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THE HAKUBI CENTER NEWSLETTER

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大学のジェンダーバランス

前白眉センター長、京都大学名誉教授 田中 耕司

京都大学退職後の5年間、特任教授として白眉センターや学術研究支援室の活動に携わってきた。任期を終えて、違った環境で仕事がしなくなり、昨年11月から国際協力機構（JICA）の技術協力プロジェクト・チーフアドバイザーとしてミャンマー国イエジン農業大学の教育・研究環境基盤強化に向けた活動を支援している。同大学は国内唯一の国立農業大学で、医学系や工学系の大学、ヤンゴン大学やマンダレー大学のような総合大学と並んでミャンマーでは「トップ10」に入る大学である。将来、白眉プロジェクトに応募するような若手研究者がここから育ってくるのを期待したい大学のひとつでもある。

ミャンマーの経済環境がこれまで停滞していたこともあって、公務員である大学教員の給与は高くない。そのため、教員の過半が女性という大学が多い。大学を卒業した男性の多くは経済機会を求めて大学を去り、教員として大学に残る人が少ないために結果として女性教員が多くなったと言われている。農業大学も例外ではなく、教員全体の4分の3が女性教員である。

入学してくる学生も女性が過半を占めている。一般に、大学への入学志願者は高等学校までの成績を評価する全国一斉の試験結果によって志望大学を絞り込んでいくが、そのポイントと個別の大学が実施する入学試験の成績で入学者が決定される。農業大学では、女性志願者にはふたつの成績の下限をやや高く設定しても、どうしても女性入学者が多くなってしまおうという。以前は、男性の教員、学生が圧倒的に多かったけれど、それが逆転して、いまでは優秀な男子学生を確保してジェンダーバランスを改善していくことが大きな課題になっている。

女性教員や学生がこんなに多い状態を間近で見ていると、いくら政府が掛け声をかけても男女共同参画社会にはならない日本にくらべて、ミャンマーのほうが将来の大学のあり方を先取りしているかのように見える。もちろん日本の大学でも女子学生が増えているが、いっこうに教員の男女比率改善の兆候はうかがえない。大学だけでなく社会全体が男女共同参画を本気で実現する気がないかのようにすら感じられる日本に対して、逆境の結果とはいえ、ミャンマーのほうが一歩先を歩いているとみるべきであろう。大学がこういう状態なので、政府機関で働く公務員も圧倒的に女性が多い。卒業後の進路が女性に対してもしっかりと確保されているようである。もちろん、いまのところ、政府高官レベルを見ればその大半は男性で、ミャンマーも男性優位社会であることがうかがえるが、大学構成員の過半を女性が占める現状が続けば、いずれは女性の登用も加速していくに違いない。

こうした環境のお蔭と言ってもよいが、女生や女性教員が身に着けているロンジーがキャンパスに華やかな彩りを与えている。その華やかさ

だけでなく、大学のマネジメントや会議の様子などを見ても、女性が多数を占めることによって、目配りや気配りがよく利いているという印象がある。決して予算的に恵まれた環境にはないけれども、校舎周辺的美観の維持や、全寮制で暮らす学生たちの世話など、女性ならではの配慮が感じられるところが少なくない。また、学生を対象に歌謡大会やスポーツイベント、学生寮の夕食会などさまざまな行事が大学で企画されるが、担当する女性教員と学生の連携が効果をあげているようにも思える。もちろん男性教員も積極的で、男女共同参画がこうした行事の開催時によくうかがうことができる。

ミャンマーと同様に、東南アジア諸国の大学でも女性の学生や教員が増加している。こうした大学の現状を考えると、将来の東南アジアの大学は、男女がバランスをもってさまざまな共同事業に取り組んでいくのではないかと期待を抱かせてくれる。先進国の大学へ留学した教員を基礎にした従来の「南北」の一方通行の交流ではなく、ASEAN諸国間で協力して、大学の活動を強化していく道を女性教員も含めた交流のなかで拓いていってほしいものである。

政治的にも経済的にも大きな変革期にあるミャンマーであるが、その変化を教員・学生ともに期待をもって受け止めようとしている。農業大学では講義時間中はロンジーの着用が義務づけられているが、こうした規則もいずれは変わっていくかもしれない。大学の現状を踏まえた高等教育の改革に向けて、各大学はいままで以上に着実な計画を立案するよう求められることになる。ジェンダーバランスにどのようなメスを入れるのか。将来の大学像を探る指標として関心を寄せている。

(たなか こうじ)



大講義室を出入りする学生たち。女子学生のロンジー姿が美しい。

シリーズ白眉対談⑩ 「Truth」

司会・編集：ニューズレター編集部

登場人物と研究課題

Bill Mak Program-specific Associate Professor, "Historical transmission of India astral science in East and Southeast Asia"

Hemant Poudyal Program-specific Assistant Professor, "Role of gut hormones in type-2 diabetes and cardiovascular disease"

Marcus C. Werner Program-specific Assistant Professor, "Modified general relativity and gravitational lensing tests"

Jennifer Coates Program-specific Assistant Professor, "Re-writing History: Women and War Memory in Japanese Film 1945-1979"

Toshihiro Higuchi Program-specific Assistant Professor, "The making of a "global environmental crisis": International politics on radioactive fallout nuclear weapons testing, 1945-63"

Kiyokazu Okita Program-specific Assistant Professor, "God as Paramour: Ethic and Aesthetic of Emotion in Early Modern South Asia"

(Mak) My name is Bill Mak, associate professor at the Institute for Research in Humanities here at Kyoto University. My field is history of science, focusing on historical Indian and Chinese astronomy. I will be the moderator for today's dialogue. Should we introduce ourselves?

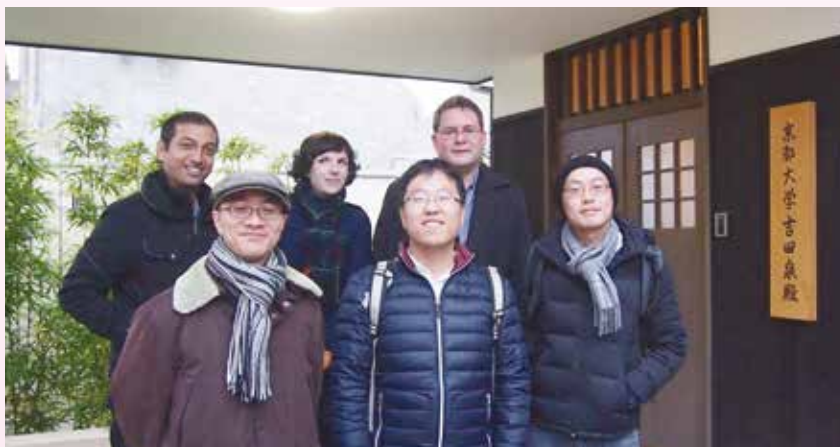
(Poudyal) I am Hemant Poudyal, biomedical scientist. My research interests include heart diseases and their risk factors such as diabetes.

(Werner) My name is Marcus Werner. I'm a theoretical astrophysicist working at the Yukawa Institute. I'm interested in the fundamental theory of gravity and space time.

(Coates) My name is Jennifer Coates. I work on alternative cinema histories, mostly from the perspective of oral history.

(Higuchi) I'm Toshihiro Higuchi. I'm assistant professor of the Graduate School of Law. My research is in the field of environmental history. I'm working on the beginning of the global environmental age since the mid 20th century.

(Okita) My name is Kiyokazu Okita, assistant professor at the faculty letters, department of



Mak, Higuchi, Okita (from left to right in the front row), Poudyal, Coates, Werner (from left to right in the rear row)

Indological Studies. In terms of my research interest, I mainly look at the South Asian religions. I'm interested in how emotion is discussed in religious contexts, especially poetry and drama.

(Mak) Welcome, everyone! Some months ago at a meeting, we came up with this topic of truth. The idea is that researchers from science and humanities had a very different understanding of truth as well as the ways to convey it. So I have invited you all today to look at the various challenges we face in our pursuit of knowledge in our respective fields. Perhaps we can enlighten each other with our experiences.

To start with, let me pose a very simple question. How do we know something is true? As we all generate a lot of information on a daily basis, obviously we want to tell the world what we believe to be true.

(Werner) In science, one relies on experiment and observation as the arbiter of any theory. While other factors may play a certain role in shaping these theories initially, they must ultimately stand up in that test.

(Okita) I think the scientific approach is to look for something universal. A scientific truth is not partial to anyone. It is verifiable to everyone. This is the theory, and this is the evidence. If you are doubtful, you can do your own experiment and prove it.

But for humanities, the truth is very much dependent on perspective, and depending on which context and in which period.

(Poudyal) It's the same with medical science. It's really a matter of perspective. Also, some of it may be geographically influenced; for example, the definition of diabetes in Japan and in the US is very different.

(Mak) But the perspective does not change the facts about the disease. Why do you need to define it in the first place? A disease is just the way it is, right?

(Poudyal) Not always. There are cultural aspects to diseases that you need to consider. There are the nature-nurture aspects. Particularly with Japan, there is a different definition or cause for every disease. There has also been some historical influence, I would say.

