

THE JAPAN SCIENTISTS' ASSOCIATION

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Let's move against military research in academia, taking an advantage of a general symposium "Reconsidering the concept of academic research and higher education systems."

A general symposium was organized on June 25th by a wide range of people feeling a growing sense of crisis around military research in academia. The purpose of this symposium was to discuss how to stop military incursion into academic research and higher education systems, under the situation where (i) faculty autonomy and academic freedom are violated by the top-down management of universities, called "governance reform," (ii) budget for higher education and scientific research has been seriously cut, and (iii) the opportunity for students to study is violated. In addition to the crisis above, universities have been controlled by both the political and business forces.

Meanwhile, we, the Japan Scientists' Association (JSA), has deepened discussions around refusing military research. We debate the issue in the Committee for Science and Technology Policy, in workshops on university issues in March and April 2017, while keeping attention to monthly discussions on military research in academia by the Science Council of Japan. We have been encouraged by constant and nationwide movements led by the Japanese Coalition against Military Research in Academia. We have also been encouraged by many local joint movements by scientists and citizens to refuse military research in universities since last year.

The general symposium of June 25th attracted about 160 participants, many of whom said that the symposium was meaningful. I am sure that we could develop movements against military research in academia, an advantage of this symposium. A movie of this symposium can be seen on YouTube at <https://www.youtube.com/watch?v=XYwm2Jyw-ro>.

The following points were highlighted in the symposium: (i) Military research is not consistent with civil research. (ii) It is evident that scientists cannot stop military incursion into academia by themselves, and therefore they must enlist the support of civil society. To do so, scientists must pay attention to social issues. (iii) It is necessary to reconsider whether military research is consistent with academic freedom and scientists' conscience. (iv) We must pay attention to military research conducted in the industry, because 70% of Japanese scientists are working in the industry. (v) We should promote movements against military research in each local community, each university, and each specific

academic area. We should also promote interaction among such local movements. (vi) We should keep in mind that military research is linked to war, destruction, and murder, and therefore will result in the devastation of higher education. (vii) We should pay attention to the social impacts of military research in academia, including accelerated militarization of the economy and the export of arms and weapons.

Professor Toshihide Maskawa, who is a theoretical physicist awarded the Nobel Prize in physics in 2008, attended the symposium as a special guest, and was interviewed by Professor Rika Kayama, a psychiatrist. The interview focused on the social responsibility of scientists and the ultimate goal of academic research. Professor Maskawa emphasized that scientists have an increasing role in social movements.

In order to stop military research in academia, we should strengthen the nationwide struggle of scientists through workers' unions in universities. We should not cease our efforts, because the introduction of military research into the scientific community distorts sound development of science. It is therefore an urgent issue for scientists. We are expected to accelerate nationwide movements against military research by encouraging scientists to consider this issue in each local community, each university, and each specific academic area, and to engage in dialogue and action with citizens.

(Masataka Takemori)

ACTIVITIES OF RESEARCH COMMITTEES AND GROUPS

The JSA headquarters organizes a number of research committees and groups undertaken on a nationwide scale, which are encouraging the members across the country

2017 HOKURIKU DISTRICT SYMPOSIUM HELD

The symposium was held from 15 to 16, April 2017 at Toyama Prefectural Hall. The theme of the symposium was "Conveying the efforts in environmental problem in Toyama to the world and future". Three branches (Fukui, Ishikawa, and Toyama Prefectures) have been struggling in cooperation with local residents with issues such as reoperation of nuclear power plant with no validation of safety, waste disposal, heat power station, and *itai-itai* disease. The Hokuriku district determined it should be significant to inform struggle with those issues to future generation, Asian countries and the world.

In his keynote speech "My experience as an engineering scientist concerning *itai-itai* disease, soil contamination, and Fukushima accident" Prof. Hata (ex-president, Japan Association on the Environmental Studies), who has been taking an active part in various environmental problems such as the determination of cadmium source origin and Toyosu (Tokyo) soil contamination, severely criticized issue points and the ill-nature to keep scandals secret which he found in Asian countries especially in Japan. From the floor a participant said, in soil surveying at Toyosu the panel meeting of scientific experts reported that part above ground is safe even if soil under the ground is polluted, which was not understandable.

