

Beyond Two Cultures

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I am a researcher in the field of STS (Science and Technology Studies, or sometimes also referred to as Science, Technology, and Society Studies). Broadly, the field focuses on ways that science, technology, and society shape each other. STS researchers could focus on how societal priorities shape what scientific questions and technological developments are pursued and funded, for example. Or they could examine how the relative risks and benefits of scientific and technological advancements are distributed and how these can be governed fairly. Science and technology infuse and fundamentally shape contemporary society in myriad ways and across domains – biomedical, digital, environmental, and many more. And importantly for me, the STS scholarship has time and again highlighted the importance of developing technology that is attuned and responsive to its contexts. Since first emerging as an interdisciplinary field of inquiry in the 1980s, STS has steadily expanded its conceptual and methodological toolkits to understand the various intersections of science, technology, and society.

My own research in recent years has focused on understanding emerging vulnerabilities and possible adaptations to climate change in urban India. My work has focused on population groups such as slum dwellers who are at heightened risk from rising temperatures in Hyderabad. In our work, we have demonstrated how the use of particular building materials and housing designs, prevailing socio-cultural norms, lack of reliable access to vital urban infrastructures of electricity, sanitation, and water supply, and lack of secure land tenure all together render slum-dwelling populations at much greater risk to rising ambient heat than other urban citizens.



Nonetheless, while there is significant policy attention to the question of heat and its unequal impacts in India, we show that existing policies remain largely disconnected from the everyday realities of slum dwellings and other vulnerable population groups.

The numerous ways these populations are adapting to the challenge of rising temperatures relying on local knowledge, skills and community networks is also largely invisible in existing policy formulations. The focus on the everyday conditions and habits that are productive of both, heightened vulnerabilities and adaptive possibilities, provide a different, and more fine-grained, understanding of how climate risk is configured than purely technologically led views, deriving from sensors and satellites, for example, would provide. This is not to discount valuable insights gained from remote sensing and GIS technologies, but rather to say that these necessarily need to be complemented with in situ, qualitative understandings of lived experience. Indeed, in our work, we have found it productive for insights gained from everyday experiences—knowledge of particular building materials and dwelling habits, for example, and a sense of what kinds of solutions might be acceptable and appropriate—as useful starting points to model and simulate heat gains in the built environment and possible interventions to minimize them. Much more can be said about this work, of course (further information is available at <https://heatingcities.in>); for now, I simply note how research in the Liberal Arts can (and should) complement STEM research. Not as an afterthought or something that happens after the science is done in terms of policy or outreach, but rather as something that can shape scientific inquiry through and through to ask better questions and arrive at better solutions.



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