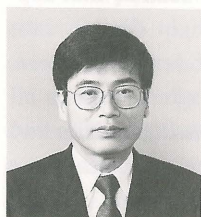




"Don't Worry If Your Chickens Don't Hatch in Japan": A Message to Fellow "Foreign" Students



Masanori MURAKAMI

Professor
Dept. of Materials Science

When I was a college student in Japan, I found in "TIME" magazine an interesting article depicting most American students' three dreams: (1) to have a Japanese wife; (2) to eat Chinese food at home; and (3) to live in an American house. (Japanese husbands may not appreciate that having a Japanese wife is the American first dream.)

The first two dreams are not difficult to attain, especially for the Japanese. In my case, I was fortunate enough to find my Japanese wife shortly after reading the article. Of course, she answered affirmatively to the question, "can you cook Chinese food?"

My motivation to go to the United States after graduation was simply to test the third dream.

Immediately after I finished my graduate course at Kyoto University approximately 25 years ago, I hopped on to an airplane headed for Los Angeles with my wife of two-weeks. My American life started as a post-doctoral fellow at the University of California, Los Angeles, making it difficult to pursue my third dream; the only way was by getting a permanent job. However, I was confronted with the most difficult "chicken or egg" problem. The Vietnam war had just ended and the unemployment rate in the

U.S.A. had risen. The American immigration office limited the number of labor certificates (necessary for permanent jobs) for foreigners and issued them only to those who had permanent visas. To obtain a permanent visa, a labor certificate was mandatory. Which comes first, a permanent visa or a labor certificate? Fortunately, the IBM T.J. Watson Research Center in New York assisted me in solving this complex chicken or egg problem, allowing me to recognize for the first time that, compared to the Japanese, Americans have much more open minds.

I am quite sure that you came to Japan to pursue a certain (part of) your dream. Recently, I have been hearing many complaints from foreign students concerning the large gap between their dreams and reality. I admit that Japan has more restrictions for foreigners than countries such as the U.S.A., and I understand that you must face real difficulties.

But perhaps the best advice is, don't worry if your dream does not come true while you are in Japan. It was only after my return to Japan that I realized I had gained many more precious things in the U.S.A. than my three small dreams. Firstly, as an outgrowth of having daily interactions with Americans as well as cosmopolitan discussions with many internationals, I had come to view "Japan" more objectively than before. Secondly, I was able to develop a bi-cultural home environment. Moreover, my American-born daughters now enjoy international "border-free" lifestyles.

My message to you is that if your dream does not come true in Japan, you should realize that you are sitting on eggs filled with much bigger future dreams. Although you should not count your chickens before they hatch, most of your eggs (some now, some later) will hatch.

工学部協定校巡り

パリ第VI大学



大矢 勇次郎

数理工学専攻教授

永い伝統を持つフランスの大学に厳しい改革の波が1960

年代後半にまずは学生から、次では若い研究者の間に急速に広まった。政治的判断による経済支援が行われて、パリに I から XIII 迄の番号が付けられた大学が創立されたのは1970年である。I から V は所謂ソルボンヌを中心として哲学、文学それに法、経を含む主として文化系大学である。次に VI, VII が伝統的学問を核とした理、医である。残る VIII から XIII は、既に1960年代からあった XI (オルセー) を含む新しい学問の流れ、即ち境界領域を積極的に取り入れた理工系と言ってよいだろうか? この中でも京都大学工学部が学部間協定を1992年の秋に締結したのはパリ第 VI 大学である。上述の事情からだろうか、この大学は番号よりむしろ1903年にノーベル物理学賞を受賞した夫妻の名を冠したピエール・エ・マリー キュリー大学と呼ば

れるのが通常である。

同大学は理工系教官1,800名、医学系教官900名から構成され、対して医学系学生13,500名、理工系学生24,500名(内9,000名が1,2回生、9,000名が3,4回生、6,500名が大学院生)計38,000名の学生を擁している。