(Mak) If the definition of a certain disease is different, does that affect the way a researcher approaches or conducts the research? And what kind of consequence does that have?

(Poudyal) I think the treatment and possibly knowledge is very local. For example, for diabetes you have different regulatory bodies in America and Japan, and they have their own framework and guidelines.

(Werner) In the physical sciences, too. There is the issue



(Mak) I think issues such as trust and authority are pertinent here since not everyone has the access to knowledge or the means to evaluate what they are told. As a result, there is sometimes conflict, such as

of authority, particularly if the subject is driven by theory, rather than by observations.

(Mak) How does authority affect the ways scientists present their theories?

(Werner) In theoretical physics, it does actually matter when a senior professor has a certain opinion. You can't disprove him or her in an easy way, because there's no observational evidence. People might prefer an idea based essentially on principles, like symmetry, mathematical beauty.

(Mak) It's rather interesting to look at these subjective factors beneath the hard surface of objectivity. In humanities, too, there can also be a spirit of science in the sense that good researchers always make the distinction between what they believe to be the facts and what is recognized to be their own, and possibly fallible interpretation. But let's go back to this topic of authority. It does seem to suggest some people's truths are more valuable than others'.

(Okita) In the South Asian tradition, truth is like beauty, which is in the eyes of the beholder. There is a strong sense of qualification. You can perceive certain things only if you have gone through certain training. Therefore, maybe certain information, or a certain understanding of reality is not necessarily available to everyone. That seems to be applicable to modern science in many ways, too. Like when you talk about physics, and laws of astronomy ...

(Werner) It's a privileged discourse.

(Okita) Exactly. Once you pull out these exotic mathematical equations... It's a language understandable only to the privileged few.

those between the church and science. As late as the 1950s, the Catholic church still found it necessary to make statements such as their approval of evolution and the big bang theory as not in contradiction to God's teaching. What kind of role does authority play in your field?

(Higuchi) I think the authority depends on the maturity of the field. In my field, namely, environmental history, there is not really an established authority at all because it is very young. Almost no one started their careers as environmental historians. Everyone comes from a different background and it feels somewhat egalitarian. As a junior faculty member, I can say something to some senior scholars because we are so eager to learn from each other.

(Werner) For scientists, the hierarchy is typically very low. It's quite common to approach a senior professor and ask any question. But I suppose there might be more deference in the humanities.

(Coates) I think when you're talking about history, the authority of the hierarchy of the academy is one problem. But the authority of the source, or what counts as a source, is another problem. Because the people whose testimony and memory I work with, are not considered authorities. Truth in the humanities, since the 60's, has been a bad word. (Laughs) Since post-structuralism, we're not supposed to believe in truth. There's not supposed to be one truth.

(Mak) In recognizing that there are many truths, there is also the idea of accommodation and to be inclusive. Does that always lead to a desirable result?

(Higuchi) As Jennifer (Coates) said, since the 1960's, historians are more aware of our mission.

It is to empower people. Back in the 19th century, historical studies were all about nations, and not humans. Now we try to go back in history and recover those people who had been erased from history. Diversity is the key, and we give voice to the underprivileged and the dispossessed so that they become someone, something. But it's not really the truth per se.

(Mak) In the case of textual studies, there used to be a tendency to see a piece of writing as a monolithic piece of work. But post-modern scholars interpret ideas and authorial intention in a much more nuanced way. I believe this is a major leap in understanding. Instead of looking obsessively for an ultimate interpretation of anything, one tries to reveal the dynamics of different forces at play, the many voices of many characters, even from those hidden behind the scenes.

(Higuchi) It's like *Rashomon* (Kurosawa Akira, 1950) . It is a challenge to the narrator. I feel a little uneasy about the earlier thought of recovering stories from the dispossessed because the narrative tends to side with them exclusively.

(Mak) So there are power issues involved and instead of presenting the historical picture in its entirety, you would focus only on a certain aspect.

(Higuchi) It is a partisan discourse, for a good cause and for good reason. That is how the earlier historians looked at the important role that black Americans played in the American revolution. That completely rewrote American history and how we understand it.

(Mak) So, to balance out the playing field.

(Higuchi) Right. But once we move beyond that kind of balancing stage and to show the complex interactions among those people, some people





would accuse someone like me, of giving undue voice to the manipulators. (Laughs) It is difficult. There's always ethics involved.

(Mak) I think we cannot really avoid this question of ethics, because in academia, scholars are looked up to as the custodian of knowledge, and thereby, also the so-called truth.

(Coates) Before we go in the direction of ethics, I think this is something that we should consider — whether things like texts and dominant narrative should be recognized as truth? I think this is really important when we talk about whether we can be custodians of knowledge, or whether there should be custodians of knowledge. In history, one of the problems there is that we tend to privilege textual sources over vocal sources - narrative. We've been talking about voices, but really we're talking about voices on the page.

Another thing that we don't recognize are divergent narratives. Narratives that involve language that we're not used to. Some of the work that I do is related to the "comfort women" issue, with traumatic narratives, that are not repeatable, and often do not seem logical. There is now an interesting question facing the academics in my field: How can we make space for people to represent themselves in their own voices? How can we, at the same time, encourage the audiences of those testimonies to recognize what they're hearing, even though it doesn't sound, or it doesn't look, like quite what they're used to recognizing as truth.

(Higuchi) It's because those who provide testimonies have their own versions of truth and stories. That's why it's difficult for the narrator to represent himself...

(Werner) But this is not the interpretation of the testimony, right? It is about how you assemble the texts or documents in the first place, no?

(Higuchi) But that takes us back

to the problem of authority. As an academic, I can insist that my way is more impartial and objective. But, that objective approach cannot really capture the real experience of it. It is a problem; we can't just claim that we historians know best.

(Coates) I think that maps onto some of the issues in the sciences about provability and absences, right?

(Werner) That's right. In the sciences, we are interested in fundamental theories, which make a statement about an infinite number of instances, which you can never possibly test empirically. But one counter-example is enough to disprove a universal statement. Therefore the common wisdom in the sciences is that a theory should be posed in such a way that it can be falsified. But in reality that is not always the case. There is always a hard core in science which is kept by the convention of the community as the immutable part.

(Poudyal) With the life sciences, we are now moving into a phase where we consider truth as constant. There is no question there. At this point in time, with what I have, this is my interpretation.

(Mak) It sounds like what you hear when you go to the doctor. This is the best I can do for you.

(Laughs) We have been talking about the issue of authority and how that may affect the way truths are presented. How does that apply to you?

(Poudyal) If you put a strong hierarchy with authority and a custodian of knowledge together, you tend to have that very rigid system that we currently have. All life sciences have this structure of experts. That automatically leads to the scenario where you have strong authority for everything, for all disciplines within the big discipline.

(Higuchi) Medicine, historically speaking, started out as an art. So, it is no wonder medicine still tends to be very hierarchical and authoritative. Medical doctors can make some general

statements as the truth, but at the same time, it wouldn't solve your ultimate problem, which is how to save the patient. So that's where the authority and trust really come in. It's just one event, not repeatable.

(Mak) How about in the case of the religious texts? As the authority from an academic point-of-view, how do you deal with those with the background of religious authority?

(Okita) There could be conflict. You need to be mature enough to deal with it. Being young in certain contexts is in itself a lack of authority. You have to treat those with religious authority respectfully even if what they say contradicts the academic view...

(Mak) So would you tolerate in silence?

(Okita) You don't need to contest each and every issue. We need to recognize that academic authority and religious authority rest in different epistemology. The former is based on empiricism and the latter on religious scripture, the words of saintly figures and so on. Recognizing this difference would allow us to respect each other's perspective.

(Mak) Let us look at the other side of the story - the untruth. So far we have been talking about different forms of authority which may affect our presentation of the truth. As publicly funded academics or more generally, as public intellectuals, we are obliged to bring to the public what we believe to be true. How do you then deal with the untruths in your field?

(Poudyal) If I say, this drug will help people lose weight, it will be a hit in the market. Maybe I gathered that evidence from an experiment on a lab rat. There is still a long way to go from that to human studies. The information is clearly untrue

by the time the information is applied in somebody's kitchen. But I did not intend to give that message to start with. It was partial evidence. It takes responsibility as academics to point these things out. It's more of an interpretation.

(Okita) But is there complete evidence? Isn't evidence always partial? The question is: when is our evidence good enough for public presentation, say in the form of publication? With the pressure to produce results we might sometimes struggle with our temptation to publish with pre-mature evidence. Have we not all experienced this? In Japan, we had this Obokata case. Why did that happen at all? A researcher told me that in life science, there seems to be more ambiguity, and therefore, more scope for interpretation.

(Poudyal) True. But with that particular case, the experiment appeared to be unintentionally flawed.

(Werner) There are cases in the experimental sciences of deliberate fraud... In the theoretical sciences, it's not so much of a problem since the published paper is the complete record.

