

スイス-日本
技術・科学者
交流協会

EDITORIAL

After a long period of maturation, the second issue of our bulletin is now ready. In the first issue, we modestly tried to start our comparative guided tour of both countries, Switzerland and Japan, with another view of their educational systems. Continuing on our way, we present here some insider's views of Japanese having worked in Switzerland and of European professors and managers who in the past held responsibilities in Japan.

By this bulletin we hope to promote the goals of the Swiss-Japan Association for Scientists and Engineers. During its four year of existence, this young Association has modestly striven to encourage the exchange of young engineers and to increase the mutual recognition.

Be it at its one pace, with its unique way of mixing past and future, Japan is now evolving into the XXI century. Switzerland is changing rapidly, too, in the middle of Europe. Our Association must keep in touch with these changes, by a continuing effort to recruit new members, eventually in the limit of its means, by supporting the stay of a Swiss engineer in Japan or vice versa. Therefore we may need the help of industrial and academic partners.

Dr. A. Zryd
AJ Vice-President

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PEOPLE AND PROJECT MANAGEMENT IN JAPAN

Y. SERRA, CEO CHARMILLES TECHNOLOGIES SA

It is not possible to describe in a few words all the aspects of Japanese management. Nor is it the objective of this article. But 13 years of managing projects and people in Japan reveal tendencies, show specific aspects. Presenting them is a way to unveil the interesting features of the Japanese culture and working practices, hoping to encourage young engineers or more experienced managers to go and see by themselves.

Managing people

Managing people in Japan has no particular secret. As probably in all other countries of the world, respect for and interest in people remains the basic principle. That means listening to concerns with empathy, understanding before wanting to be understood. Mastering the language may be difficult, but is necessary to accomplish this task as one would otherwise be restricted to the tiny pool of fluent English speakers. Once the step is over, the hierarchical relationships are in general rather easy even though they remain quite strict. As Japanese are born with « team thinking » in mind (or is it because group behaviour is taught very early in the life of a Japanese child ?), authority is well accepted as such.

Foreign companies, especially small or medium ones, do not attract typical Japanese. Most Japanese believe that relationships between overseas employers and employees are « drier ». They doubt their commitment to a long term presence in Japan and tend to be ill-at-ease in presence of foreign bosses. Trust needs to be established early on and requires tangible deposits or trustworthiness.

As it can be seen, feeling and sensitivity play a large role in Japanese behaviour. Motivating people is often accomplished at

emotional level. And the social life existing in and around the company enhances this attitude. Some events are spontaneous: go out and have a drink (mostly more than one) in the evening. Others are organised (one company trip per year is a minimum). To fit in the figure of « Pater Familias », a manager has to take care of his subordinates, even participating in their private life (weddings, burial, ...).

Social conflicts are rare, as the employees assume that a company takes into account the social aspects of work. Workers unions together with the company managers are looking for mutually acceptable solutions rather than confrontation. On the opposite however, the interpersonal conflicts may be difficult to handle. Feelings cannot be expressed directly, problems are not much externalised. They are expected to be understood « between the lines ».

Project management in Japan

Project management suffers from this emotional way of thinking, being sometimes irrational. But at

the same time it takes benefit from it. The starting phase of a project is the crucial moment: everybody needs to be convinced (be it by emotional or rational arguments). A reasonable consensus must be found between all possible points of view. At this stage, communication is vital and must be done as far as possible by direct contact (indirect forms like e-mail are avoided). Once a large agreement is reached, the realisation phase can start. It is usually fast and efficient. Every action is focussed on the respect of deadlines.

As a large group takes part in the decision phase, the objectives are well accepted. And, team thinking being deeply rooted in the culture, everybody being accustomed to put company interests first, there is no need for complicated planning. People take themselves in charge. Collaboration is functioning generally smoothly, as Japanese are accustomed to trust each other even if they had no previous working relations. This emotional, highly global system has nevertheless some drawbacks. Evolutions come mostly in small steps and tend to be more reactive than proactive.