一般的制度としては最初の3年間で学部を終え、第4学年で修士を修了するようである。最終学年の学生の多くは、研究上のよい伝統を受け継いで居り、医学博士約600名、先端技術博士約90名、フランス全体の約10%に当る1,800名の高等教員資格試験合格者、150名に工学博士、1,300名に PhD (フランス全体の25%に当る)が毎年授与されている。

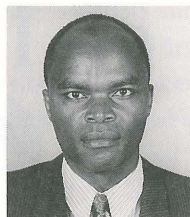
フランスの高等教育制度を考えるには、所謂ナポレオン創設のグランド・ゼコール (Grandes Ecoles) を避けて通れない。上記学位取得者の中には、学位申請の為に課程を既修とできる特典をもつ、これらの卒業生が多数含まれている。例えば Ecole Normale Supérieure (高等師範学校 E. N. S.), Ecole Polytechnique (工芸学校 E. P.) 等々である。現在の協定には、学部学生の交流は含まれていない。これにはいくつかの理由があるが、本学の学生との交換に好適なのはむしろグランド・ゼコールの学生の学力水準のように思われる。(30年程前に較べると、フランスの若い学生の英語能力は格段に高くなっていることもあって…)従って、現在は研究者又は研究方向が確定している学位申請直前の院生水準の学生が交流の中核をなすだろう。専門分野によりいくらか異なるだろうが目的が明確な研究者間での相互交流は極めて密度の高いものになる。

又、経済問題については、現協定では具体的取決めはないが、訪問研究者が旅費を自ら調達すれば、先方の受入れ研究者が滞在費の確保に努力してくれる場合もある。最近では我国も少しづつ変わって来ているが、仏国立科学研究所 (CNRS) が研究者に与えている研究費の使い方は可成り柔軟で、我国よりはるかに有効に使えるようである。

なお、若手研究者には少数ながら仏政府給費留学生に合格する機会もある。これには日常生活に困らない仏語と研究の萌芽を協同で育てられる仏側指導者との密な接触が基本条件となるようである。

私個人としては1970年の大学改革以前のパリは Poincaré 研究所 (パリ大学理学部), Sorbonne, E. N. S., E. P., Collège de France が5区の中心を占め、落ち着いた雰囲気を持っていたのを思い出すが、ここ4半世紀の変化は、それらをも残しつつ、更に活気あふれる新しい5区に変って来ているのかも知れない。

Culture Shock



David MULATI

Ph. D. Student
Dept. of Electronic
Science and Engineering

My field of research is solar-cell technology. Photovoltaic technology can surely be considered critical for overcoming global environmental and energy problems such as the greenhouse effect and acid rain, which are caused primarily by massive consumption of fossil fuels such as coal and oil. The key to solving these problems obviously lies in the development of clean energy, such as that supplied by solar cells which convert sunlight directly into electricity through the voltaic effect of semiconductors. Also, supplies of traditional energy resources such as oil are fast being exhausted so there is a pressing need to find viable alternatives. I myself come from a tropical zone where we have a plentiful supply of this natural energy, but we are not using it to the full. This is the major reason for my studies at Kyoto University.

I am indeed grateful to the Japanese government for having granted me a chance to join the Kyoto community in October last year. Before coming here I of course expected to find differences in a country socially and geographically so unlike my own. Nonetheless, I have still been very surprised by some things, and I would like to share some of my impressions. On arrival, I was immediately struck by the high standards of cleanliness and punctuality of public transport. The Haruka express train that brought me from Kansai Airport operates so reliably on schedule that travellers need not worry about arriving in time for flights, and when I used it I felt immediately more oriented by the announcements and visual displays of the names of the various stations we passed through on our way from Osaka to Kyoto. This to me was quite unique and impressive.