Next day morning, lawyer Mizutani (defense counsel for *itai-itai* disease case) delivered a keynote speech on the *itai-itai* disease issue as an attorney, especially the role which he paid in concert with damaged residents and scientists in the court. In the panel discussion five panelists talked on the

following: a) the result of citizen action for environment in Hokuriku District and accession of them, b) the achievement of *itai-itai* disease study and what it teaches us, c) 45 years of the measure to determine cadmium source origin, d) study for the last 40 years about flu gas extraction measure, e) the issue of talking long about antiwar and peace and breaking with nuclear power generation into the future, and f) in Ishikawa prefecture the antipollution movement started out from heat power station construction problem in Ishikawa. Participants including general citizens voiced their opinions.

In the afternoon of the second day, a field trip to Toyama Prefectural *Itai-itai* Disease Museum was organized, where Mr. Takagi (*itai-itai* disease victim) explained articles on display, and visitors exchanged their opinions.

The symposium had participants from a group of *itai-itai* disease victims and civic campaigns for environment in Toyama, namely, *society to talk long about itai-itai disease into the future*, *society of thinking about atomic energy education*, and *earth day Toyama*.

DISTRICTS' AND BRANCHES' ACTIVITIES

The JSA consists of 47 branches which are grouped into 9 districts, and they are independently and/or cooperatively carrying out their activities in addition to the headquarters' ones

1) "RECOMMENDATIONS ON NUCLEAR POWER AND ALTERNATIVE ENERGY" IN YAMANASHI

The Yamanashi branch held a lecture with the above title on March 31, 2017. The lecturer was Prof. Iwatsuki (Emeritus Prof., Yamanashi Univ.).

He actively participates in citizen movement after retiring from Yamanashi University and has written interdisciplinary books. He pointed to slough off mass consumer living and global warming countermeasures as basic points of thinking about energy issues and verified in detail the advantages, safety and necessity of nuclear power plants. And he reviewed the proposed alternative energy and made recommendations on energy issues as follows: a) Promotion of energy saving: sloughing off mass production and mass consumption for money making principle, change our society into a society in which long-term, sustainable living and spiritual richness are realized based on "cooperation", b) Immediate sloughing off nuclear power plant, c) Promotion of Fukushima Daiichi nuclear accident managements, and d) Promotion of reduction of dependence on fossil fuels and introduction of various renewable natural energy.

In addition, he suggested to the municipalities of nuclear power plants that 1) no nuclear power plant can operate, 2) development and promotion of renewable energy, and 3) support to make agriculture, fishery and forestry into a subsidiary.

Since his proposal was based on the scientific results of based on the lessons learned from the Great East Japan Earthquake that brought unprecedented disasters, the participants sympathized with his proposal.

2) THIRD CONSECUTIVE PUBLIC LECTURES “SIX YEARS SINCE THE GREAT EAST JAPAN EARTHQUAKE: LESSONS TO LEARN”

From February to April, 2017, Miyagi Branch held the above public lectures with a total of 200 participants. This program resulted in an extra gain that the chairman of the teachers' union newly joined JSA as a member. It was great that we felt compelled to extend this program further.

The organizer of these lectures, the “Study Group on the World, or ‘yo-no-naka’, part 2”, was set up in June, 2015, after the “Yo-no-naka Study Group”, once chaired by the late Prof. Hattori Fumio. We agreed to follow the example of that group and hold monthly meetings to talk about things of each other's interest while eating and drinking together.

When we first planned to take up the public lecture program, we thought we would start to do a brainstorming with three-minute speeches about what we now have in mind, what we think of and in what we are now interested. We agreed to bounce ideas off each other, not necessarily by inviting a great speaker from somewhere.

This became quite enjoyable and we began to wonder if such a great opportunity could be left as small as ten-member size. Hoping to offer this to more people, we arranged the JSA's public lectures so that they be hosted by the Yo-no-naka Study Group part 2. We also obtained support of the Miyagi Prefecture Residents' Center for Assistance for Rehabilitation and Reconstruction, Tohoku Research Institute of Health and Welfare, Confederation of Democratic Medical Institutions of Miyagi, and of the Tokyo Branch of Japan Lawyers Association for Freedom .