The Japanese branch office of the Agie Charmilles group is located in the "Technical Village Partnership (TVP)" building near Tokyo.

Entrepreneurship was so far underdeveloped, not even highly valued. And belonging to a well-known company being by itself a symbol of success, there is little questioning of one's own achievements.

How far is a stay in Japan profitable for a young engineer or a more experienced manager? Is it at all profitable? The answer is yes, definitely yes. To live and work in such a different culture, where the approach of people and problems is radically new for a European, widens one's mind, opens it to another vision of the world. It takes time and effort, but the reward is substantial provided some simple guidelines are followed: focus on

contact with the Japanese, learn the language. Provided, in fact, enough time is taken to understand and like the Japanese people. A stay in Japan is also a good school of modesty, as this is a virtue that Japanese highly value. It is not by chance that the first speech of a newly appointed manager often starts by these words: « nani mo dekimasen ga,... » : « I don't know many things, but with your help »

The author:

Y Serra is presently C.E.O. of Charmilles Technologies S.A. in Geneva, Switzerland. Engineer from the « Ecole Centrale de Paris », Master of

Science from the University of Wisconsin, Mr Serra spent 13 years in Japan, starting with 18 months of intensive language study during an executive training program sponsored by the EU. He then worked for the Corporate planning of Sulzer, leading the acquisition of a company in the medical engineering field and managing it. At the end of 1991, Mr Serra joined the management team of Charmilles technologies as regional Director for Asia (which later developed into Agie – Charnilles after the merging of the two former competitors), being responsible not only for the Japanese market, but also for Singapore, Taiwan, China, Korea, Hong-Kong as well as the two daughter companies Beijing-CT and Beijing-Agie. In September 1997, Mr Serra left Japan to take over his present position in Geneva.

JAPANESE IMPRESSIONS OF AN EPFL PROFESSOR

"ONE'S COUNTRY IS ALWAYS BETTER PERCEIVED FROM AFAR"

The professor of micro-engineering Hannes Bleuler went to Japan after his thesis at the ETH Zürich. He lived there during 5 years altogether before returning to Switzerland and being appointed at EPFL. Saying that Hannes Bleuler is fascinated by the Land of the Rising Sun is certainly not betraying him. He maintains privileged relationships with this country especially thanks to his wife... a Japanese, of course.

"You're crazy, cried out my colleagues from ETH Zürich when I announced my intention to leave for Japan. What will you do there? You'd better go to China, because Japan must be totally Americanised and China is the old culture". What I discovered subsequently is that the "Americanisation" of Japan, indeed apparent on a superficial view, is in reality only a thin cover like a sugar icing, hiding a unique, totally different, very ancient and very strong culture.

At the Swiss embassy I was told that over 95% of the unmarried young men living more than a year in Japan end up marrying a Japanese wife. I confirmed the statistics.

After my doctorate at ETHZ, I was employed in 1985-1986 as a

researcher at Hitachi Ltd by pure chance as a result of our work in Zurich on magnetic bearings, a topic with very few specialists world wide. This stay lasted almost two years. I then came back to the ETHZ before being proposed in 1991 for the "Toshiba Chair for Intelligent Mechatronics" at the Institute of Industrial Science of The University of Tokyo. I led research projects with Japanese, Korean and Swiss students and gave lectures. The university organisation is taken from the USA with a strict division between BSc and MSc degrees and a large part of the population (near 40%) reaching the BSc, but with many colleges which would not have been considered universities in Switzerland. The entrance exams are very selective and based only on fact learning and multiple choice

answers. The schools are strictly ranked, the once established ranking is fixed. The University of Tokyo, as the former Imperial University, is number one.