The next impression I'd like to tell you about was not



パリ第 VI 大学の建物屋上からパリ市街を望む



パリ第 VI 大学のロゴマーク

so favourable—indeed, to me, it was horrifying. This was of my first winter in Kyoto. A long and cold winter season started in December and lasted until April. It was the first time in my life that I had undergone such an experience—thank God for the heaters in almost every room! However, I found that I was able to ride a bicycle even in deep snow, and I enjoyed seeing people displaying their skiing skills during this rough season. Due to technology, it has become possible for ordinary life, work and study to continue without disruption by bad weather. Since I come from a tropical zone in Africa this is an experience I will always remember. Indeed, I now think that the value of students studying abroad is not only in the new intellectual and cultural environment, but also the new physical environment. I admit that some aspects of this last surprised me very much. One extraordinary thing was the way some women, particularly young girls, would wear very short skirts or shorts during the coldest weather!

Academically, I have discovered that one reason for the wonderful technological achievements of this country is the long hours people devote to their work. The graduate students here sometimes even sleep in their laboratories—something I have yet to see in my country! I have also been struck by what happens at the time the results of the entrance examination are announced. Candidates come with their parents to check the results and, later, to attend the entrance ceremony. For me, it shows the closeness of the family, although we are perhaps used to thinking that when a student enters university he is meant to be an adult and do such things without parents' involvement. In the university itself I have found something like this family closeness. The student-teacher relationship is so strong that even after graduation this relationship is maintained, with positive long-term results especially for the employment prospects of graduands. I feel indeed fortunate to be included in Kyoto University's "family" of students.

Thank you for allowing me to describe my short experience of Kyoto.

*

留学三年目にして思うこと



シン へリン

建築学専攻修士課程2年

ついこの間まではよく留学の動機や抱負を語られました。3年経った今はほとんど研究の成果や帰国後の計画を聞かれます。来日当時のフレッシュな気分を持ち続けているつもの私には、帰りを攻められているような気がして、内心寂しささえ感じます。しかし、そろそろこの3年間で

改めて振り返り、その答えを見つけねばならないのは確かなようです。

留学にきた以上、言葉の壁を超え、その国の人と付き合い、文化に接することも大事だと思いますが、興味をもつ研究分野を見つけ、努めることが最初の目的で最終の成果だと私なんかは考えています。その研究が、留学したからこそ接することの出来たものであれば、留学にきた甲斐が一層増すかも知れません。そう考えれば、今私が話す日本語がまだ片言であっても、知り合いの日本人が研究室の人に限られていたとしても、もう答えの一つは求まったと言えそうです。

私の専門は建築視環境で、主に建築照明について研究しています。おそらく、わざわざ留学までしなくても研究できる分野ではあります。しかし、建築照明の研究に対する大いに違う見方や、その基を成している照明認識視空間という概念に大変興味が引かれました。その見方とは、従来の建築照明研究のように照明光そのものの特性や知覚でなく、光によってどのような視覚情報が運ばれ、それを基に人間がその空間をどのように認識するかということです。照明認識視空間とは、私たちが照明された空間に対して形成する照明に関わる空間の認識のことで、今は退官された池田光男教授によって提案されました。手法としては人間を被験者とした心理物理実験を用います。

見慣れない実験で戸惑いながらの2年半、考えて見ると、今やっていることやこれから目指していることに対し、周りの人に首を傾げられたときもしばしばありました。留学生のなかに同じ経験を持つ人もいられると思います。しかし、生意気なようですが、私たち留学生が今やっている研究はどこでも誰でも出来るものだとは決して思いません。最初冒険とも思った今の研究に励むことが出来たのは、今のここでだけ可能な研究環境に恵まれ、知識だけでなく研究姿勢を教わり、その上自分の研究に対して信念を持つようになったからです。留学の目的や動機は留学に来る前に立てるものではなく、来てから築き上げるものだと思います。そこから研究の成果に対する答えを見つけ、新たな成果へと導かれると思います。そして私は、最近聞いてもらえなくなった留学の動機や抱負を、来日三年目のこれからでも自分自身に問い続けたいと思っています。



