother (or wife) while pursuing the research that I want to. I hope to keep living for the moment, and continue enjoying my research, while being grateful to my family, my parents and parents-in-law, and my colleagues for their support.