The Japanese, Masters in reaching compromises

The style of the lectures is however as different from America as it could be. There are no discussions debates or questions during lectures. The interactions between professors and students are very limited. Exchange of ideas takes place later during the master project in the research lab and of course in the companies within the team. As soon as work is done in small groups, each member participates without exception. The art of reaching compromises and consensus is well developed, not

unlike some Swiss behaviour patterns. Individualism is nearly non-existent, the common interest is put first in a natural way. Some of the Japanese people's greatest virtues could be summarised as their capacity to listen and their awareness especially also for things not expressed explicitly, but based on feelings, the sense of situations, putting oneself at the other's place and adapting to given situations.

Education and literacy levels are among the highest world-wide. The Japanese know much more about the Westerners than the other way around. They are curious and eager to learn about Western culture and arts. This is combined with a deep attachment to their history and culture. Being perfectionists, they have reached summits, besides technology, in various cultural domains, in literature, architecture and design, calligraphy, not so minor arts such as pottery, tea ceremony, ikebana, "martial" arts etc.

The time spent at the other end of Eurasia have of course marked me profoundly. Maybe I pay more attention to other's opinions. I



"This is my dictionary, made by hand and taken from the excellent "Kanji 2001" written by Mr. De Roo. I'm specially attached to it, as it saved me from total illiteracy in Japan." - Pr. Bleuler

encourage students to go abroad because one's country is always better perceived from afar. As a small example, our services in general, transportation, communication and similar infrastructures we usually take for top rate here, are put in a some-times quite humbling perspective when

comparing with Japan. On the other hand, I see also much here which is well known and admired in Japan which we can be rightly proud of.

Adapted and translated from Polyrama, February 1996.

A JAPANESE PROFESSOR IN A SWISS UNIVERSITY

PROF. HIROYASU FUNAKUBO

Introduction

During 5 years, starting in 1987, I have been invited at the Swiss Federal Institute of Technology in Lausanne (EPFL) by its former president, Prof. B. Vittoz. I worked as an invited professor at the Institute of micro-engineering, together with Prof. C.W. Burckhardt and R. Clavel. At this time EPFL was, however, already familiar to me, as I already had had the opportunity to collaborate with this Institute before.

The environment

When I first went to Lausanne in 1982, the departments of the EPFL were scattered in the town. The personal contact between the researchers as well as the inter-faculty collaboration suffered from this point. However, after the construction of the new campus, all members of the school were concentrated in the same location and the communication between the different laboratories could be done smoothly.

This campus is located in the area of Lausanne, famous for its beautiful scenery. There is no doubt that this excellent natural environment has a positive and active influence on the educational and research works of students. Compared to most of the Japanese Universities (among them Tokyo University), it is certainly a positive point. Moreover, the studying environment (infrastructure, research facilities, rooms), being clean and modern, promotes the productive power of the students.

EPFL has always promoted exchanges with other countries, attracting since a long time many students and researchers from abroad. This international atmosphere, growing and growing, became even more fruitful in the facilities of the new campus.

“Diploma” thesis

During my stay in the Institute of micro-engineering, I directed several diploma thesis students. In almost all universities of Europe (including nowadays EPFL), the diploma thesis is a 6-month work. Until 1992, its duration was however of 3 months at the EPFL. To compensate for this short period, the students worked compulsory on a pre-thesis work of 2 times 2 months, before embarking into the actual diploma work. For comparison in Japan, all universities require a full year of diploma thesis work for the last year students.

Three months at this time were a fairly short period. I was concerned whether the students could accomplish their task and construct the instruments necessary for their experimental work. But, working always energetically throughout the phases of conception, design, selection and purchase of elements, machining in atelier and experiments, they produced excellent final reports. It is obvious that a full year of work would have led to richer results. But, on the other side, through the intense work of the short period, students learned an efficient way of managing their research in a tense atmosphere. I believe that this is a good preparation for the practical work

they will encounter in industry. In Japan, on the opposite, the long time span lacks this energetically tense effort.