(Higuchi) Cold fusion is a very interesting example. Back in the 1980's, there were scientists claiming that they could induce fusion reactions at a much colder temperature. In the end, no one could replicate it. When it comes to science, it gives more leeway to experiments in terms of catching flaws. I think the difference between the physics case and the Obokata case is how closed, exclusive the research community is. For Obokata, it has a lot to do with the first authorship, the patent and so on. At around the same time, a similar thing in experimental physics could have been a scandal, i.e., the discovery of something faster

than the speed of light. But, it was not a scandal, because the data was open. Everybody just jumped at it, and tried to figure out if it is true or not.

(Mak) That shows how, institutionally, openness is an important criterion for the truth to come out.

(Christian) I think the point that Higuchi raised is also interesting from another point of view because it shows that scientists are sometimes pushed toward publishing before their work is actually ready to be published. I think this is partly because of this trend of economization of academia that talks about consuming knowledge, and asks for measurable results.

(Higuchi) I think everyone has that tension. You would like to have more evidence or sources examined, but in order to make sure that this paper is published before the end of a certain fiscal year, you just have to go with what you have.

(Mak) Wouldn't you think that working in such environments, the researchers would be prone to produce rather shaky works, with the partial truth or even untruth that we were talking about?

(Higuchi) The hyper-pressure, hyper-speed academic environment, is not how the academics should be to begin with.

(Okita) It seems to me that it was because the system of evaluation has adopted more of a business model; partly also because it's difficult to judge the quality of some papers. As a result, especially for the younger researchers the number of their publications may become more significant than their quality.

(Christian) Speaking of quality, it often isn't easy to say what the impact of the paper would be. In the mathematical sciences sometimes a paper might be decades old, and is then found to be relevant later for an important theory.

(Okita) Exactly, but in the meantime, we have to survive and get acknowledged. We may not be able to wait until

your theory is discovered, and praised, after you're dead.

(Poudyal) I suppose we just have to work with the business model without affecting the quality of our research. With this amount of money, and this amount of time, I can achieve what I can and continue. In the context of truth, my hypothesis is this: it's true or false, right? That becomes a dynamic concept, and might change, update every five years. As long as we maintain the continuity, we should be fine. The issues Higuchi described arise only if you cannot maintain such continuity in your work.

(Mak) When you produce your research results, do you always have that continuity in mind? Or do you worry who is going to use it, or how it is going to contribute to your field? In humanities, researchers are always accused of producing something that no one cares about, and that has no impact on society. Do the scientists not succumb to this kind of utilitarianism critique?

(Poudyal) I think it's very tricky nowadays because the research data is easily accessible. It's very important how you word your results because that information goes to a lot of people. We have to be responsible, keeping in mind how the media is going to take this result, especially because this can have a lot of health impacts for people.

The biggest thing at the back of my head used to be, at one point, "How will this get me the next grant?" But now it's more like, "How will this be perceived by somebody who is interpreting my work?"

(Werner) Would you be held personally responsible?

(Poudyal) No, nobody cares. (Laughs) They wouldn't even see my name on the paper, but as scientists, I think it's part of our responsibility.

(Okita) These issues with the consumption and social impact of truths may not be so relevant to the scientists who work mostly with theories. In some cases, they may be closer to humanities...

(Mak) In terms of relevance, or





irrelevance! (Laughs)

(Werner) The immediate impact of theoretical science is, of course, marginal, but the ultimate impact might be huge, and an example from history is electromagnetism. In the early 19th century, electromagnetism was a very academic pursuit; it was used in the fair grounds to show interesting experiments like arcs of light, and so on; but afterwards Maxwell unified and thus created the theory of electromagnetism. Where would our society, nowadays, be without electromagnetism?

(Mak) Even in humanities, obscure ideas may end up having a huge impact on society. Look at communism or how the Nazis appropriated the Aryan theory and turned it into their ideology. But let us return to the topic of truths and our roles as researchers. For example, what Coates was saying about this issue with the "comfort women". How do you feel about your role when you produce a paper on this topic? Are there wrongs in history that are going to be righted by your work? Will you present the truth even if it may offend some people?

(Coates) As Toshi [Higuchi] said, you're always trying to think about how to represent perspectives that are not represented in the academy, and by the political elite. In the case of the "comfort women", academics are definitely trying to right some historical wrongs; but really when you're talking about oral histories and personal testimony, there can't really be a concept of untruth because

memories are fluid. I think the format in which you disseminate your findings from oral history is becoming increasingly important because oral history and personal testimony can't stand up against bureaucratic paperwork or text on the same basis.

(Mak) Presenting one's views through appropriate medium and manner is always important. We should definitely avoid any kind of misrepresentation as that could lead to unnecessary dispute. However, there are sometimes conflicts of interests which we cannot avoid when we present the unpleasant truth. As academics do you feel that taboos and such problem areas are an issue in your research?

(Okita) In my current research, I do deal with the very sensitive issue of sexuality in Hindu tradition. The lay Hindu people are sometimes annoyed by certain parts of my work, which examine God's sexuality.

(Mak) What made you interested in this subject in the first place?

(Okita) To put it very simply, I think there are certain aspects of Hindu traditions that need to be addressed, and discussed, which has been swept away partly because of their colonial legacy.

(Mak) My research on the transmission and exchange of historical sciences has a lot to do with ancient cultures and the contact among them. Most people would like to think: this is Chinese, this is Indian, this is Greek; or this is "ours" and "others" have no right to talk about this. In reality, culture and identity are much more fluid than what most people think. I am often surprised to see how some academics may become very emotional when it comes to the issue of cultural identities, particularly their own. Nowadays we have a more much more dynamic kind of intercultural dialogue than before, though

academic chauvinism can still be felt in certain circles from time to time. I feel that I would get into this kind of controversy precisely to make people think about these issues, to challenge people's mindsets. Who are the Asians, who are the Japanese, or Chinese?

(Poudyal) I think it has also to do with what stage in your research career you are in because at the moment I think we can afford to take a few risks, and work on controversial subjects.

(Mak) This is a very rare and privileged time that we have.

(Poudyal) Absolutely, and I think we should make the most of it, and I'm very happy doing that. Medical science is very commercialized now, and we've got a lot of pressure from the industry or funding agencies to present your evidence in a different light. I try to differentiate between being very brave because I'm young, and I can take a few risks, and speak the truth.

(Werner) The same is true for the physical sciences and my work.

(Coates) In the humanities, basically you're always interrogating society's dominant fantasies. In the process, you're going to make controversy because the dominant fantasy is dominant for a reason. It provides something that makes it easier for people to live, and to order their worlds. People get very angry because that's something that they have structured their life around.



(Higuchi) As a good historian, I never really start off seeking a controversy, but the controversy catches me later. When I started my research on radioactive fallout in 2000, no one really cared; but once the Fukushima accident happened, everybody started asking what I'm doing because one of the main parts of my story is about low-dose radiation, which is of course as controversial as anything could be. The interesting thing is I always feel a bit of distance from what's going on in Japan. I feel more like an extraterrestrial alien coming from another planet called the United States.

(Mak) In a way you're in a privileged position because you have access to different perspectives, isn't it?

(Okita) I guess also part of the issue is that you are, after all, Japanese; so the Japanese audience expected you to be supportive.

(Higuchi) It is both good and bad. The bad thing is that I'm not an insider. So, I have to be aware not to offend the people actually affected by the situation. It doesn't make me timid, however, because I do think if there's a controversy, there should be a third way of looking at it.

(Mak) On this note, let us wrap up today's dialogue. On the topic of truths, we have covered more topics than we thought we would: the necessity of being open with your discovery, originality and risk-taking, the keen awareness of issues related to trust, authority and power, and last but not least, responsibility and sensitivity as to how your work may affect other people and the world at large. All these are challenges we as young researchers have to confront in our pursuit of knowledge regardless of our discipline. Let me say thanks to all of you.

海外渡航記

Washington, D.C

Sarah S. Kashani

Since April 2015, I have been conducting research on immigrant entrepreneurship and ethnic economies in the Washington Metropolitan Area as a visiting scholar at John Hopkins University. Immigration and entrepreneurship are two central themes in the history of the United States. The topics are closely interrelated, since the United States developed a strong culture of entrepreneurship as it became the quintessential immigration country in the nineteenth century. Empirical studies confirm that self-employment exerts a strong appeal for immigrants, as other avenues of social integration and advancement are often more difficult to access. While the experience of navigating between cultures can be uncomfortable and challenging, it can also be an asset that sparks creativity and creates new possibilities for entrepreneurship. However, the question of which cultural and social factors nurture entrepreneurship remains open. As an economic anthropologist, I believe a detailed study of immigrant entrepreneurs in the United States will add significantly to the topic and bring important comparative insights to other societies worldwide, especially Japan, which not only suffers from a low rate of entrepreneurship but also lacks multicultural policies at the state level and continues to close its door to immigrants and refugees despite its demographic and economic challenges.

There is no better place than Washington, D.C. to be conducting my current research. In addition to having access to the Library of Congress, the second largest library collection in the world, the Washington Metropolitan Area, including Maryland and Virginia, has the third largest Korean community in the United States, which is the focus group of my ethnographic field research. Through my research,

I explore the ways in which newcomers create businesses, how local economies facilitate minority entrepreneurship and the ways in which Koreans mobilize their ethnic cultural identity for economic resources and advancement.

