In spring 2006 I received an intriguing invitation. With support from the National Science Council of Taiwan, Fu Daiwie was about to launch a new journal, EASTS. He and his colleagues asked me to join the editorial board and to attend an inaugural international conference in Taipei that summer. It was an irresistible offer and of course I accepted immediately!

Why did I find the EASTS project so attractive? One reason was that it was based in Taiwan. Over the previous years I had come to consider Taiwan one of the most exciting centers for historical or STS debate. I was struck by the vitality, openness, and acumen of discussions, whether they were about historical method or geopolitics. I had already enjoyed a fruitful collaboration with Daiwie Fu on a big historical project (Chemla et al. 2001). Chu Pingyi, soon to be an associate editor of EASTS, was an old friend. I was impressed by the prominence of feminist scholars like Chia-Ling Wu and Yi-Ping Lin in shaping STS agendas in Taiwan. I also loved the philosophy of Taiwan colleagues that good food and fun are essential ingredients of sustained intellectual debate and network building.

But perhaps the most compelling attraction of the EASTS project for me was how it breathed new life into STS by insisting on decentering or provincializing the West. The journal was expressly intended to challenge conventional STS frameworks and their implicit or explicit periodizations, geographies, and models of circulation; thus, deep history and local genealogies of knowledge and practice were an integral element of EASTS scholarship from its inception. I was excited to see the journal’s agenda giving contemporary expression to critiques of Eurocentric knowledge hierarchies and periodizations that first engaged me at Joseph Needham’s East Asian History of Science Library (EAHSL), where I began my research career in the early 1970s.

So how did Needham’s Science and Civilisation in China (SCC) project relate to the radical critiques that were then and have remained the raison d’être of STS, encouraging it to speak truth to power, sustaining its reflexivity, and keeping it “open-ended and never-at-rest-with-itself” (Mikami and Woolgar 2018: 315)? I thank Wen-Hua Kuo for giving me the opportunity, in this informal history, to trace some of the connections
between the denizens of EAHSL and the projects in which they were engaged some forty years ago, and the current intellectual ambitions and social networks of EASTS.

Needham’s charismatic personality, his outspoken views on the politics of science and its history, the exotic fascination of SCC and the unique richness of Needham’s research collection attracted a constant stream of visitors to EAHSL. Some came just once, to take tea with the Great Man; others stayed for weeks, months, or years. Those who stayed longer or visited regularly included scholars working on their own projects, and Needham’s collaborators, to whom he had entrusted sections or volumes of SCC. Needham himself would appear for the daily ritual of afternoon tea, where conversation, not discussion, was the rule. But elsewhere there were discussions and arguments aplenty. We had a kind of coffeehouse club, meeting for morning coffee (proper filter coffee, not instant) and a sandwich lunch to discuss all kinds of issues that took the Needham project and the problems it raised as a springboard.

I think it is no coincidence that a number of people who were regular visitors to EAHSL in the 1970s and 1980s subsequently became regular contributors to EASTS, among them Shigeru Nakayama, Yung Sik Kim, Judith Farquhar, Karine Chemla, and myself.1 Back then we read the works of Barry Barnes and other SSK (sociology of scientific knowledge) luminaries and discussed the implications for our own projects. If STS consists in “understanding developments in science, technology of medicine in relation to their social contexts,”2 or “seeking to answer the big questions about how societies both influence and are influenced by science, medicine and technology,”3 then almost everyone at EAHSL was already an STSer.

Yet recognition was not mutual; the flow of influence was definitely one way. STS developed into a huge and variegated field, but overall it was and has remained un-self-consciously Western-centered. When the non-West or global South featured, it was typically in “local” case studies that were to be explained by theories generated within Western context (Law and Lin 2017). Apart from Nakayama, none of us, I think, were included in STS circles until EASTS began publication, rising to the challenge of what John Law and Wen-yuan Lin call the “third symmetry” by developing a postcolonial, rigorously reflexive take on the STS agenda with which we could identify and to which we felt we could contribute.