Training of students in Japanese industry

For about 10 years, I have supported the training of EPFL students in Japanese industrial laboratories. In order to achieve this, many Japanese companies helped me by taking charge of the students for a period of about one year. The students working year after year established very friendly relationships with their guest laboratories. Many of them still keep the contact with their Japanese colleagues.

I should not forget the efforts of Ms S. Matsuda and her co-workers of Kanazawa, who accepted our students each year in April for 3 months so that they can learn the Japanese language. This time spent in the language school was also an opportunity to experience the Japanese culture. Many families also kindly co-operated with the project, lodging students who often visit Kanazawa again to renew their nice souvenirs.

For the practical realisation of this training, I appreciated the perfect and always positive support of the EPFL and its administration. The contact with the Japanese companies on visa procedures, the contact with Ms Matsuda, the complicated administrative work was smoothly organised by the “Service d’Orientation et Conseil” (SOC). In fact the continuing success of this training project depends mainly on

the deep understanding and the collaborative efforts of the Japanese companies and the SOC.

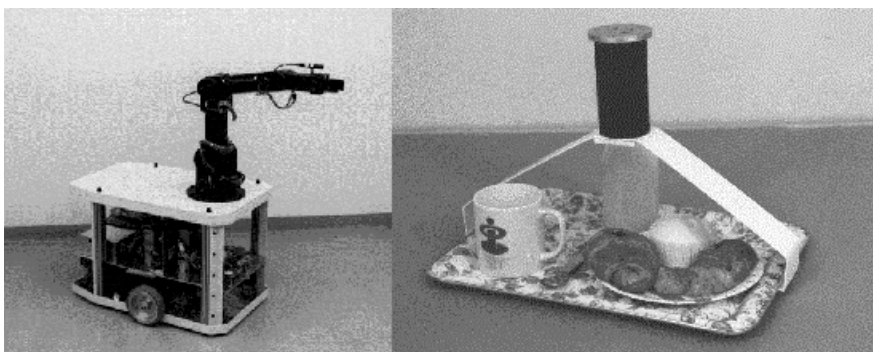
Conclusion

My stay in EPFL was very pleasant and fully satisfied me. All students I met, at the EPFL and for the industrial training in Japan, had a high level of education, were quite independent, very eager to achieve their goals in the limited period of time they were given. I am also keeping in my memory the friendly help of all members of the EPFL and particularly of the Institute of Micro-engineering.

The author:

Prof. Funakubo has been engaged in the field of research and education on Medical and Welfare Engineering for the last 30 year. He started his career in the Tokyo University. His aim at the EPFL was to give roots to a research on small size medical and welfare instruments (Micro sensors, micro robot system, artificial organ, application of shape memory alloy etc). To achieve this, he established a successful collaboration with medical specialists in neuro-surgery and ophthalmology of the University Hospital of Lausanne.

In the last ten years, Prof. Funakubo focused his activities on welfare for elderly persons, as the society is more and more in demand of a research in this direction. He is now working to develop a precise portable non-invasive sensor to detect the water content in the surface of skin, together with dermatologists.



After returning to Japan, Prof. Funakubo joined the Shibaura institute of technology. Small mobile robot systems like the one represented here are developed in his lab. The task of the robot on the left is to move the tray displayed on the right in a semi-automatic way.

MOTIVATIONS AND EXPERIENCES OF SWISS ENGINEERS AND SCIENTISTS IN JAPAN

June last year, two students from the Swiss Federal Institute of Technology in Lausanne (EPFL), Faouzi Djeddou and Nguyen Trang Huynh, presented the results of the survey they carried out on the AJ association as part of their research project called "Sciences, Technique and Society". The title of their work was "Motivations and Experiences of Swiss Engineers and Scientists in Japan". The aim was to highlight the reasons, professional or private, why AJ members decided to live at least one year in the country of the Rising Sun. By processing the collected information, both in the database and in the directory of the Association, the students identified these motivations, and by interviewing AJ members they could learn also about their opinion concerning their personal experience as engineers and scientists.