Being in D.C. has also encouraged me to delve further into how my research can affect immigration policies and the importance for pragmatic and thoughtful responses to the challenges and opportunities that large-scale migration presents to communities in an increasingly integrated world. D.C. is a metropolis for numerous nonpartisan, nonprofit think tanks and I am able to have a dialogue with local, federal and international policy-makers, law enforcement officials, NGO professionals as well as academics with an immigration and ethnic entrepreneurship research agenda. I have been working closely with the Migrant Policy Institute, giving seminar talks, contributing to their journal and co-organizing a symposium on immigrant and refugee integration through government policies and diversity entrepreneurship. I also take part in a collaborate research project which sheds new light on the entrepreneurial and economic capacity of old and new immigrants by investigating various immigrant communities and ethnic economies comparatively across multiple generations. I am extremely grateful for the Hakubi Center for providing me with the opportunity to conduct my research overseas and recognizing the importance of transnational, multisited research projects that go beyond national borders.

(さら かしやに)

Library of Congress, Thomas Jefferson Building,
Washington, D.C.



The way to humankind's diseased heart...

Hemant Poudyal

Research over the past couple of decades has given scientific credence to an old English proverb "the way to a man's heart is through his stomach". However, in our time, the "stomach way" usually leads to obesity, diabetes and a diseased heart in both men and women! The modern human diet is characterised by high amounts of refined sugars and fat and low amounts of vegetables and fruits (infamously called the cafeteria diet) which is thought to increase the risk of many chronic diseases including heart disease.

There are several hypothesis on how the cafeteria diet damages the heart. The most popular since the 1970s has been that nutritionally-poor, energy-dense diets primarily cause dyslipidaemia (increased cholesterol and triglycerides), obesity, and diabetes that ultimately leads to heart damage. As a young(er) researcher at the start of my Master's degree research project almost a decade ago, this hypothesis raise many questions for me including:

1. Which components of the cafeteria diet (sugar, fat, or lack of fruits/vegetables) causes obesity and diabetes?
2. Can nutrients also directly damage the heart?
3. Does obesity and diabetes cause comparable damage to the heart?

My research during my Master's degree and PhD naturally focused on the first question. I looked at the effects of different types of dietary fat in animal models and showed that not all fats induce heart damage but the ones that do almost always also promote obesity and diabetes. Further, adding fruits and vegetable to the cafeteria diet also prevented obesity, diabetes, and heart damage.

In my Hakubi project, I sought to explore the role of sugars in heart disease. Specifically, I looked at the effects of glucose and fructose, the two most common sugars in our diets, the latter being predominant in the cafeteria diet. These studies suggests that a fructose-rich diet does not promote obesity or diabetes, at least in the short-term, but still damages the heart, suggesting a direct action. In contrast, a glucose-rich diet promoted body fat storage but did not induce diabetes or heart damage. This result clarifies my first two questions, and I have now identified some of the specific dietary sugars and fats that cause obesity and diabetes. I have also found evidence that some of these nutrients may have a direct effect on the heart.

At the start of my Hakubi project, I had also started exploring my third question, which is quite controversial. I started monitoring heart structure

and function in rats that are either obese or diabetic due to genetic predisposition but are consuming a balanced rodent diet. Preliminary results suggest that diabetes but not obesity caused extensive heart damage! This result supports recent paradoxical findings that obesity may even be protective for the heart and obese individuals have better survival in certain population groups such as the elderly (the obesity paradox).

Therefore the generalisation that nutritionally-poor, energy-dense diets cause obesity and diabetes that ultimately leads to heart damage may not be accurate. We are now beginning to understand that specific nutrients within nutrient super-families of fats and sugars are unique and some may directly affect the heart independent of diabetes and obesity. Perhaps, it is time to consider dietary recommendation frameworks based on specific nutrients instead of the current nutrient super-family based framework. Also diabetes, irrespective of the diet, can cause heart damage. However, I am now developing two new questions that I aim to address in the next few years:

1. What is the mechanism for the direct effects of fructose?
2. Does obesity really increase the risk of heart diseases in humans?

(へまんと ぼうどやる)



Goto-Kakizaki (left) and Zucker Fatty (right) rats- Models of diabetes and obesity-induced heart damage.

森にひとり

細 将貴

月明かりに照らされて群青の海が広がっている。島を渡る湿った風がほおを撫で、背にした亜熱帯の山野へと吹き抜けていく。日暮れの前に降った雨は、今ごろ薄い霧となって森に立ち込めていることだろう。野帳に日付と時刻を記入し、車を降りながら懐中電灯を灯す。谷筋へと続く、簡易舗装のよく滑るこの道を1年ぶりに歩く。昨夏の台風になぎ倒されたと思しきハマユビワの大きな幹が、多数のひこばえを伴って道を塞いでいる。久しく木陰に甘んじていたクワズイモが、開けた夜空に向かってここぞとばかりに大きな葉を広げている。迂回して下草のなかを進むときには足運びに注意が必要だ。陰に潜むサキシマハブをうっかり踏んでしまえば調査どころではない。鉈を振るって道を拓いていく。苔で覆われ始めた、白いビニールテープが木の幹に見えた。センサスルートの始点である。

20代から30代前半にかけての短からめ時間を、私は独りこの西表島の森で過ごした。出会えば奇跡と言って差支えない稀産のヘビ、イワサキセダカヘビを捕えるためだ。このヘビは、珍しさだけでなく生き様の変わりぶりも屈指のもので、本種を含むセダカヘビ科の一族はカタツムリとナメクジしか食べないとされる。この幻のヘビを追うことは、ダーウィンの進化理論では説明できないとされていた、左巻きカタツムリの謎を解くためには必要なことだった。

カタツムリは、殻の巻き方向に応じて右巻き型と左巻き型に分けられる。どちらなのかは種ごとに定まっており、種内に両方の型がいる場合はほとんどない。逆巻きの相手とは交尾がしづらいからだ。仮に種内に両方の型がいたとしよう。数の少ない側の型は交尾相手に恵まれないため、自然選択を受けて徐々にさらに数を減らしていくと予想される。つまり最終的には元から多数派だった側の型に統一されてしまうのだ。ところがこの論理は、右巻きの種も左巻きの種もいるという現実にとって大変に都合が悪い。逆巻きの種が進化するためには、種内に突然変異で出現した逆巻き型がこの繁殖上の不利を乗り越え、子孫を増やすという過程を経る必要があるからだ。この進化過程には、何らかの未知のトリックが働いていたはずだ。

トリックスターは、きっとカタツムリを食べるヘビだ。私はそう信じた。最初の祖先が右巻きだったからだろう、カタツムリの世界では右巻きの種が圧倒的に多い。カタツムリの大敵からすれば、餌のほとんどは右巻きになるわけだ。そのため、天敵は右巻きを食べるのに特化する可能性がある。そのような「右利きの捕食者」がいれば、左巻きの種は多少なりとも進化しやすくなるはずだ。セダカヘビは実は右利きで、その分布する地域に限って左巻きカタツムリは頻繁に進化してきたのではないだろうか。

幸運と努力の甲斐あって、この「右利きのヘビ仮説」はいくつもの証拠から実証されたと言ってよいところにまで昇華することができた。その一方で、進化理論のほころびを繕う創造的な段階は完結したともいえる。そこで私は、この系を種分化研究のモデルたらしめることを目指すことにした。

種分化とは、ひとつの種から新しく別の種が進化してくる現象、すなわち種の起源のことである。生命の進化において最も普遍的な現象のひとつであるとともに、ダーウィン以来綿々と解明が進められてきた究極の謎でもある。

この数年来、私は舞台を台湾に移し、新しい展望を求めて悪戦苦闘を続けている。面積では九州の半分ほどしかないとはいえ、最高峰が富士山を超えるこの島の自然は奥が深い。つい先日も新種と考えられるカタツムリを見つけてしまった。生物多様性の真の姿に近づくことができたのは間違いないが、道のりの遠さに目眩がしてしまう。いったい、どの種がどこまで分布しているのか。共存する種の組み合わせに発見したつもりのおぼろげな法則は、どこまで適用できるのか。そもそもこの法則の意味するところは何なのか。今はまだわからないことだらけで、成果が形になるまでにはさらに時間がかかりそうである。また今年からは、意を決して解読を始めたカタツムリ・ゲノムの茫茫たる山野も拓いていかなくてはならない。月明かりを道しるべに、今夜も森にひとり。

(ほそまさき)



新種と思われる左巻きのカタツムリ。

当事者の視点から世界を読み解く楽しさ

加藤 裕美

私は、人と自然の関係に興味をもち研究を始めました。私の専門は文化人類学で、同時代の地球に生き、異なる生活世界のなかで生きる人々を、当事者の視点から理解することを大切にしています。研究の対象としているのは、マレーシアのボルネオ島の熱帯雨林に暮らす人々です。特に、長年森の中で狩猟や採集をして暮らしてきた、狩猟採集民と呼ばれる人たちを対象にしています。