The main theme of the lectures was conceived unanimously since we all were in the midst of the Great East Japan Earthquake. Details of operation were finalized six years, rather than five years, after the disaster.

Particular items were thus came out as; the first lecture, “Verification of the Recovery from the Great East Japan Earthquake” (Sept.19), the second, the Great East Japan Earthquake and the Local children: Education in Miyagi” (March 19) and the third, “The Great East Japan Earthquake and the Nuclear Power Plants” (April 16)”. After the lecturer gave 20 minutes baseline talk on the theme, JSA members were to speak for five minutes each and non-member participants too were to be encouraged to speak out. Proceedings were provided on the spot also for the non-members whose drafts of the speech were received several days in advance. Ten thousand flyers were prepared to be inserted in the newspaper and distributed to the teachers' union and University organizations and others.

When the first day came with the title “Verification of the Recovery from the Great East Japan Earthquake”, more than ten people including the lecturer, JSA members and people from the floor exchanged opinions.

At the second meeting titled “The Great East Japan Earthquake and the Local Children: Education in Miyagi”, more than ten people including walk-in participants exchanged opinions. In addition to the abnormality of Miyagi Prefecture, other aspects like the excessively scarce public expenditure for education in Japan which makes teachers' burden anomalously heavy and that educational and medical malpractices cannot be solved by lawsuits that question somebody's responsibility and thus alternative ways of handling should be found were also presented.

The third meeting was on “The Great East Japan Earthquake and the Nuclear Power Plants”. Here understanding of the issue was deepened with an additionally invited guest speaker. Among the topics were immorality of atomic power plants that utilize nuclear energy, clarification of incompatibility between nuclear plant and living things, efforts for utilization of renewable energy and so forth.

In summary, the public lectures as a whole have become rich in content and their tasks are now more visible. We believe that this event is a right opportunity for the Japan Scientists’ Association to share things with the public.

3) CITIZEN LECTURE “30 YEARS AFTER THE CHERNOBYL NUCLEAR POWER PLANT ACCIDENT”

The Fukui branch held a citizen lecture on May 13, 2017 at Fukui University. The lecturer was Mr. Yamamoto who is a member of the research committee of nuclear power problems of JSA. He participated in the Chernobyl nuclear accident investigation team co-sponsored by the National Liaison Center of Nuclear Power Resident Movement and the Japan Eurasia Association and reported in detail the local conditions he saw in Belarus and Ukraine.

The first time visiting facilities of the investigation team after the Fukushima accident were schools for children living in high-concentration contaminated areas, rehabilitation facilities with function of sanatorium, the Belrad Institute of Radiation Safety, Radiobiology Laboratories, Chernobyl Nuclear Power Plant Unit 4, and the hospital attached to Radiation Medical Research Institute in Kiev. Unlike victims of the Fukushima accident, the victims of Chernobyl are guaranteed living support and free medical care for a lifetime by “Chernobyl method” which states the responsibility of the country. The investigation team inspected the actual conditions of each institution under the strict control of the country and received detailed explanation of the research results on the influence on human body by radiation exposure in the Radiation Medical Research Institute.

Both Belarus and Ukraine are currently underestimating the impact of radiation exposure due to nuclear accident from the standpoint of promoting nuclear power plants. Furthermore, since the nuclear power plant problem has become a political problem, scientists are at risk of closing laboratories if they make critical remarks to the policy of the government and cannot freely express their opinions. So, there is no resident opposition movement of nuclear power plants.

Mr. Yamamoto said that if the opposition movement of resident weakened, the flow of promotion of nuclear power plants is strengthened. He stated that we must strengthen the resident movement against nuclear power plants in Japan.

4) DISCUSSION OF EXPOSURE TO ELECTROMAGNETIC WAVE EMITTED BY UNDERGROUND POWER CABLE IN HYOGO

The Hyogo branch held the branch convention on May 13, where it organized the above titled forum. Exposure to electromagnetic wave emitted by ground power cable has been debated. As the capacity of thermal power plants enhances, people began to turn their attention to underground one.