About the AJ association

The main motivation of AJ members is to keep in touch with Japan after having returned to Europe or the United States. Let us mention here briefly the main objectives of the association:

- To gather engineers and scientists, both Swiss and Japanese, who worked, are working or will be working in Switzerland and Japan respectively, as well as to create a network of people having a direct life experience in these two countries.
- To highlight, within scientific, technical and industrial circles in Switzerland, the professional experience carried out in Japan.
- To provide Swiss and Japanese scholars with an adequate information infrastructure to ease their professional integration in Switzerland and Japan respectively.

Presently, the association gathers around 70 members. The data shown in this article is based on the 37 AJ members who took part in the creation of the association's directory, (57% of the total). This directory includes information such as: age of the expatriates, educational background, funding organisation, choice of employers (company or university), place of work, the number of expatriated women...

Results of the survey

First of all, general information concerning the members themselves

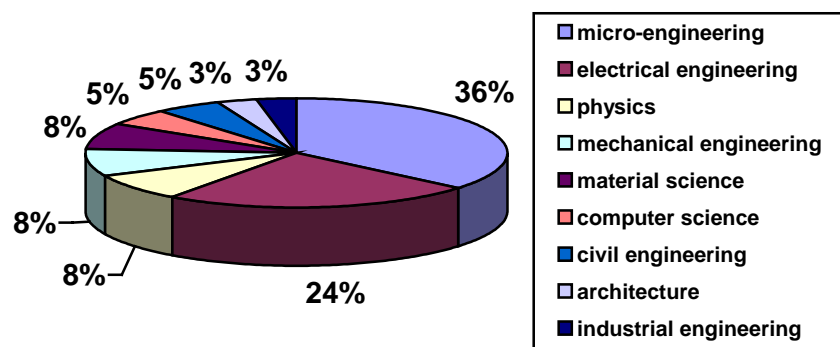


Fig. 1 : specialisation fields. As it can be seen, most of the engineers who went to Japan have a degree either in micro- or electrical engineering.

is presented here as well as their conditions of departure and stay. In general terms, 86% of the interviewed engineers stayed in Japan for one year, of whom 84% were trainees in a company. Most of them lived either in downtown Tokyo, Osaka or their surrounding area.

- age

AJ engineers and architects are now aged 25 to 40. They went to Japan when they were 23 to 32. Most of AJ members (73%) did not have any professional experience before going to Japan. Most of them were young engineers who had just finished their studies and were given an EPFL financial support.

- educational background

When comparing the specialisation fields of the members, a clear difference appears the repartition among study fields. As shown in figure 1, two main fields stand out: micro-engineering (36% of all engineers) followed by electrical

engineering (24%). Physics, mechanics and material science represent only 8% of the AJ members, computer science and civil engineering come next with 5% of the total, and architecture and industrial engineering account for only 3%. Fields such as rural engineering, chemistry, mathematics and communication systems are not represented because little opportunities for company training exist in these fields.

30 % of the interviewees (37 people in total) had a doctorate level. Among them, 6 people wrote their thesis before their going to Japan, while 4 of them did it afterwards. Two members of AJ completed their doctorate in Tokyo University in micro-engineering studies. Let us note that the language for submitting the thesis was Japanese.

It is surprising to find out that there are very few engineers in computer science who went to Japan. The reason for that is probably related to

personal motivations and economic circumstances: it is likely that computer science engineers are more attracted by the United States than any other country.

- **ratio between men and women**

Among all the interviewed people (a total of 37) only 2 were women, corresponding to roughly 5%.

This is related to the number of women carrying out their technical studies in an institution such as the EPFL from which 90% of the AJ members come from. Only about 15% of the students of the EPFL are women. Let us also point out that, when entering technical institutions, young women tend to choose mainly fields such as chemistry, architecture and computer sciences.