彼らとの出会いは、修士課程の頃です。修士論文の調査地を決めるために、ボルネオ島のあちこちを訪れて予備調査をしていた私の心を奪いました。それまで訪れた村々とは全く異なる環境のなかで生活をし、自然と一体になった、生き生きとした生き様がとても魅力的に映りました。調査を行っているグループは全人口二百数十人の少数民族集団です。マイノリティであるがゆえ、これまで史料や先行研究の中では捨象されてきており、本格的な人類学研究もおこなわれてきていませんでした。

長い間、森のなかを遊動して生活をしてきた彼らの、動物や自然環境に対する知識は素晴らしく、非常に緻密な認識をしています。しかし、マジョリティである農耕民や政府など、外の世界と関わると一転して「遅れた人たち」、「貧しい人たち」というレッテルを貼られてしまいます。政府やマジョリティ集団から見ると理解されない行動も多く、混乱をもたらす、不法である、あるいは正しくないと評価される場面も多々あります。そうした彼らの生き方は、NGO 的な視点では開発や森林伐採によって生活を翻弄されている弱者、あるいは政府からすると、発展させるべき対象として扱われてきました。しかし、こういった文脈では、彼らが経験してきた歴史、日常生活で蓄積してきた豊富な知識、綿密な社会関係は捨象されてしまいます。この部分に着目したいというのが私の研究の出発点です。

現地調査では、現地語を習得し、人々の一挙手一投足に目を向け、発する言葉の一つ一つに丁寧に耳を傾け記録します。社会の一員となれるように、人々のありとあらゆる活動に参加し実践します。村には、養父母といった擬家族があり、彼らも私という遠い国から来た娘と関わることを楽しんでくれています。調査中は彼らに話をしてもらうことが生活の一部になるため、夜時間があるときに聞き語りをしてもらうことが多くあります。時には、インタビューの趣旨ではない、昔話や伝説、動物の物語を語ってくれることもあります。そういった世間話にも彼らの

世界観の一端を覗くことができます。

日本では、調査中に記録したインタビューを書き下ろしたり、フィールドノートの内容を整理して分析したり、先行研究を読み勉強をする日々です。そのような研究生活で励みになるのは、海外の研究者が新しく発表した論文などを読んで勉強し、刺激を得ることです。また、同じような地域で研究をしている世界各地の研究者たちと交流するのも大変刺激になります。マレーシア、アメリカ、フランス、イギリス、フィンランドなど世界各地の研究者と国際会議で会い、研究のアイデアや調査地での現象の解釈について議論できることはとても楽しいです。そして、私も彼らに負けないように、良い研究ができるように頑張ろうと励みになります。また日本で研究に疲れたときに、現地の人たちと電話をして世間話をするのも、気分転換になり研究の励みになります。

私は人類学が専門ですが、最近は調査対象を広げ、生態学者や地理学者との共同研究も始めました。同じ現象を見ているのに全く異なるアプローチ、分析のしかた、アウトプットの出し方をするのが興味深いです。

これまでの研究生活では、学士、修士、博士の頃に刺激を受け与え合えられる仲間巡りに巡り合え、的確なアドバイスを下さる先生や先輩方に恵まれたこと感謝しています。今後も自分の好奇心を研ぎ澄ませ、調査地の人々と冗談を言って笑いあえる関係を大切にしていきたいです。また、世界中の研究者と同じ土俵で議論ができ、刺激を与えあえるような研究を続けていきたいと思います。

(かとう ゆみ)



国際狩猟採集社会会議での発表を終え、ボルネオ研究者とディスカッション (2013年6月イギリス、リバプール大学にて)

白眉研究ピックアップ

Why Does A Broken Heart Feel So Good? From A South Asian Perspective

Kiyokazu Okita
置田 清和

'Why she had to go? I don't know she wouldn't say' sang the Beatles. From *Romeo and Juliet* to *Yesterday*, the world is filled with songs and dramas with the theme of unfulfilled love. We listen to and watch them repeatedly and some of us even cry. However, if we reflect on our own experience of broken hearts we remember resentment, anger, disappointment, and injured pride. It is mostly a negative experience, something we do not wish to be reminded of again. So why do we sing songs of separation and watch dramas with tragic heroines?

According to *The Treatise on Drama (Nāṭyaśāstra: ca. 3rd ~ 4th century)*, a classical Sanskrit text attributed to the sage Bharata, the answer lies in the fact that emotions in poems and dramas are aestheticised. In our daily life, we experience various emotions such as anger, envy, and delight. Bharata names them foundational emotions (*sthāyibhāva*). When we listen to a song or watch a drama, these mundane emotions that lie in our consciousness are artificially heightened. Bharata calls this heightened emotions aesthetic experience (*rasa*).

Commenting on Bharata's theory of aesthetic experience, Abhinavagupta in the 9th century adds an important concept of generalization (*sādhāraṇīkaraṇa*). He explains that when we listen to a singer's song about the pain of broken heart, we do not experience that feeling of hurt as something personal. It is a *generalized* feeling that is artificially constructed through the words in the song and performed by the artist. Since aesthetic experience is constructed and

since it does not belong to us personally, we can enjoy it even when it is about the feeling of a broken heart.

Incorporating this theory of aesthetic experience into a religious context, Rūpa Gosvāmī in the 16th century further argues that this aesthetic experience becomes most intense when it is positioned in relation to God. According to his theology, God is conceived of as a handsome young male, and devotees as his young female lovers. For devotees, God is the ideal object of love since he embodies the highest beauty. Thus Rūpa's teacher Caitanya sings, 'He may break my heart by being absent or he may do whatever he likes with other women. Still, he alone is the lord of my breath and no one else.'

(おきた きよかず)



Mechanism of Cell Death During Crisis: A Novel Role of Telomeres In Tumor Suppression

Makoto Hayashi
林 眞理

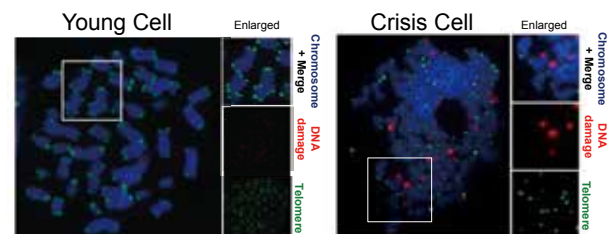
クライシス期における細胞死メカニズム：細胞腫瘍化の抑制におけるテロメアの新たな役割

Human somatic cells do not divide infinitely, as their telomeres, nucleoprotein complexes at chromosomal ends, become shorter and shorter every time they divide. Under normal conditions, telomeres protect chromosomal ends from being recognized as DNA damage. Once telomeres reach the critical length, DNA damage response is activated (telomere deprotection), which functions as a barrier against tumorigenesis by inducing irreversible cell cycle arrest called senescence. When senescence is bypassed by the inhibition of cell cycle arrest (*e.g.* inhibition of p53, a tumor suppressor protein), cells continue dividing beyond the critical point and enter a crisis stage. This stage is characterized by massive cell death, which functions as a second barrier against tumorigenesis, as cells that survive this stage can become tumors. Although chromosomal end-to-end fusions caused by loss of telomeres and genome instability are well-characterized features of crisis, the mechanism underlying cell death during crisis has not been fully understood. We previously discovered that prolonged arrest in mitosis of the cell cycle (mitotic arrest) also induces telomere deprotection (termed mitotic telomere deprotection) similar to shortened telomeres at senescence (Hayashi MT, *et. al.*, *Nature Structural & Molecular Biology*, 2012; 19(4): 387-394). This prompted us to ask if mitotic telomere deprotection has any physiological function.

Live cell imaging analysis revealed that cells in crisis stage display the spontaneous mitotic arrest phenotype. This mitotic arrest is often accompanied by cell death during mitosis or in the following cell cycle. The mitotic arrest phenotype in crisis cells was dependent upon loss of p53 and was suppressed by overexpression of telomerase, an enzyme that

elongates telomeres, indicating extreme telomere shortening and resulting telomere fusion as the underlying cause. In support of this observation, telomere fusions induced by knocking out the telomere protecting protein TRF2 caused the mitotic arrest phenotype in young cells. This suggests that telomere fusions alone trigger the mitotic arrest phenotype.

Cells in crisis display an increased level of mitotic telomere deprotection. Suppressing the mitotic telomere deprotection by TRF2 overexpression shifted the fate of crisis cells in mitotic arrest from death to cell division. Conversely, the proportion of crisis cells that died during prolonged mitosis increased by exacerbating the mitotic telomere deprotection through a partial reduction of TRF2. These results revealed a novel tumor suppressive role of telomeres; telomere fusion during crisis induces mitotic arrest and the resulting mitotic telomere deprotection, which functions to promote cell death during mitotic arrest. Such cell death ensures that cells with telomere fusion, which potentially drives tumorigenesis, are removed from the population. (Hayashi MT, *et. al.*, *Nature*, 2015; 522: 492-496) (はやし まこと)



Cells in crisis show mitotic telomere deprotection phenotype.

