

# Describing and intervening: Exploring the plurality of STS in India

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On September 14, 2017, the Centre for Knowledge, Culture and Innovation Studies (CKCIS) in the University of Hyderabad (India) invited Prof. Wiebe Bijker to a workshop, to think together with other academics and students on how STS (Science, Technology and Society) could engage with challenges in (Indian) society today. Prof. Bijker also delivered a public lecture the same day, discussing the question of [Swaraj](#) (Self-Rule) by knowledge-producing institutions in India today.

Delivering the inaugural address to the workshop, [Prof. E Haribabu](#) traced the origins of STS in India. He highlighted that a critical engagement with science began, not in the academia first, but among members in civil society. Later, popular science movements like

[Kerala Sasthra Sahithya Parishad](#)

[\(KSSP\)](#) and [All India People's Science Network \(AIPSN\)](#) inspired academics in the [Indian Institutes of Technology \(IITs\)](#) to teach social science courses for engineering students since the early 1960s. Reflecting on the status of post-academic science in the country today, Haribabu proposed that current controversies around science demand alternative, democratic ways of understanding through, what he called, "Mode 3" production: collaboration between academics and civil society organizations, specific to the local context.



In his keynote address, Prof. Bijker reflected on his journey as an STS scholar. He recalled that he could visualize **three different routes** for engaging with science and society issues: (i) academic highway (ii) policy street, and (iii) democratization boulevard. The third route was more specific to his experience with civil society activism in India, where understanding first and intervening later constituted an integral part. Drawing from his experience in developing the **Social Construction of Technology** heuristics and theory, he wondered if academics could be more effective if they gave symmetrical descriptions of all the groups in a socio-technical ensemble, rather than formulating the research project only as a critique of the most powerful group. This reflexive question could help as an important tool for STS researchers to gain expertise and intervene in questions around science and society relations.

**Annapurna Mamidipudi** shared her attempts at using STS concepts to theorize handloom weaving and to act in support of the handloom industry, which is a livelihood for millions in India but is often neglected by policy makers in favour of the power loom. Her research helped her understand that the knowledge of the weavers was itself a socio-technical innovation consisting of multiple aspects such as telling colour by the smell of the natural dyes and using the collective memory of the weaving community, both of which also embodied the politics of the craft of weaving itself. She also borrowed the vocabulary of one of the many music traditions of southern India (

## Carnatic

) to understand creativity behind handloom weaving – **Saadhana** (repetitive practice) and **manodharma** (creative expression). Could this understanding help validate the craft of handloom weaving? Could this offer an opportunity for political action in support of the weaving community? Annapurna felt STS does offer tools to answer these questions.

Shifting gears from livelihoods to ecology, Pankaj Sekhsaria explored how STS offers a potential new frame to understand and respond to "natural" disasters. He drew from his experiences as a STS researcher, wildlife enthusiast and writer, to reflect on the unspoken consequences of the 2004 tsunami on the Andaman and Nicobar (A&N) Islands of India. Post-tsunami, many technocentric "solutions" were offered to "develop" the A&N Islands: to develop it as "mid-ocean real estate", to serve as a source of nuclear power, and as a base for a "dynamic warfare system". Pankaj shared that the proponents of such options are oblivious to the geological, ecological and socio-cultural aspects of the A&N Islands, which remain home to some of the oldest peoples (the Jarawas) and several endemic species of wildlife. Emerging STS themes in disaster research offer a means to understand "compound" disasters (natural and industrial) and prevent the increased vulnerability to disaster caused by political and economic choices.

Aalok Khandekar explored how STS could be strengthened through different kinds of collaborations, not just a means of responding to societal challenges, but as a case for collaborative STS in itself. Drawing from Kim Fortun's work on *late industrialism*, Aalok illustrated how emerging economies are facing issues so complex that these necessitate a collective approach to understanding them. For example, environmental hazards in the Chennai metropolitan region have been identified to be intrinsically linked with caste discrimination, and air pollution in Delhi has been observed to have implications for the transnational geopolitics between India and Pakistan. As one of the organizing committee members of the upcoming 4S meeting in 2018, Aalok extended an invitation to engage with *TRANSnational* STS projects like the open bibliography project on *STS genealogies*, explaining that different nations have markedly different genealogies in STS and so contribute uniquely to understanding the structures in which science shapes and is shaped by different nations.



In his public lecture to a large audience of students, scientists, academics and civil society activists, Prof. Bijker explained his participation in an Indian experiment to develop a manifesto for Indian science and technology. This experiment drew its inspiration from Mahatma Gandhi's **Hind Swaraj** (Indian Home Rule) written in 1909, where Gandhi explained his views on Indian self-rule and self-reliance. The new manifesto, called the Knowledge Swaraj manifesto, was developed collaboratively by activists and STS researchers of the Knowledge in Civil Society (KICS) forum in 2009. It explored what a self-rule of a nation's knowledges and technologies could look like today, and what kind of principles and social institutions could govern such a self-rule. This document, Prof. Bijker said, is an example of the role STS could play in understanding how scientific knowledge is socially constructed, particularly in this era of post-truth and alternative facts. He also shared how a larger European project on Responsible Research and Innovation (RRI) is attempting a conscious shift from a product-oriented to a process-oriented approach, all rooted in STS research, and geared towards a people-centric science and technology policy.

As a general "plea" to those present, Prof. Bijker suggested that STS researchers develop "

bold modesty

": to be confident in our expertise as researchers, but combine it with modesty when listening to others who speak from other knowledge practices. He learned this through personal experience, he said; for despite being a white-tall-male European, he was still accepted and could participate in several Indian civil society experiments, largely because he was willing to listen first and intervene only later.



Giving the closing remarks for the day, Prof. C Raghava Reddy, Head, CKCIS, shared that STS in India was going through an exciting new phase, where younger STS scholars could learn from international scholars like Prof. Bijker, participate in transnational STS projects and engage critically with science and society issues in India and elsewhere.

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**Prof. Bijker's public lecture** (September 14, 2017) [discussing the question of Swaraj \(Self-Rule\) by knowledge-producing institutions in India](#)