- **which institutions provide scholarships**

Scholarships are offered by several organisations both in Switzerland and Japan (see also the next article on page 8). The EPFL financial support covers a part of the three-month intensive language course (held in Kanazawa) as well as the flight. Once in the spot, the engineer gets a salary from the Japanese company that has been previously chosen by the EPFL. This is the mostly used financial support (63%), as the EPFL sends a relatively big number of trainees to Japan. Host companies are generally big companies such as Toshiba, NEC, Mitsubishi, Sandoz, ... The SATW (Swiss Academy for Science and Techniques) scholarships are proposed only to engineers who have had a professional experience of at least 2 years. This is the case of 24% of the interviewed people. The other condition to get this SATW scholarship is that the scientist finds himself his training, and thus his host institution. This scholarship is limited to one year and cannot be renewed. The amount scholars received varies from CHF 40,000 to

CHF 55,000, depending both on their level of qualification and on their travelling alone or in family. A Japanese intensive course is also offered. The Monbusho, Japanese Ministry of Education, also offers scholarships of about 180'000 Japanese yen per month to engineers who are interested in working within a Japanese University. About 7% of the AJ members were granted a Monbusho scholarship. The Swiss-Japanese Chamber of Commerce and the Swiss National Fund offer scholarships as well, but they are rather little used (3%).

- **main motivations for going to Japan**

Several reasons for the choice of Japan are expressed by the AJ members. Most of them wished to have an experience in a foreign country so that they could work in a different environment. When comparing with other European countries or the United States where social, cultural or professional structures are similar to those of Switzerland, staying in Asia, particularly in Japan represents, for young Swiss engineers, a real challenge, a real split from Switzerland, even if it is only for a short period.

Another reason why young engineers decided to go to Japan is the attraction and fascination for Japan and its culture. Thus one fourth of the interviewed people declared that their interests were more cultural than professional. Five people wanted to satisfy their personal attraction for the country and six other did not have any special preference for any host country in particular. Let us note that, among the 14 people just quoted, two of them, who already were working for the industry, had been offered a job in Japan.

The majority of the members went to Japan by themselves (7); four other

went first by themselves and were followed afterwards by other EPFL students who were doing the same programme (three-month language course in Kanazawa). Two among them went to Japan with their partners and one of them went with his family (partner and 2 kids). His stay was presented in the last issue of this magazine.

For most of the candidates, this was their first experience in living abroad for such a long time. Before that, they only had the experience of short-term vacation type trips, language classes abroad, or one of two-month IASTE training programs.

Finally, for most of the AJ members, staying in Japan became a personal challenge both at a professional level (as Japanese technology, management and logistics are known and acknowledged to be more advanced than those of Europe and the United States) and at a cultural level (learning another language supposedly difficult; different customs and traditions...). Therefore a Far-Eastern country seemed the most interesting and adequate choice.

In the next issue of the AJ magazine there will be reported personal and professional experiences of AJ members in the country of the raising sun, their discoveries and adventures (sometimes misadventures...)

Article adapted by Dr. Nadia Nibbio,
AJ President,
from the study made by
Mr. Faouzi Djeddou and
Ms. Nguyen Trang Huynh.

OPPORTUNITIES TO GO TO JAPAN: HOW TO GET A GRANT.

Each year, new opportunities to go to Japan on a grant are offered to Swiss graduates. Below you will find the latest possibilities that are available and where to get the information.

The Central Office of the Swiss Universities

The Central Office of the Swiss Universities - abbreviated as SZfH in German or OCUS in French - is a good starting point for people wanting to go to Japan with the financial support of a grant. This office is in charge of the administration of several grants and exchange programs for Swiss students. It has established contacts with approximately 40 countries.

The address of the SZfH/OCUS is Sennweg 2, 3012 Bern. Their web site is at <http://www.szfh.ch/> and the e-mail vkupper@szfh.unibe.ch.