気候の温故知新

Understanding the past climate to predict the future

Hiroki Tokinaga

時長 宏樹

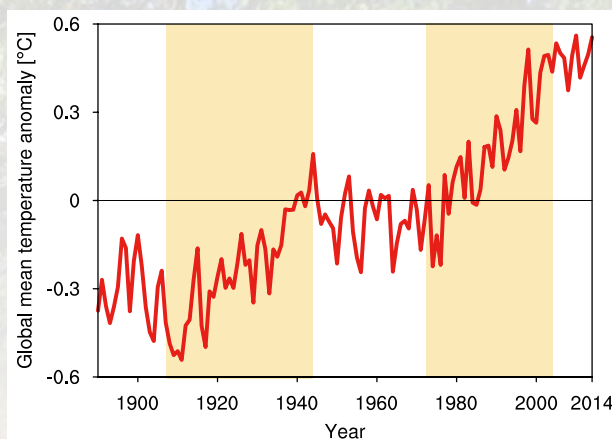
The Earth's surface, as measured by the global mean air temperature, has warmed by about 0.84°C since 1900 (Fig.1). But the warming rate is not uniform over time. It exhibits two phases of rapid warming separated by cooling or hiatus periods. According to IPCC's Fifth Assessment Report, it is extremely likely that the warming since the mid-20th century is attributed to the increased emission of greenhouse gases caused by human activities. By contrast, it remains unclear why the rapid warming occurred during the early 20th century, because the anthropogenic greenhouse gas impact on the Earth's temperature was much weaker than in recent decades. Therefore, the early 20th century is a very important epoch to learn how intrinsic climate variability influences global temperature.

One possibility that caused the past rapid warming might be the inter-decadal variability of sea surface temperature. Especially the tropical Pacific is known to warm the Earth's surface by changing atmospheric circulation and rainfall patterns as in the 1997/98 and 2015/16 El Niño events. It has long been challenging to understand the tropical Pacific variability during the early 20th century due to limited observations over the ocean. However, as a result of close investigation with various error-corrected historical observations, we have finally identified physically consistent patterns of sea surface temperature, sea level pressure, air temperature, wind, and precipitation changes. The sea surface temperature changes during the early 20th century are characterized by a significant warming in the equatorial Pacific like El Niño. These findings suggest that the inter-decadal variability of tropical Pacific sea surface temperature plays an active

role in modifying the warming rate of global mean temperature.

Will global warming accelerate or slow down in the next decades? The past 6-year change of tropical Pacific sea surface temperature (2010-2015) actually resembles the El Niño-like pattern of the early 20th century, presumably suggesting that the global mean temperature will accelerate again. It is strongly predicted that the Earth's surface will warm more rapidly than anticipated if the tropical Pacific keeps warming in the next decades. We need to carefully monitor and understand how the tropical Pacific variability accelerates global warming and affects regional climate.

(ときなが ひろき)



Time series of global mean temperature anomaly since 1890

活動紹介

白眉の日 2015 報告

白眉研究者とその家族が交流する白眉の日（ホームカミングの日）。離職された方も参加されるので、同窓会的イベントとも言えます。2015年で4回目を迎えました。

Stefan Gruberさんの司会で、離職された山崎正幸さん、岸本展さんから講演をしていただきました。山崎さんは蛋白質凝集メカニズム研究、現所属の龍谷大学での研究と教育についてお話いただきました。岸本さんは、堀先生からの「数学はむしろ哲学」との言葉に戸惑いを表わされながらも、微分方程式の数学研究の奥深さを感じさせるお話をしていただきました。離職された方々がどういう思いで現役白眉としての研究生活を送り、また次のステップへと移られていったのかは、将来について考える上で興味深いお話でした。

また、新たに6期メンバーの簡単な自己紹介、江間さんたちの寸劇、前センター長の田中先生から現在のミャンマーでの御活動のお話、現センター長の光山先生からこれまでに感じられた白眉研究者の共通点についてのお話がありました。「ビッグマウスであることと、何かとかこつけて飲み語り合うのが好き」というのは、6期のメンバーだけに共通することではなかったようです。

加賀谷 勝史

そして、さらに多くのご家族も含めた懇親会。子供達が虫をつかまえて遊び回る中、おだやかで、あたたかい雰囲気つつまれながらおおいに飲み語りあうことができました。来年度の白眉の日は、8月6日(土)です。今から楽しみです。

(かがや かつし)



第4回白眉の日 2015年8月1日 @KKR ホテルく に 荘

アジア伝統科学国際ワークショップ 2015：古今の世界観

International workshop on Traditional Sciences in Asia 2015: An Interdisciplinary Investigation into Overlapping Cosmologies

樋口 敏広、Bill Mak

2015年6月17日から19日にかけて、「アジア伝統科学国際ワークショップ2015：古今の世界観」と題するシンポジウムが開催された。京都大学白眉センター、京都大学人文科学研究所科学史研究室、京都大学宇宙ユニットの共催を得てビル・マクさん（第4期）が中心となって組織した本シンポジウムでは、国内外の天文学史の研究者と現代の天文学者が一堂に集まり、古代と現代のアジアにおける天文学の系譜と地域を超えた知の伝播や受容についてそれぞれの研究を踏まえて議論を交わした。白眉プロジェクトからも、初日の挨拶にお越しいただいた光山正雄先生、企画の立ち上げから参加した私、ヘマント・ポウドヤルさん、ジェニファー・コーツさん（いずれも第5期）、そして会場から鋭い質問を投げかけたマークス・ワーナーさん（第6期）といった多くの人々が参加した。本企画では、口頭発表やポスターセッションを通じて参加者間の議論を深めたのみならず、市民に開かれた公開講座や京都における天文学的な史跡を巡るツアーを通じてアウトリーチと体験的学習の場を提供したことが特筆される。本企画が成功裏に終わったことで、今後も白眉有志を中心に国際的、学際的、複合的な知的交流の試みを自発的に続けていきたい。（ひぐち としひろ）

Disparate and often conflicting worldviews and cosmologies exist within most cultures. How did our understanding of the universe evolve, and how was astral knowledge communicated, adopted, and transformed as they crossed linguistic and cultural borders in pre-modern Asia? How do cosmological ideas from past and present coexist with or collide against each other? How do scholars from different disciplines understand and explain such phenomena? To answer these questions, a three-day international workshop on Traditional Sciences in Asia 2015: An Interdisciplinary Investigation into Overlapping Cosmologies, was organized at Kyoto on 17-19 June, 2015. In total, twelve Japanese and international scholars presented their latest research related to the topic, together with two keynote public lectures in Japanese delivered by Professor Kaifu Norio (President, International Astronomical Union) on 宇

宙にまつわるアジアの神話・伝説と宇宙観 Myths and Legends on Stars, and Universe of Ancient Asia, and Professor Yano Michio (Professor Emeritus, Kyoto Sangyo University) on 宿曜道にみられるインドの天文学と占星術 Indian astronomy and astrology as seen from the Japanese Buddhist astral school Shukuyōdō. Participants of the workshop were welcomed by the opening speech delivered by Hakubi Center Director Professor Mitsuyama Masao. Among the highlights of the event were a guided tour to the historical sites of astronomical interest in Kyoto, poster session, roundtable discussions, and an exhibition on the history of research in historical astronomy at Kyoto University at the historical annex building of the Institute for Research in Humanities. The event was jointly sponsored by three academic units of Kyoto University: Hakubi Center for Advanced Research History of Science Laboratory, Institute for Research in Humanities and Unit of Synergetic Studies for Space, and was jointly organized by Hakubi researchers Bill Mak, Hemant Poudyal, Toshihiro Higuchi, Jennifer Coates and members of other institutes. website: iwtsa.wordpress.com (びる まく)



Prof. P. Skilling presenting his paper on a cosmological manuscript from Thailand



Participants of the IWTSa 2015



Prof. T. Takeda welcoming participants of the public lecture



Workshop posters

第3回白眉シンポジウム「邂逅の作用反作用：歴史・芸術・フィールドの視角から」（2016年1月25日）

小石 かつら・和田 郁子

2016年1月25日（月）（13:00 - 17:00）、京都大学芝蘭会館山内ホールにおいて、第3回白眉シンポジウムを開催しました。「邂逅」および「作用反作用」という2つの言葉をキーワードに据え、人間とはどういうものか、人間はどのような社会をつくってきたのかを考え、議論の場をつくるのが、今回のシンポジウムの目的でした。

プログラムは、王柳蘭氏（4期）による「タイに生きる中国系スリムの葛藤とさまざまなイスラーム」で始まり、つづいて長崎大学多文化社会学部准教授・鈴木英明氏が「フィールドと文献を往復する：インド洋海域史の歩き方」の題目で発表されました。さらに和田郁子（5期）による「近世インド・港町の『オランダ』人社会に生きた女性たち」の報告後、休憩を挟んで、小石かつら（3期）による「改宗ユダヤ教徒としてのメンデルスゾーンとドイツ祝典音楽」、ジェニファー・コーツ氏（5期）による「李香蘭・山口淑子・シャーリー＝ヤマグチ：時空を超える邂逅」の2つの報告が行われました。総合討論では、個々の報告への質問に加え、全体のテーマに関わる発言も出され、司会の中西竜也氏（3期）が指名に困るほど盛り上がり、予定されていた1時間は熱い議論のうちに終了しました。