Having an acquaintance with the plan for electric power company to more install thermal power stations and transformer stations, and establish underground power transmission cables (257 kV), the

speakers measured electromagnetic wave at 165 existing underground cables (77kV), observation points being 1.0-1.5 m from the ground. They had 0.1 μ T on an average, while 234.7 μ T near exposed cable. 2010 ICNIRP (International Commission on Non-Ionizing Radiation Protection) exposure guidelines made a worse change from 1998 ICNIRP guidelines, although in Japan electromagnetic wave exposure for ground power cable is limited but not for underground one.

Fire of underground power cable in Saitama Prefecture once has caused electric power outage in Tokyo area, but effect of electromagnetic wave does not draw people's attention. Some instance of abroad (low-frequency) electromagnetic wave regulation were exemplified, and significance as well as difficulties of epidemiological investigation were also pointed out.

We at present have cell-phone, microwave, and large lcd TV. We can't just accept that manufacturers call attention to pacemaker wearers in some products.

The lecturers submitted a petition to Kobe City and Ministry of Economy, Trade and Industry, calling for countermeasures.

5) SEMINAR AT THE JSA AICHI BRANCH "A COMMENT ON THE LECTURE ABOUT THE BUSINESS MANAGEMENT ORIENTED TO THE STOCK HOLDERS' INTERESTS AND JAPANESE ECONOMY"

I joined in the seminar on Sunday, May 14, in which Tsutomu Shibata, Gifu University lectured on The Business Management oriented to the Stock Holders' Interests and Japanese Economy. This seminar was held with the General Meeting of the JSA Aichi branch. Shibata talked about the further extension of inequality between rich and poor people in Japan. Big business had gained a lot of profits, however Japanese laborers' wages had been reducing under the Abe Administration. Many people could not understand the reason why such a situation had happened. Japanese economy was one of the advanced countries. So, I simply understood this inequality was caused by internationalization of labor market and wage difference between advanced and less developed countries, by which the average wage of Japanese laborers gradually has been reduced.

In this seminar, however, Shibata insisted that the Japanese laborers' wages had being reduced by the behavior of Japanese business management. The business management oriented to the interests of stock holders made the price of company's stock high by raising the company's dividends and buying back the company's stock. This business management, however, had made the wages of the company reduced. Shibata clearly explained the background of this situation as follows: liberalization of M&A (mergers and acquisitions) had proceeded and raised the stock price of the company to a high level. This was becoming a necessary condition for surviving throughout the serious competition between other companies. In order to raise the stock price, business management had found it best way not to invest in business facilities in a long run, but to raise the dividends, reduce the wages and please the stock holders of the company.

What should we do against such a situation? After his lecture, there were many questions and answers, and we could understand that the worsening working conditions in Japan should be corrected and the liberalization of M&A should also be regulated, and the most important thing to do was to rectify the way of business management oriented only to the interests of stock holders in Japan.

Please read thoroughly once again the article written by Mr. Shibata in *Japanese Scientists*, in February, 2017.

(Takeshi Nakatsuka)

6) RESEARCH EXCHANGE GATHERING IN CHIBA

On May 20 the Chiba branch held a gathering to exchange members' studies. The reports are delivered by two researchers concerning NO₂ density measuring.

Prof. Ito, representative of NOX (workshop of NO_x measuring), started nationwide measuring last August using the simplified monthly measure instrument for NO₂ density of Amano type. NO₂ in the air are collected in a thumb-size passive sampler for a month, and chemiluminescent NO₂ obtained using Saltzman reagent are quantitatively analyzed. The Saltzman method enabled to measure continuously all year round. Uncertainties, however, remain in deriving the NO₂ density in the air from the result of analysis. He is looking forward to improvement to solve such a problem and a new measure instrument explained in the next report (see below). In many parts of the world, the materials harmful to humans like NO₂ gas have been taken notice and begun to attack. From the experience in "Our blue sky trial" Chiba Kawasaki Steel Lawsuit, we know it very important to get accurate primary information of pollutants in our circumstances and release to the public. JSA Chiba branch executive committee decided to tackle measuring campaign in response to an appeal of NOX. The professor asked young students, grad students, and teachers to take part in the measuring campaign.