This is not to say that the early STSers had no interest in Needham. Visitors to EAHSL included such notable pioneers of Western radical science studies and STS as David Edge and Les Levidow. But I think it is fair to say that they were drawn principally to Needham’s critique of Cold War science politics and his firm belief that science could and must be directed toward bettering the human condition. They were less engaged by the idea that a thoroughly researched history of science in China could serve to test the ontological foundations of modern science. Indeed, Needham deliberately distanced himself from that position.

Needham’s challenge to the orthodox narrative of the rise of the West lay in undermining claims to European exceptionalism, not in challenging the premodern/modern

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1 So too have many younger-generation scholars associated with the Needham Research Institute, as EAHSL was renamed in 1991.
dichotomy that still prevails in so much STS (and history of science, technology, and medicine). Needham’s metaphor of rivers of local “proto-science” flowing into the sea of “ecumenical” modern science enabled him to argue that modern science was not a purely Western achievement but a synthesis incorporating contributions from China and other civilizations. But Needham maintained a fundamental qualitative distinction between local premodern sciences and modern science. The local sciences were a product of civilization, inflected by social and cultural context or prevailing power relations; so far so Marxist. Yet “ecumenical” modern science he posited as unitary and universal. Where contemporary science was concerned, Needham was passionately engaged in the politics of science—how science was used and to whom it was made available—but he was not prepared to recognize the politics and culture in science. He shared the goals of SSK when looking at premodern societies, but was not prepared to deconstruct the findings of modern science in similar fashion. To that extent, Needham’s oeuvre belongs to what Ulrich Beck has called the first modernity.

Needham’s commitment to the objectivity of modern scientific knowledge stood him in good stead when it came to constructing persuasive arguments about the significance of ancient Chinese discoveries or inventions. The authority of Needham’s claims to identify “proto-science” in premodern China gained greatly from his status as a preeminent scientist working within the recognized framework of modern scientific domains. Needham’s readership trusted him to identify elements of real science in exotic contexts. Organizing the volumes and sections of SCC according to the intellectual hierarchies of the modern sciences (mathematics and its applications first, then physics, chemistry, and biology) and explaining Chinese concepts using modern scientific terminology further strengthened Needham’s argument that Chinese “proto-sciences” should be understood as precursors of the corresponding domains of modern science.

The general public, including many of the practicing scientists among Needham’s readers, were excited by the new horizons that SCC opened for them, but many sinologists at the time rejected what they saw as an anachronistic approach that misrepresented the specificities of Chinese thinking and downplayed the complexities of Chinese intellectual history. Too much science, not enough civilization, was the problem with SCC, I was told by my colleagues in Oriental Studies at Cambridge University. They disapproved just as strongly of using the terms science or technology in Chinese context as did the faculty of HPS (history and philosophy of science) at the time, who were clear that science was the exclusive preserve of the classical Greeks and the post-Renaissance Europeans. The likes of Simon Schaffer had yet to burst onto the HPS scene.

While the Cambridge mandarins kept their distance, the EAHSL network chose to rise to the SCC challenge, grappling enthusiastically with the historiographical and epistemological problems that it generated. Most of our debates led us in the direction of science in context, science as culture, and science as civilization. Nathan Sivin, for instance, disagreed vehemently with Needham on many points, in particular his stated goal of explaining in the final volume of SCC why China had failed to produce the Scientific Revolution. It was historically useless, Sivin (1982) declared, to ask why something didn’t happen. The point was to investigate thoroughly what did, and to explicate it in context. In her critique of SCC’s selective disembedding, Karine Chemla (1999) noted how the teleology of Needham’s metaphor of rivers and the sea effectively wrote out of history those elements that didn’t make it to the sea. But whatever its deficiencies, Needham’s approach gave us license to use the terms of science and technology as categories of analysis in hitherto forbidden contexts, opening new
and often unexpected perspectives on regimes of power, knowledge production and transmission, cosmology, or material culture (e.g., Bray 2008).