Monbusho

The Japanese Ministry of Education, Science, Sports and Culture - better known as "Monbusho" - offers several scholarships to Swiss students for postgraduate studies or research activities at the Engineering faculty of the Tokyo University. The stay at Tokyo University starts 1st October 2001 and the length can be either 12 or 18 months. There are possibilities to stay longer for a Ph.D. Applicants must be Swiss citizens, and be below 35 years old. The grant is 180,000 Yens per month approximately plus travel expenses to and from Japan. Candidates must also get in touch with a professor of the Tokyo University and come to an agreement on a study or research topic. The application deadline is 8th December 2000.

For more information please contact the Service d'Orientation et Conseil (SOC) of the EPFL, tel. 021 / 693 22 81 or 82.

Matsumae International Foundation

The Matsumae International Foundation is willing to offer fellowships to 20 persons for a period of 3 to 12 months, between April 2001 and March 2002. The grant is 250,000 Yens monthly plus allowance for travelling expenses to and from Japan. To qualify, applicants must hold a doctorate degree or have at least two years of research experience after their Master's degree. The candidate should not have been in Japan previously. Deadline for the application in Japan: July 31st, 2000.

Application form and further details can be obtained at the SZfH/OCUS (see above) under ref.: Japan-Matsumae.

SATW - Swiss Academy of Engineering sciences

The aim of the SATW grants is to give to young engineers the possibility to improve his/her professional and scientific competencies together with a better understanding of the Japanese culture and way of working. To qualify, applicants must be under 33 years old, be a Swiss citizen or live in Switzerland, have finished his/her engineering studies and have worked at least two years in a non-academic environment. Before asking the SATW for this financial support, the applicant must have established contacts with a company or a research group willing to incorporate him/her in a precise task.

The SATW brochure gives more details on the procedure and gives some addresses in Japan. It can be asked at the following address: Commission de recherche de la SATW, EPFL, LAMI-IN, DMT, 1015 Lausanne, tel 021 / 693 26 41. More information on their web site: <http://www.satw.ch>.

Hosei International Fund

The Hosei University in Tokyo offers each year three fellowship grants for a period ranging from six to twelve months. The field of study can be humanities, social or natural sciences or engineering. To qualify, one should have a sufficient knowledge and fluency in either Japanese or English, hold a Master's or Doctoral degree or equivalent. The candidate must not be more than 35 years of age. The grant is 210,000 Yens monthly plus allowance for travelling expenses to and from Japan.

Application form and further details can be obtained at the SZfH/OCUS (see above) under ref.: Japan-Hosei. More information at their web site: <http://www.hosei.ac.jp/english/international.html>

Rikkyo University Research Fellowship

The Center for International Studies of Rikkyo University in Tokyo offers each year several grants for a period from 3 to 8 months. The field of research should be humanities, social sciences or natural sciences. To qualify, applicants must be under 45 years, be a full-time professor, lecturer or assistant (holding a Ph.D.). The grant is between 260,000 and 335,000 Yens monthly depending on qualification, plus allowance for travelling expenses to and from Japan.

Application form and further details can be obtained at the SZfH/OCUS (see above) under ref.: Japan-Rikkyo University Research Fellowship. More information at their web site: <http://cc.rikkyo.ac.jp/koho/toppage1.htm>.

Mr. S. Stijve
Editor

RAKU: WHERE TRADITION MEETS MODERN CERAMIC ART

Who ever discovers once in his life the Raku will not forget it. Raku is a traditional Japanese technique that was transmitted all along the years. Although it is antique, it is at the moment alive as never. At every place where a potter is working alone in its workshop, he is perhaps secretly refining his own interpretation of the Raku basics. But he knows that even he is a good Raku player, the final look of the piece will be done by the fire . . .