記録的な大寒波にもかかわらず、当日の会場は60名近い参加者で大盛況となりました。他方で、前日より西日本を見舞った暴風雪のため、とりわけ九州では交通網が完全に麻痺していました。飛行機は24日から25日にかけて多数の便が欠航し、陸路も新幹線はもとより在来線も運休、高速道路も通行止めとなるなか、ゲストスピーカーの鈴木氏が長崎

から一步も出られないという緊急事態（！）に陥り、やむを得ず、電気通信技術を駆使したシンポジウムとなりました（それはそれで見応えがありました）。

今回は邂逅がキーワードでしたが、これにはさまざまな捉え方があると考えられます。人と人との出会い、新たな思想や制度との出会い、未知のものとの出会い。それらを経験した人が作り出すさまざまな作品。それらの作品を資料として研究に取り組む研究者。その多様な、しかし基本的に一回性のものである邂逅が、何を生みだし、どのようなうねりをもたらすのか。邂逅から引き起こされるダイナミックな作用反作用について、今後も議論の発展がおおいに期待されることです。
（こいし かつら・わだ いくこ）



白眉セミナー

白眉センターでは原則として8月を除く月2回（第1・3火曜日 16時から）センターの全スタッフが出席するセミナーを開催しています。各研究者が順番に企画担当者となり、様々なトピックについて議論が行われます。2011年度からは通常英語で発表・質疑応答を行っています。以下に2015年度のセミナー情報を掲載します。

平成27年

- ◆ 4月21日
Marcus Christian
Gravity and light: an introduction to gravitational lensing
- ◆ 5月19日
瀧川 晶
実験室からの宇宙鉱物学：宇宙塵は何を語るか？
- ◆ 6月2日
山吉 麻子
生命現象を支配する遺伝子を狙い撃つ
- ◆ 7月7日
原田 浩
腫瘍内酸素環境の多様性とがん治療の効果に及ぼす影響
- ◆ 7月21日
榎戸 輝揚
Known knowns, Known unknowns, and unknown unknowns ~測ることで見えること~
- ◆ 9月1日
林 眞理
染色体の終わり（末端）が制御する細胞の終わり（死）のお話
- ◆ 9月15日
石本 健太
微小世界の遊泳術
- ◆ 10月6日
末次 健司
光合成をやめ、菌に寄生する植物たちの不思議な生活
- ◆ 10月20日
山名 俊介
素数、整数、有理数、実数、複素数、そしてモジュラー形式
- ◆ 11月10日
大槻 元
頭の中で
- ◆ 11月17日
上峯 篤史
石を読む
- ◆ 12月1日
加賀谷 勝史
シャコパンチの鹿威しフレームワークに基づく考察
- ◆ 12月15日
荻原 裕敏
石窟寺院に書かれた文字が語るもの

平成28年

- ◆ 1月19日
鳥澤 勇介
生体内を模倣したマイクロデバイス：臓器チップ
- ◆ 2月2日
飯間 麻美
拡散MRIによるがん診断へのインパクト
- ◆ 2月16日
丸山 善宏
意味の系譜：科学の統一と不統一を巡る論争
- ◆ 3月15日
金 玟秀
「ユビキチンコード」の解説

農学部教員でリレーマラソンに出場



先日、全国高校駅伝の渋滞に巻き込まれました。でも、この渋滞にはイラつきません。というのも、6年前、

高校駅伝選手たちに力をもらったからです。白眉採用面接でうまく答えられず、心は砕け、後悔の念でいっぱいになりながら今出川通りにでたとき、ものすごい速さで走りぬける高校駅伝選手を目にしました。後尾に走ってきた選手もものすごい速さです。しんどいはずなのに、懸命に走り続けています。その姿を見て、「こんなことで落ち込んでいたらあかん。みんなしんどいのに関わらず、前を向いて走ってるんだから、私も頑張らな！」と一気に前向きになったのでした。そして翌日、アメリカに帰る前に空港で買ったのはいつもの小説ではなく、世界情勢と経済の本でした。採用面接で答えられなかった専門分野以外の質問にも自分なりの意見をもって答えられるように、そして何より私自身の興味の幅を広げることの重要性を強く意識した結果の選択でした。

後悔いっぴいの面接にもかかわらず白眉に採用されて5年間、そこで経験したのは“面白いことは至る所にあり、その面白いことを研究している人が身近にいる”ということ。[「なんで?」]と思ったことに近くの人がすぐ答えてくれて、

しかも期待した以上に面白く話してくれます。いとも簡単に興味の幅が広がり深みが出てくるのです。これは、白眉だからこそ、意識せずに受けられた恵まれた環境であったと思います。一方、こういう機会は自らが発信源となり積極的に作ることが可能だということ、またそういう機会を望んでいる人達が沢山いることも、この5年間で学んできました。現在も分野交流や情報発信を進めるため、学術会議若手アカデミー社会連携分科会として分野交流を促進できるシンポジウムの開催を企画したり、研究者自らが教養を深め、分野交流ができる「未来を面白く(仮)」という会で活動を続けたりしています。

白眉での充実した5年間を終え、龍谷大学に今年4月に新設された農学部の教員になりました。この農学部の特徴は、1, 2回生が学科を横断する実習を必須でとらなければならないことです。これは、学生にとって様々な分野を学ぶ機会になるのはもちろんですが、教員にとっても学科の隔たりがなくなり、自然に交流が生まれ、お互いの分野を学ぶ良い結果を生んでいると感じています。こう見えて人見知りな私ですが、この学科横断型システムのおかげで、あまり恥ずかしがることなくスタートできました。今後は、龍谷大学農学部にとどまらず、他分野、他組織の人と交流する機会を自らが核となって作り広げることで、自分自身だけでなく、そこにかかわるすべての人の興味の幅も広げていきたいと考えています。(しおじり かおり)

塩尻 かおり

第1期特定助教、在職2010年5月2日～2015年3月31日、2015年4月1日より龍谷大学農学部 講師

ポスト白眉の日常

志田 泰盛

第1期特定助教、在職2010年4月1日～2015年3月31日、2015年4月1日より筑波大学人文社会系 准教授

小学校・中学校の校歌の歌詞に筑波山と利根川が登場していたので、地元のつもりで新天地に着任しましたが、大学の一步外では「～だっぺ」以外の方言の難易度が意外に高く、程よい緊張感の中で通勤しています。

ノーベル賞受賞者とオリンピック金メダリストの双方を輩出した国内唯一の機関で、東京大学よりも設立の古い東京師範学校を前身とし、好むと好まざるにかかわらず不断の改革が運命付けられている大学、というのが新任教職員への学長挨拶の趣旨でした。各種大学ランキング(に一喜一憂すべきかはともかく)の基準の一つである〈国際性〉は比較的高めに評価されており、様々なレベルでのトランスボーダー化をさらに推進していくようです。

私は〈人文社会国際比較研究機構〉という組織にも配属されました。国公立の文系分野の見直し論は二転三転しながら議論が続いていますが、不可逆的に台所事情が厳しさを増している情勢下でのインド哲学仏教学のポスト新設は奇跡のようでした。医学出身の学長を始め本学全体からの人文学に対する理解に支えられ、〈海外教育研究ユニット招致〉という国際力強化プロジェクトが人文社会系でも立ち上げられた中での公募発動だったとのこと、縁と奇跡が重なったことを改めて実感し、襟を正しています。

系・学群・学類という独特の組織に少し馴れた頃、おそろおそろバドミントン部の練習を覗いてみました。国内・海外の大学バドミントン界の第一線で活躍する選手、元実業団選手を含め指導者の道を志す者、パラリンピックへの出場を目指す学生など、多様な目標を抱えた部員が授業の合間を縫って切磋琢磨する一方で、2020年に向けたジュニア世代の育成や草の根的な海外交流をしていました。ちなみに今年度、男子は関東1部リーグ復帰、女子は春・秋の関東リーグ戦、東日本大会、インカレという主要大会を全て制覇しています。

スポーツを科学する本学体育会の練習を横目に、その隣のコートで教職員の羽根つきに汗を流しつつ、古典学や人社系の未来に思いを馳せたりもします。緊密な国際連携と高度にバランスのとれた多様性、組織への強いコミットメントと弾力的なバックアップ体制など「強い組織」のキーワードを模索しています。(しだ たいせい)

U16 モルディブ代表選手との交流会にたまたま同席し、大人気の学食 Marhaban の本格的ハラール料理で汗が止まらない筆者(上段左端)



青山 和司

第1期特定助教、在職 2010年4月1日～2014年9月30日、2014年10月1日より大阪大学大学院理学研究科 助教

白眉を離れ約1年が過ぎました。私は現在、大阪大学大学院 理学研究科 宇宙地球科学専攻に所属しています。当専攻には、宇宙・地球・惑星で起こる自然現象をターゲットとした様々な研究グループがあり、私の所属する研究室では、磁性体・地震・パターン形成など広い意味での統計物理学の研究を行っています。所属研究室のセミナーの話題は、物性物理をはじめ生物学、固体地球科学やX線天文学など多岐に渡っています。無知ゆえのおバカな質問を度々させていただいている私ですが、その勇氣は、白眉での研究のつぼに放り込まれた経験に支えられています。私の専門は物性物理学ですが、振り返ってみると、大学進学した当初は地学を志しており当時は地質調査の様なものに興味がありました。約10年が経過した現在、宇宙地球科学専攻への異動ということで、地学バンザイ、フィールドワークの授業に時々飛び入りで参加させてもらっています。気分がリフレッシュされると共に自然現象の面白さ・不思議さに改めて気付かされます。今は完全に個人の趣味レベルですが、こうした体験が将来何かの形で研究に繋がれば良いと思っています。

