

Enabling Solidarity into the Steel: Rethinking Innovation from East Asian Cases

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What is the exemplary architectural innovation in contemporary East Asia? The skyscraper Taipei 101, or the Watercube in the Beijing Olympic Park? Take a look at this issue's cover, as *EASTS* invites you to enter a new world of East Asian innovation based on insights from Hsieh Ying-chun's (謝英俊) years of post-disaster reconstruction efforts in rural Taiwan and China.

In September 1999, a magnitude 7.3 earthquake struck Taiwan, killing more than 2,000 people. Several aboriginal tribes suffered most seriously and were among the groups who had the least resources to rebuild their communities. Taiwanese architect Hsieh Ying-chun and his team Atelier-3 Worldwide came to those tribes to help, but he aimed to achieve a vision that went beyond a temporary resettlement. He believed that making new living spaces after a disaster could instill new hopes in a community by promoting such ideals as solidarity, democracy, and sustainability. Hsieh once reflected that “it is indeed the earthquake that gave me the chance to put the theory of green architecture, public participation, and sustainable development into practice” (Hsieh and Roan 2003, 4). Could it be possible to develop a new housing project among the ashes and at the same time empower the local residents, exalt the cultural heritage, increase employment, and restore the ecosystem—all within a limited budget? The answer for Hsieh was a definitive Yes, but the question for us is how was it done?

A technical innovation—the lightweight steel construction—plays a significant role in Hsieh's inspirational project, whose major elements include “simplified construction” and “open architecture” (Roan 2007). Lightweight steel construction is expensive in some industrialized countries due to the high patent fees for building complicated connecting points. Hsieh, however, was about to reduce the number of connection points to 10%, a feat that considerably cut down the costs of construction. To involve aboriginals and volunteers in rebuilding communities, Hsieh created a do-it-yourself method so that even people without formal training

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could get their tools to work without too much effort. The flexibility of Hsieh's invention is further shown in the fact that residents could employ locally available resources such as bamboo, wood, and bricks when building walls, façades, and roofs. Hsieh, thus, inscribes the core values of social relationships—solidarity, public participation, and local knowledge—into bolts, lightweight steel, and his open architectural system. STS scholar Hsin-Hsing Chen (2004) calls this rebuilding effort “the first large appropriate technology project” in Taiwan, for it consciously designs progressive social values into technological innovation and social organization.

Hsieh's Taiwanese lessons proved critical when similar challenges arose in a new setting. In May 2008, a magnitude 8.0 earthquake hit China's Sichuan Province, taking 70,000 lives and damaging three million houses. With the experiences gained from his reconstruction work in Taiwan and previous projects in China, Hsieh Ying-chun and his colleagues traveled deep into mountainous areas in hopes of rebuilding the devastated villages. Compared to Taiwan, the scale of the destruction in Sichuan was considerably higher and the financial resources far more limited, but the challenges of preserving ethnic minority cultures, incorporating local labor, encouraging community participation, and protecting sensitive ecology remain the same. The lightweight steel again proved to work well this time. Hsieh points out that this invention serves as a “complex adaptive system” that can meet multiple tasks and goals (Rural Architecture Studio 2009). In Hsieh's field notes, he observes that while residents in different villages may vary in how to respond to the designer's blueprint, how they sing folksongs during construction, and how they utilize local materials, the lightweight steel serves as an interface that is flexible enough to enable locals' diverse engagement and creativity.

We choose the newly emerging Yangliu (Willow) Village in Sichuan—one of the projects that Hsieh Ying-chun Architects and Rural Architecture Studio are currently working on—as the cover for the opening issue of the *EASTS*'s third volume. Although not as high-profile as Taipei 101 or the Watercube, Hsieh's post-earthquake reconstruction projects over the past 10 years demonstrate an important facet of architectural innovation in Taiwan and China. But more stories need to be told and more questions addressed. How do local residents as users evaluate these housing projects? How does expert culture transform when place knowledge, local knowledge, and situated knowledge become important during the place-making process? *EASTS* welcomes investigation into these inspiring issues, so as to help us rethink, redefine, and reflect on the meanings of innovation and expertise.

To celebrate the birth of this new volume, we present our own innovation in a new section called “STS Research in East Asian Languages: Selected Translation.” In addition to providing multilingual abstracts, *EASTS* seeks to break down the language barrier and enhance the visibility of the achievements of non-English-speaking East Asian STS communities through translation. The editorial board formally nominates and selects important STS work for translation. The pieces chosen represent significant contributions to East Asian STS research that have been published in non-English languages like Korean, Japanese, and Chinese, but for language reasons have not been available to a wider international audience. We are all aware that relying solely on English publications might lead to a systematic bias in understanding non-Anglophone societies. This problem is particularly severe as much of East Asian STS research is published in languages other than English.

Before the ideal of a multilingual readership becomes common, *EASTS* seeks to contribute to this endeavor by introducing a selection of influential East Asian STS “classics” to the broader academic community. We hope that this “editor’s choice” section will expand our horizons of the richness of East Asian scholarship.

The debut of this new section is Chung-hsi Lin’s “The Silenced Technology—The Beauty and Sorrow of the Reassembled Cars.” This widely read (and possibly the most loved) STS article from Taiwan discusses how the specific socio-cultural contexts shape the production and use of reassembled cars. Lin challenges the mainstream perception that reassembled cars used on sugarcane fields and oyster collection sites are risky, low-tech, and outdated. Through meticulous historical investigation and fieldwork, he demonstrates that they, in fact, display numerous qualities such as efficiency, effectuality, safety, and flexibility in their local context. His work, thus, urges us to question and redefine, once again, what innovation and expertise mean.

In addition to the special issues that *EASTS* readers may be more familiar with, we joyfully present you four independent papers that form the major content of the current issue. Stepping into the third year, we would like to take this opportunity to announce that *EASTS* always welcomes independent submissions. The diverse topics covered in this issue range from laboratory study to pharmaceutical regulation, from hygienic modernity in Korea to scientific controversies in China. Still long for more fresh issues and debates? Then, enjoy the book review section, and hopefully, its five reviews will quench your thirst of the work of East Asian and international STS.

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