

## Special Issue

# Transformation of East Asian Scientific Community through Wartime to the Cold War: Cases from the Bioscience Fields

## Introduction

Kaori IIDA\*

Science in East Asia has often been viewed in bilateral relations with Imperial Japan from the late nineteenth century to 1945, and with Cold War America after World War II. This perspective has given insufficient attention to the flow of people, information, and materials in the local and transnational context. As recent scholarship informs us, in order to grapple with complexities of the postwar development in Asia it is useful to examine intra-relations within Asia and also each country's historical contexts in a longer stretch, covering both wartime and postwar periods.<sup>1</sup>

This volume deals with such a transnational flow in case studies from the bioscience fields in the twentieth century: labor science, physiology, genetics, and medicine. These studies demonstrate that researchers in those fields were mobilized to the war and, after 1945, engaged in the process of reconstructing each nation and their science by using their transnational networks and opportunities. This complex and long history matters in explaining the development of the biosciences. We also show how local interests in Asia were often different from better-known narratives told from American perspectives.<sup>2</sup>

Sookyong Hong examines Gito Teruoka, a pioneer of the “science of labor” (*rōdō*)

---

\* Department of Evolutionary Biosystems, The Graduate University for Advanced Studies, SOKENDAI, Hayama, Kanagawa, Japan. Email: iida\_kaori@soken.ac.jp

<sup>1</sup> Hiromi Mizuno, Aaron S. Moore, and John DiMoia, eds., *Engineering Asia: Technology, Colonial Development, and the Cold War Order* (London: Bloomsbury Academic, 2018); Jaehwan Hyun, “Making Postcolonial Connections: The Role of a Japanese Research Network in the Emergence of Human Genetics in South Korea, 1941–1968,” *Korean Journal for the History of Science* 39, no. 2 (2017): 293–324; Aya Homei and John P. DiMoia, “Integrating Parasite Eradication with Family Planning: The Colonial Legacy in Post-war Medical Cooperation in East Asia,” *Social History of Medicine* (2020), hkaa005. For China and Taiwan, see Mary A. Brazelton, *Mass Vaccination: Citizens’ Bodies and State Power in Modern China* (Ithaca, NY: Cornell University Press, 2019); Wayne Soon, *Global Medicine in China: A Diasporic History* (Stanford, CA: Stanford University Press, 2020); James Lin, “Sowing Seeds and Knowledge: Agricultural Development in the US, Taiwan, and the World, 1949–1975,” *East Asian Science, Technology and Society* 9 (2015): 127–149. For the larger South-South picture, see Gisela Mateos and Edna Suárez-Díaz, “Development Interventions: Science, Technology and Technical Assistance,” *History and Technology* 36, nos. 3–4 (2020): 293–309.

*kagaku*) and the director of the Institute for Science of Labor. Hong illustrates how Teruoka's idea of labor intersected with Japanese wartime rationalization and settler colonialism in Manchuria, where Teruoka set up one of the institute's branch stations. Teruoka mobilized science to improve working conditions for the underclass and ultimately the health of society as a whole, promoting a human-centered approach over Taylorism, which treated humans as mere machines. Hong shows how this classless, human-centered approach had affinity with wartime work ideology and how it was applied in settler colonialism, where clear racial and ethnic boundaries remained. The article views the "science of labor" in the prewar (1920s), wartime, and postwar periods as continuous activities, and ends with postwar trajectories of that science in Japan and Korea.

Jaehwan Hyun also focuses on Teruoka, but uses his work on "sea women" (traditional freedivers, called *ama* in Japanese, *haenyeo* in Korean) as a window to analyze how a transpacific research network was formed among South Korean, Japanese, and American physiologists in the postwar period. Hyun demonstrates how wartime Japanese and postwar American physiologists had different interests in the sea women and shows how they came to collaborate despite their different motivations. Through the analysis of an international symposium on *ama* held in 1965, this paper argues that a renewed interest in the "primitive" in the Cold War context played an important role in the formation of a transpacific network, and that the process accompanied the American physiologist Hermann Rahn's selective choices determining what was regarded as proper physiology and who was regarded as a physiologist in the postwar context.

Kaori Iida discusses the Japanese plant geneticist Hitoshi Kihara and his postwar research project on rice that was supported by the Rockefeller Foundation, and shows how Kihara used this opportunity to reconstruct and further develop genetics in Japan. Kihara's project was supported by the foundation partly because of American interests in improving rice yields in Asia, which developed into the agricultural initiative that came to be called the Green Revolution. The paper illustrates how Kihara's postwar efforts were continuous with the Japanese geneticists' development of resources, networks, and authority in Asia since wartime, and argues that examining interactions between the Japanese rice research community and the foundation/International Rice Research Institute, through key mediators such as Kihara, broadens our understanding of the history of the Green Revolution in Asia, which has often been framed in an American perspective.

John DiMoia examines South Korean medical efforts in Vietnam during the Vietnam War and places them in a wider context. While much of the literature on Korea's developmentalism begins in the 1980s, DiMoia goes back to a decade after the Korean

---

<sup>2</sup> For example, see Warwick Anderson, "Postcolonial Specters of STS," *East Asian Science, Technology and Society* 11 (2017): 229–233.

War, when Koreans still retained colonial knowledge and were in the process of rebuilding their nation. He shows how the Korean interests behind their project in Vietnam differed from Korean roles depicted in a dominant narrative told from an American perspective. By focusing on public health activities of the Korean Preventive Medicine team, the paper demonstrates that Korean medical experts used the opportunity for their own aims, to collect epidemiological data and gain experiences. These activities were beneficial for improving Korea's domestic public health and the health of Korean troops, as well as for allowing Korea's tropical medicine to gain trust and authority internationally.

As we think more transnationally, following people, materials, and ideas that cross multiple national borders, we increasingly need more international collaborations.<sup>3</sup> In writing transnational histories, historians face problems of dealing with multiple languages and navigating foreign archives that are often difficult to identify and access. Local stories are crucial to understanding the complexities of the history of science and technology in Asia. Seeking more transnational collaborations in the future will be useful for us to develop transnational historiography effectively.

---

<sup>3</sup> This point is discussed in Simone Turchetti, Néstor Herran, and Soraya Boudia, "Introduction: Have We Ever Been 'Transnational'? Towards a History of Science Across and Beyond Borders," *British Journal for the History of Science* 45 (2012): 319–336.