こちらに来てからは、フラストレーションと呼ばれる“人間世界のドロドロした三角関係のような状態に陥った磁石”の理論研究に教授の先生と取り組んでいます。白眉時代とは少し異なる研究テーマですが、新しいものに取り組むときはやはり楽しいですね。定期的に行う学生との議論も得るもの

が多く刺激的で、充実した日々を送っています。

白眉時代には、メンバーと議論だかおしゃべりだか分からないような話をよくしました。気づくと今の自分は、そんな環境の中で自身の研究テーマを練っているような気がし、白眉の水が合っていたのかなと思います。伏木先生、田中先生、堀先生をはじめ、白眉スタッフの方々には、4年半大変お世話になりました。将来、私を白眉で採用して良かったと感じてもらえるよう、今後も精進したいと思います。

(あおやま かずし)



学生との対話

Y UMEKUSA

エッセイ

A Report from Behind Bars

Many of my Hakubi colleagues will have noticed my absence this year. The reason for this is that I have been in prison. University officials should not worry, though. This has not been due to bad behavior on my part, but rather an important part of my fieldwork. I am currently working on a research project that looks at how different countries around the world treat their imprisoned criminals, and trying to understand what lessons can be drawn from a comparison of these practices and their outcomes.

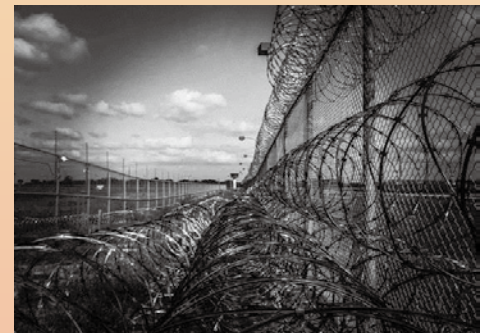
From my experiences, I have seen that challenges abound for prison administrators. Some of these can vary significantly from place to place. In Fuchu Prison, located on the outskirts of Tokyo, some of what I saw almost seemed like an old person's home, as the authorities sought to manage the dramatic increase in the number of elderly prisoners apparently willingly entering prison as a result of petty crimes. At Massachusetts Correctional Institution at Concord near Boston in the USA, and at Ranby Prison in Nottinghamshire in the UK, I found the staff's main concern was dealing with the many problems stemming from drugs that were all-too-readily available inside the walls. There were also some issues that were universal, such as how to run prisons economically and securely, whilst at the same time preserving the humanity of the prisoners, and preparing them for their eventual release.

One advantage of this diversity of problems is that it can sometimes lead to a diversity of solutions, which can help provide inspiration for other systems

Silvia Croydon

to follow. Policy-makers in the USA and the UK both look admiringly at the safety and order of Japan's prisons - there has not been a single riot in a Japanese facility since 1969, and the number of homicides or serious injuries to prison staff and inmates is remarkably low. Former Virginia Senator Jim Webb (US) has for a long time campaigned for prison reform along the Japanese model, and former Justice Secretary Kenneth Clark brought effectively the same proposal to the political agenda in Britain in 2010. In the other direction, in reforming its Prison Law in 2006 following a scandal involving inmate fatalities at Nagoya Prison, Japan has emulated systems elsewhere by introducing an independent inspection procedure in a bid to reduce the chance of such catastrophic failures occurring again.

It is my hope that through exploration of the successes of the Japanese prison system, and what more it has to learn from elsewhere, work such as mine will facilitate further international communication between policy-makers that will ultimately lead to better criminal detention practices everywhere. After all, as Fyodor Dostoyevsky told us "The degree of civilization in a society is revealed by entering its prisons", and we all want to live in a more civilized world.



受賞・報道

置田清和特定助教が、2015年度（第5回）日本南アジア学会賞を受賞しました（2015年10月6日）。

石本健太特定助教が、第10回（2016年）日本物理学会若手奨励賞を受賞しました（2015年10月）。

上峯篤史特定助教の研究が、韓国・中部毎日新聞で紹介されました（2015年11月4日）。

重森正樹特定准教授らによる講演会の告知記事、「『宇宙の謎に迫る』、22日に市民講演会」が、産経新聞に掲載されました（2015年11月12日）。

重森正樹特定准教授らによる講演会の告知記事、「一般相対性理論 最新の知見解説」が、京都新聞に掲載されました（2015年11月13日）。

末次健司特定助教の研究が、朝日新聞（「鹿児島」屋久島でヤツシロラン確認「豊かさ示す発見」）、京都新聞（「光合成不要のラン、日本初確認 屋久島で京大助教ら」）、産経WEST（「屋久島で幻のラン発見…光合成せず、台湾のみ確認」）で紹介されました（2015年11月19日）。

Bill Mak 特定准教授が、Annual meeting of History of Science Society (San Francisco, USA)において FHS Asia Essay Prizeを受賞しました(2015年11月21日)。

Hemant Poudyal 特定助教が、The 7th AASD Scientific Meeting (in Hong Kong) において The Asian Association for the Study of Diabetes による The Young Investigator Award を受賞しました (2015年11月21-22日)。

坂本龍太特定助教によるジュニアキャンパスの授業「ブータンから学ぼう！」の紹介記事、朝中高特派員レポート「『京都大学ジュニアキャンパス2015』に参加 進路考えるいきっかけに」（文責：京都市立山科中学3年・兼崎愛里さん）が、朝日中高生新聞に掲載されました（2015年12月27日）。

小石かつら特定助教の研究に関する記事「ワーグナー演奏なげ定着」が、京都新聞に掲載されました(2006年3月8日)。

中西竜也特定助教の研究に関する記事が、京都新聞「知を拓く——研究最前線」に掲載されました(2016年3月17日)。



Hemant Poudyal 特定助教の受賞

書籍

Ishimoto, K., and E. A. Gaffney

"Modelling spermatozoan swimming: its capabilities and limitations for contributing to the understanding of sperm guidance."

In *Flagellar Mechanics and Sperm Guidance*, Ed. Jacky Cosson, Bentham Science Publishers, 2015, pp.315-348.

Nishiyama, Masayoshi

"High-pressure microscopy for studying molecular motor."

In *High Pressure Bioscience - Basic Concepts, Applications and Frontiers*, Ed. Kazuyuki Akasaka, and Hitoshi Matsuki, Springer, 593-611

西山 雅祥

高圧力顕微鏡法による細菌運動観察

高圧バイオサイエンスとバイオテクノロジー（野村一樹，藤澤哲朗，岩橋均 編）三恵社，75-81

センター日誌 (2015年4月1日～2016年3月31日)

2015 (平成 27) 年

4月1日 第6期白眉研究者17名着任
榎戸輝揚、大槻元、荻原裕敏、金玟秀
鳥澤勇介、原田浩、山吉麻子
(以上、特定准教授)
飯間麻美、石本健太、上峯篤史
加賀谷勝史、末次健司、瀧川晶
林眞理、丸山善宏、山名俊介
Marcus Christian (以上、特定助教)

4月2日 第6期白眉研究者研究発表会

4月16日 2014年度年次報告会

4月21日 第94回白眉セミナー

4月30日 Cedric Tassel 特定助教離任

5月19日 第95回白眉セミナー

5月29～
30日 白眉合宿

6月2日 第96回白眉セミナー

7月7日 第97回白眉セミナー

7月21日 第98回白眉セミナー

8月1日 白眉の日

9月1日 第99回白眉セミナー

9月15日 第100回白眉セミナー

9月30日 信川正順特定助教
Jeremy Rappleye 特定准教授離任

10月1日 村上祐二特定助教着任

10月6日 第101回白眉セミナー

10月20日 第102回白眉セミナー

11月10日 第103回白眉セミナー

11月17日 第104回白眉セミナー

11月30日 末次健司特定助教離任
運営委員会 (第17回)

12月1日 第105回白眉セミナー

12月1日 第106回白眉セミナー

12月31日 樋口敏広特定助教離任

2016 (平成 28) 年

1月19日 第107回白眉セミナー

1月25日 第3回白眉シンポジウム

2月2日 第108回白眉セミナー

2月16日 第109回白眉セミナー

2月17日 運営委員会 (第18回)

2月25日 第7期公募開始

2月29日 Niels Van Steenpaal 特定助教離任

3月1日 第2期白眉離任式

3月3日 公募説明会 (東京)

3月9日 公募説明会 (京都)

3月31日 Asli Colpan 特定准教授
Vincent Giraud 特定助教
今吉格特定准教授、江波進一特定准教授
王柳蘭特定准教授、大串素雅子特定助教
小出陽平特定助教、後藤励特定准教授
坂本龍太特定助教、中西竜也特定助教
西村周浩特定助教、原田浩特定准教授
藤井啓祐特定助教、前野浩太郎特定助教
和田郁子特定助教離任

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