

Panel Title: Science, Technology, and Medicine in Transit in East Asia, 1944-1993

Panel Organizers: EunJeong Ma (Cornell University) and Honghong Tinn (Cornell University)

Chair: Fa-ti Fan, Associate Professor, Department of History, State University of New York, Binghamton

Abstract:

This panel brings together the papers whose main research concerns are related to East Asia in transition. The panel pays particular attention to the contested realm of science, technology, and medicine in East Asia during and after the Second World War.

Through diverse case studies about the Korean medicine, Taiwanese microcomputers, Japanese high-energy physics community, and Japanese Kamikaze Technologies, our goal is to investigate various representations and practices of technoscience in relation to democratization, development schemes, and identity politics.

We expect to unveil the underlying political tensions, cultural frictions, social distinctions, and economic dynamics in the history of science, technology, and medicine among these nations.

Not only serving as an informative session by giving detailed narration grounded on empirical studies, but we also hope to engage ourselves with theoretical and methodological questions that can contribute to the existing scholarship.

Therefore, our attempt in this panel is not just to unfold the historical and cultural complexities of these regions, but we also expect to articulate East Asia's unique position in decoding how nationalism, democratization, and development schemes are operated, negotiated, produced and reproduced; and, in the process, what particular form of scientific, technological, and medical knowledge is suppressed/promoted and whose voice is muted and represented.

Title: Science and Democracy: The Case of Herbal Medicines in South Korea

EunJeong Ma

Science & Technology Studies, Cornell University

Abstract:

In this paper, I explore the emergence of democratic science with particular attention to the politics of categorization and classification in postwar South Korea. Focusing on a series of the herbal medicine controversy between Western pharmacists and Oriental physicians that took place from the mid-1970s to the mid-1990s, I ask how social actors manage to divide natural and social order when there is no clear-cut categorical distinction between nature and culture.

I first examine how scientific and medical infrastructure was imagined to fit with the ideals of modern, developmental state (South Korea). Second, I investigate the processes in which medical practitioners to maneuver to make political space for their knowledge and practice within the emerging national order.

Practitioners of both medical blocs strongly associated their knowledge systems with the ideals of civil democracy in order to gain political, social, and epistemic power in the public arena. For example, OM doctors contested the ways categories such as

pharmaceuticals and medicine were encoded in legal institutions and bureaucratic organizations and argued that classifications based on biomedicine and Western science were the legacies of persistent colonial categories. They advocated for medical and pharmaceutical policies based on the OM classification system in distinction with the system of WM. In contrast, WM pharmacists aligned the legitimacy of their expertise with the transnational, scientific biomedical order and advocated for policies on that basis. The latter contended that the new Korea should implement international standards in its political and social institutions as a foundation not only for a strong nation but for global respect.

Title: From Do-It-Yourself Computers to Illegal Copies: The Controversy over Building One's Own Computer in Taiwan, from 1980 to 1984

Honghong Tinn

Science & Technology Studies, Cornell University

Abstract:

This paper aims to address an important aspect of the social history of computing in postwar Taiwan. In the early 1980s, rather than buy microcomputers directly from Apple Computer, Taiwanese computer users might either put parts together to build their own computers or ask shops to do so. In this paper, I trace the origin, development, and transformation of the early-1980s Taiwanese practice of building one's own computer. I demonstrate that a robust and persistent practice of tinkering with computers has been central in the proliferation, use, and culture of microcomputers in Taiwan.

The practice of tinkering prompted a copyright-centered legal debate between Apple Computer and Taiwanese computer manufacturers, while the legal protection of software had not come to exist in Taiwan. As opposed to Apple Computer, Taiwanese manufacturers, engineers, and scientists have argued that making illegal copies of Apple II compatibles was an unavoidable stage for a developing country, such as Taiwan, to learn new technology.

This project deals with two significant issues in the history of technology. In the field of the history of computing, post-1945 computer development in Asia is a rich and relatively unexplored field whose relative absence from the scholarly research reflects a long-standing emphasis on the origins of computer technology, particularly as these origins can be traced to the United States and Europe. As for the history of technology, this project will supplement the current focus on the technological and business innovations with the influx of the lay, amateur, and quasi-professional technological expertise and cultural imagination.

Title: Rubber Boots and Particles: High Energy Physics, Women, and the Local Community in the Early Years of KEK (National Laboratory for High Energy Physics)

Kenji Ito, Ph. D.

Associate Professor

Sokendai (the Graduate University for Advanced Studies)

Hayama, Kanagawa, Japan

Abstract:

This paper aims to show hidden networks of women in Japanese high-energy physics in the 1970s and discuss their relevance to physics. I claim that the history of science does not have to be just about scientists. Technoscience since the late 20th century involves many practitioners other than scientists. Focusing too much on scientists misleads historians of science to overlooking significant roles played by non-scientists. High-energy physics in Japan and elsewhere is a highly male dominant community, in which women are hardly visible. Most high-energy physicists we interviewed are indeed male. Yet, behind the apparent façade of male dominance, there are various and active networking of women, including wives of physicists, secretaries and other support staff, and women scientists. Based on oral history interviews and other approaches, and focusing on the early years of KEK, when KEK and the surrounding Tsukuba Science City emerged, this paper will make visible such hidden networks of women in high-energy physics. Then, I discuss how such networks of wives of physicists and other women at and around KEK are relevant to physics. Because of highly and massively collaborative nature of high-energy physics, which took place in Japan in conjunction with a creation of a science city, such networks are important in order to run daily operations of the laboratory, maintain community relations, start a collaboration, and carry out a large-scale experiment. This study is a result of collaborative work by the Oral History and Archives Project at Sokendai (the Graduate University for Advanced Studies), and contributions of various individuals. This project aims to collect data on the history of Sokendai's affiliated research institutes in Japan, including KEK.

Title: Kamikaze Technologies against the United States: What Japanese Engineers Did and Why They Did It, 1944-45

Takashi Nishiyama, Ph. D.

Assistant Professor

Department of History

State University of New York, Brockport

Abstract:

During 1944-45, Japan embraced its new defensive policy out of "desperation." It involved the special attack operation, widely known as kamikaze, a source of dismay and despair to both Japanese and the Allied forces of World War II. What remains unexplored to date is why various units of wartime Japan—including engineers—ended up embracing this particular operation. During war, it might be "rational to act a little crazy and crazy to be too rational." War could make assumptions of peacetime untenable, but what did engineers do and, above all, why they did it during 1944-45? My presentation is an attempt to answer these deceptively easy questions. It will highlight a series of initiatives launched by the wartime nation, military officials, engineers in research and development labs, and technicians on the production floor toward the final stage of the war. The highly-sophisticated technologies for special air attack reduced the operators to a collateral damage on the battlefield; in the process, the engineers complicated the prevalent dichotomy of self-righteous "Us" as opposed to "the Others." The engineers, I argue, faced and developed the contested, compromised, and inconsistent character of the entire process, which I refer to as kamikazation of war.