A little bit about history

The term "Rakuyaki" originated from "Jurakudai" which was a representative architectural design during the Momoyama Period, in the 16th Century. The origination of the term also meant the birth of the Raku family name, started by Chojiro, the founder.

Today, Rakuyaki has spread worldwide as a field of ceramics. However, back in Momoyama Period, the form was only referred to the earthenware made by Raku family, started by Rikyu and Chojiro. The present Kichizaemon Raku is the fifteenth generation since Chojiro. The residence and the workshop are located on the west side of the Imperial Palace in Kyoto, south of Aburanokoji and Ichijo intersection, and they maintain a traditional Kyoto city architecture with "Inuyarai" and "Degoshi". The making of Raku ware was initiated by Chojiro, the first generation of the Raku family, during the Momoyama period (1573-1615). At this time three-colored glazed pottery (san cai) based on technology from the Fujian region of China was produced in and around Kyoto. Chojiro is thought to have been familiar with such techniques. A written record confirms that Ameya, Chojiro's father, originally from China, is thought to have been the person who introduced the techniques of three-coloured glazed pottery from China, although none of his works has survived to prove this. These Japanese san cai wares were not, however, called Raku ware and it was only after Chojiro had become acquainted with the tea master Sen no Rikyu (1522-1591) and had started making tea bowls for the tea ceremony (chanoyu) that Raku ware came into being. It could

be said that the origin of Raku ware lay in the making of a single tea bowl for the tea ceremony.

The tea bowls made by Chojiro were initially called ima-yaki, literally "now wares", that is to say wares produced at the present time. They were subsequently renamed jurakuyaki, "juraku wares", which is thought to have been due to Toyotomi Hideyoshi (1537-1598), the leading warrior statesman of the time, presenting Chojiro with a seal bearing the character for Raku. The term Raku derived from Jurakudai the name of a palace built by Hideyoshi and one of great symbols of his age. Chojiro adopted the term not in its normal sense, which is "joy" or "ease". Raku then became the name of the family that produced the wares. This is the only instance of a family name remaining synonymous throughout history with the ceramics they produced. Furthermore, there are few pottery making families who have survived generation after generation in an unbroken line in the way the Raku family has done.

A little bit about technique

Raku is a very unique ceramic firing process. The ceramic pieces are covered with special glaze. Each piece is fired in a ceramic kiln until it reaches 950°C degrees. At that time, the piece is carefully removed, with long tongs, and placed in a special metal can with combustible material (paper, wood chips or sawdust). Then, the heat from the piece ignites the material, causing a reaction of the glaze (reduction or reversed oxidising). The result is a wide range of colours on the surface of the piece. A lid is then quickly put over the metal can, and the ware is allowed to cool for an hour or longer

in this reduction atmosphere (until it is cool enough to handle). The piece is then removed from the can and the beautiful colours, lustre and patterns are revealed.

Come and make Raku with me

If I have chosen Raku, it is because this technique offers surprises that can be good or bad. Each time you open a can to uncover a piece, it is like opening a present to yourself. Every piece is unique. It has its own characteristics. Every step of the process is altogether risky and spontaneous. I like this kind of game where nothing is played up to the last moment. Every piece is a new landscape. Every piece is a new poem.

I build dishes and boxes (see pictures). The dishes are based on ground plates. The surface is wide enough to offer different handling steps during the cooling down. The last seconds of the process are very important. It gives a further dimension to the work. The boxes are turned. I modify the sizes, the lid's form, the painting in order to make every one already unique before the firing. This last step gives interesting colour and aspect effects all around the piece. I like to be free to move like I feel it during the painting of the plates with hot wax.

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Switzerland

References:

- Leaflet of the "Troisième salon de la céramique utilitaire", St-Cergue, 1997"
- www.raku-art.com



Every artist can influence the final aspect through different actions during the firing process.



A box (above) and a dish (below), the results of many efforts.



The firing process changes the colours of the glazes coloring this round plates.