Prof. Tozaki explained an instrument for measuring NO₂ density in the air by light absorption method. The research of such a method is proceeding in Ireland, France, India, China, and so on since about a decade ago. It is the method to utilize PAS (photoacoustic spectroscopy), that is, use of lasers to illuminate and expand NO₂ gas at intervals, then generate a sound, and use of sensitive microphones to detect amplified sound signal after resonating sound source. This equipment can be established in a still easier, smaller, and more inexpensive way than existing one which utilizes optical resonator. Laser diode, high-efficient microphone, and PC also contributes to this technology. He expects that with the aid of these devices anyone would be able to measure continually NO₂ density in the surrounding area.

7) KYOTO BRANCH REGULAR CONVENTION HELD

The convention with an academic gathering was held on May 21 at Imadegawa Campus, Doshisha University, where seven speakers addressed: a) Prof. Sakon, "Black universities and *university circles* reform in Japan"; b) Prof. Okuno, "Constitutional problem in action by troop of the Self-Defense Forces"; c) Prof. Okunishi, "Foundation development problems from social background – disaster risk in soft ground improvement and the whole trough high filling and regulatory actions"; d) Prof. Kobayashi, "What is the health hazard caused by low-frequency noise?"; e) Prof. Manabe, "Interests unable to apply the norm – from economics"; f) Prof. Sokawa, "Atoms-for-peace myth". The themes of addresses a), c), and f) are involved in activity report, action policy, and special resolution for the regular convention.

The term *University circles* in b) has been coined by ARSER Japan, which is an affiliate of ARSER (*L' Association de Réflexion sur les Enseignements Supérieurs et la Recherche*) born in France. The speaker, thinking of the system of university as a sort of industrial circles, developed discussion about

that. Taking highway construction at the left bank of Yodo River and land development by soil fill in Otsu City as examples, Prof Okunishi denounced that the administration changed its policy from security the first to development the ultimate, politicians control civil officers by mediation, and civil officers' potential decline by reasons of business. Prof. Manabe, considering equilibrium, superabundance of capital, and neutrality of currency as norms, mentioned that there are interests beyond the scope of those norms, and raised a question how we should take up such interests.

8) FUKUOKA BRANCH LECTURE MEETING OF JUNE 11 "MILITARY TENSION ON THE KOREAN PENINSULA: WHAT PATH JAPAN SHOULD TAKE"

While North Korea's developing nuclear weapons and missiles heighten tensions on the Korean Peninsula, preparations for war such as the US-South Korea joint military exercises are boosting military tensions as well. These are not only threats to northern Kyushu but also threats to peace in Northeast Asia. Under these circumstances we held a lecture meeting to think about the path Japan should take and discuss the matter with general citizens on June 11th in the center of Fukuoka City. Even though many other progressive meetings were going on at the same time on the same day, fifty people attended the meeting. All three speakers emphasized the importance of peace making by means of dialogues.

In talking about the history of democratization of Korea, Hotta Koji, the Chairman of The Fukuoka Branch of Japan-Korea Association (Nihon-Koria kyokai) pointed to the candlelight demonstrations as a turning point that led to impeachment of President Park and gave commentary on President-elect Moon's inaugural speech and his future tasks. The new president won people's heart by the speech in which he talked about diminishing the culture of authoritative presidency, dissolving Chaebol conglomerates, resolving the non-regular employment issue and others.

Okamoto Ryoji, Professor Emeritus of Kyushu University, reported on current state of North Korea's nuclear development based on his research using public information like online materials. He concluded that we should understand that they are already able to produce and deploy highly efficient and sophisticated boosted fission weapons and, if left untouched, North Korea's nuclear armaments capability could dramatically build up both in terms of quality and quantity within a few years.

Suzuki Tatsujiro, President of Nagasaki University Research Center for Nuclear Weapons Abolition, showed his analysis that nuclear threats were ever-growing due to recent circumstances surrounding nuclear weaponry, but he highly valued as a great hope the decision made at the UN general assembly to begin negotiation on a treaty to ban nuclear weapons. As he expressed his wishes to establish "Northeast Asia nuclear-free zone", he questioned why Japanese government refused the nuclear ban treaty of UN general assembly and indicated the importance to begin dialogues with every citizen.