Along with a concern for context, the cosmopolitan milieu of EAHSL also encouraged reflexivity and efforts at what nowadays is termed “provincializing Europe.” When it was a question of interpreting ancient natural knowledge, or even of advocating for an organicist turn in contemporary science, Needham enthusiastically entered into the spirit of indigenous categories and principles such as yinyang-wuxing principles of transformation. Radical reflexivity on the part of his collaborators, however, was not always accommodated. Commissioned to write sections of the final volume of SCC that Needham intended to explain why late imperial China generated neither capitalism nor a scientific and industrial revolution, Timothy Brook, Gregory Blue, and Immanuel Wallerstein produced instead a critique of the Eurocentric concept of capitalism and the teleologies of modernity. This was pushing the envelope too far: their contributions were not included in SCC but published separately (Brook and Blue 1999). It was, however, an exercise very much in the spirit of reflexive decentering that EASTS encourages.

A more modest but typical effort at “provincializing the West” was my own study of the longue durée history of East and Southeast Asian rice societies (Bray 1986). Spurred both by my research on the history of agriculture in China and by my encounters with Green Revolution development projects in Malaysia, I was seeking to formulate an alternative dynamics to modernist models. Discussions with Nakaoka Tetsurō, the historian of Japanese industrialization, showed me a way forward. Nakaoka is a specialist on the politics of technology, whose research on what are now called “hybridization” and “industrious revolutions” influenced several of us at EAHSL long before David Edgerton or Jan de Vries came on the scene. As I was seeking non-Eurocentric frameworks for understanding the history of rice-growing societies, Nakaoka introduced me to Japanese works and research programs that offered entirely new perspectives on the cultural and social history of technology. I also realized that Japan was just as influential as US-dominated programs in shaping and analyzing contemporary development in Southeast Asia’s rice regions. The West was decentered for me once and for all! Once again, such postcolonial recenterings are a staple for EASTS and its associated scholars—think for example of the reflections published in EASTS by Atsuro Morita, Aaron Moore, and others on Japan in the making of contemporary Southeast Asia.

The last themes I will discuss here are those of knowledge circulation, and of centers and borders, again, central themes both at EAHSL and in EASTS. One reason that Needham preferred to speak of “science in China” instead of “Chinese science” is that he saw the transmission or exchange of knowledge between societies as a fundamental part of its history. The tension between knowledge in motion and knowledge as civilization is difficult to manage (Chemla and Peiffer 2001), but in SCC we are shown knowledge flowing continually into and out from China. This amounts to far more than a series of assertions that “China invented it first,” although such claims naturally captured the public imagination. But even in a work as capacious as SCC, there was not room to develop satisfactory theories of transmission and exchange. We had not heard of entangled or connected histories, although we tried to deal with their traces. Nor was there much recognition within SCC in its heyday of the need to “rescue history from the nation” (Duara 1995), or rather, in the case of imperial China, from the state (though see Brook 2004). But within a few years these issues figured prominently among the scholars who visited what had by then been renamed the Needham Research Institute (NRI). Here the contributions of historians and anthropologists of medicine
are especially notable. And once again we see scholars who are familiar with the Needham project (including Elisabeth Hsu, Judith Farquhar, and Florence Bretelle-Establet) contributing to ongoing debates at EASTS.

The achievements and limitations of Joseph Needham’s grandiose vision have been carefully analyzed and criticized by historians and philosophers over the years, but perhaps less attention has been given to how the tensions at the very heart of his SCC project catalyzed the formulation of questions that are now at the heart of the EASTS agenda. Mainstream STS has paid little attention to SCC and the critical approaches it has generated, and while many of us use STS approaches in our work, we do not feel confident in presenting it as STS. But then, mainstream STS is still very Western-centric, and tends to presentism. EASTS has critical history and cosmopolitan theorizing at its core. It is not surprising that so many of us who worked at EAHSL, or work today at the NRI, feel we have a home-away-from-home in the EASTS community, or that other STS iconoclasts like Adele Clarke have become, through EASTS, “entranced with postcolonial STS as one key to STS future imaginaries” (Fletcher and Clarke 2018: 231).

References


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