実空間を用いた実験の様子
被験者（池田教授） 実験者（筆者）

Honorary Degree Conferred on Professor Robert Bird



Morio OKAZAKI

Professor
Dept. of Chemical Engineering

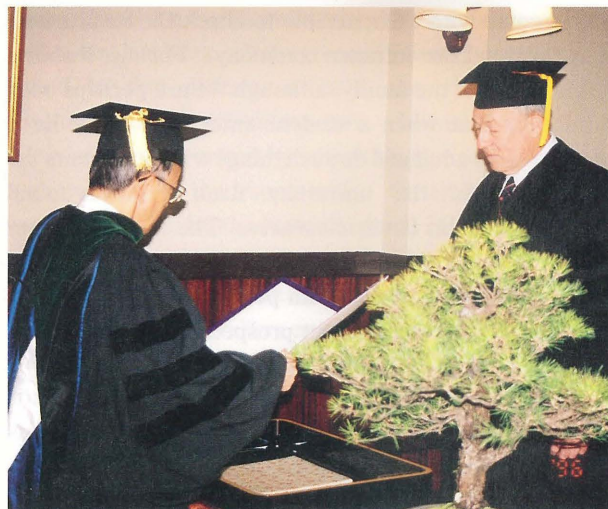
The honorary degree of Doctor of Engineering was conferred on Dr. Robert Byron Bird, Professor Emeritus of the University of Wisconsin-Madison, on the 8th of January, 1996. He is the third person from the Faculty of Engineering and the seventh from the whole of Kyoto University to be honored in this way. The ceremony was presided over by President Hiroo Imura.

Professor Bird was one of the first researchers to show how to estimate transport properties, such as viscosity, thermal conductivity, and diffusivity for gases and liquids, by using non-equilibrium statistical mechanics along with a realistic intermolecular force law. He also made major contributions to the field of non-Newtonian fluid dynamics, particularly in connection with the development of nonlinear constitutive equations for describing the rheological properties of polymers and for solving flow problems. More recently he has made important contributions to the field of material science by the use of statistical mechanics to explain the rheological and other properties of polymer melts and solutions by using realistic molecular models for these industrially important fluids.

He has emphasized that the descriptions of the transport of mass, momentum, and energy are mathematically similar, and that it is advantageous to teach all three transport phenomena simultaneously. He has thus created a new academic discipline, "Transport Phenomena", which has exerted great influence not only on chemical engineering but also on other branches of engineering. His scholarly work has been the basis for several textbooks and monographs, and these have been

translated into various foreign languages, thereby influencing scientists and engineers throughout the world.

After the first visit of Professor Bird to Kyoto University in November of 1961, he taught for six months at our university as a Fulbright exchange professor in 1962. During that period he collaborated with professors of the Faculty of Engineering in various aspects of education and research. His course "Transport Phenomena" made an important contribution by emphasizing the importance of engineering science in chemical engineering research, and by influencing research on non-Newtonian fluid dynamics. Subsequently he has made four visits to Kyoto University, giving lectures and seminars and interacting with faculty and graduate students in their research projects. In addition he has been active in arranging for professors and research students to visit the University of Wisconsin, so in this way too influencing the research activities of the Faculty of Engineering at Kyoto University. Being an enthusiastic Japanophile, Professor Bird commands spoken and written Japanese. His speech at the banquet and the memorial lecture was delivered entirely in Japanese, impressing and delighting his audience immensely.



Professor Bird receiving honorary degree
from President Hiroo Imura

国際交流日誌 (平成8年4月1日～平成8年9月30日)

平成8年

- 4月23日(火) 工学部国際交流委員会
- 5月21日(火) 工学研究科・工学部国際交流委員会
- 6月3日(月) 南アフリカ連邦プレトリア大学 Technical Innovation 研究所長 Prof. Carl W. I. Pistorius 他3名来訪
- 6月21日(金) 工学研究科・工学部国際交流委員会

8月4日(日)～9日(金)

池上詢教授及び関係者一行「総合工学」学術交流事業事務打合せのため、マレーシア及びシンガポールを訪問

9月25日(水) 工学研究科・工学部国際交流委員会

The Committee for International Academic Exchange, Faculty of Engineering, Kyoto University, Kyoto 606-01, Japan

Phone 075 753 5038 / Fax 075 753 5065

606-01 京都市左京区吉田本町 京都大学工学研究科・工学部国際交流委員会