Engaging Science, Technology, and Society

Innovationism Across Transnational Landscapes

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Abstract

This editorial introduces the thematic collection on STS and innovation. The collection includes eleven *Engagements* exploring the relationships between innovation studies (IS) and STS across various geographies. There is also an *Original Research Article* in this issue, by Susan Bell, Patrick Grzanka, Kelly Joyce, and Laura Senier, examining masking and not masking during COVID-19. The issue is accompanied

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by another six supplemental materials in the STS-Infrastructures platform including: a video recording, interview, a set of questions, syllabi, among other forms of supplemental documentation.

Keywords
innovationism; innovation studies; science and technology studies; transnationalism; COVID-19

The "Cult of Innovation"

Since the nineties, innovation, with its promises of a competitive economy and an ever-better world, is probably among the most recurrent words when it comes to science and technology scholarship. Spurring innovation is an isomorphic goal in many countries' science and technology programs, regardless of their capabilities. The Brazilian scholar Marcos Barbosa de Oliveira (2011) has termed this *innovationism*: the primary objective of scientific research has become to achieve innovation. There is a "cult of innovation," says Langdon Winner (2018), and it works as a "God term," with inherent potency and essential good. More than two decades ago, Benoît Godin (1998) qualified innovation as a performative discourse, one in which the enunciator proposed a new organization of knowledge while, at the same time, participating in policy formulation and implementation.

For all these reasons, innovation is an obligatory matter for STS reflection and intervention. Have we discussed it sufficiently? Do we need this concept as is, or transformed? Have we paid attention to differences within innovation approaches? Have we been able to influence the scientific direction otherwise in the policy arena as our colleagues from Innovation Studies (IS) have? Is innovation in confrontation with situatedness, co-production, public participation, and other concepts and political claims developed by STS? Are STS and IS indeed so separated as fields everywhere? If not, what dialogues do they sustain? Are we willing to respond to the call for reapproximation made by IS scholars during the 50th Anniversary Conference of the Science Policy Research Unit (SPRU) at the University of Sussex?[1]

Most of Issue 9.2 of *Engaging Science, Technology, and Society* consists of a thematic collection that addresses such questions. The collection consists of an opening piece, by Alan Irwin, entitled *STS and Innovation: Borderlands, Regenerations and Critical Engagements*, commented by eight scholars from nine different countries, representing great diversity both in terms of the features of the STS and IS fields, and regarding S&T trajectories and capabilities: Lucas Becerra and Hernán Thomas (2023a), Tiago Brandão and Carolina Bagattolli (2023a), Maja Horst (2023), Shobita Parthasarathy (2023a), Sebastian Pfotenhauer (2023), Pankaj Sekhsaria (2023a), Judith Sutz (2023), and Sally Wyatt (2023a). After this part of the collection was ready, Lilly Irani (2023) contributed a general commentary, and Alan Irwin wrote an epilogue (2023b).

[1] The conference was held on September 7–9, 2016, with the theme "Transforming Innovation."

Constructing this collection took a very long time but it makes a strong contribution to advancing our editorial commitments and curation style. The first version of the proposal for this thematic collection was presented at the beginning of our term as an editorial team, and with feedback, it changed considerably to embrace our goal to transnationalize STS scholarship, which Alan Irwin seconded with great enthusiasm.

Cultivating Innovative STS Pedagogies

By the time all the manuscripts were in their final steps, we realized that such a wonderful set of pieces would be an excellent contribution to STS education. We then decided to explore more of this potential, in line with ESTS's goal of cultivating scholarship on STS pedagogies. Several pieces are therefore now accompanied by pedagogical materials, be they a video recording by Lucas Becerra and Hernán Thomas (2023b), an interview with Maja Horst conducted by Noela Invernizzi and Emily York (2023), a set of questions from Pankaj Sekhsaria (2023b), a syllabi from Tiago Brandão and Carolina Bagattolli (2023b), a syllabi and more from Sally Wyatt (2023b), and supplemental documents, i.e. an analytical framework from Shobita Paratharasay (2023b). These materials are all accessible on the STS Infrastructures Platform.

"Could Innovation be Otherwise?"

In the opening piece, Alan Irwin (2023a) asks three relevant questions that he addresses in the article and extends to the commenters to prompt the conversation:

- When it comes to engaging with and acting upon socio-technical change, is "innovation" part of the solution or of the problem?
- How should we view the relationship between STS approaches to innovation and neighboring fields, especially innovation studies (IS)?
- What new conceptual and empirical resources can STS bring to the study of innovation (including the possible redefinition and reframing of the term itself)?

As a scholar trained in a period where the two fields were more connected, and recognizing the work of some prominent scholars who were able to work in the borderlands, Irwin is confident in the possibility of a dialogue and believes that STS scholars can't simply stand against innovation. However, he acknowledges the need for an overhaul of the concept and practices of innovation. STS studies have already contributed with a critical appraisal of the general claims of the benefits of innovation, signaling issues of risk, uncertainty and contestation, as well as the need for a situated analysis of innovation. But, he stresses, there is still work ahead. Irwin invites us to think symmetrically about "innovation as a solution" and "innovation as a problem" and to bear in mind the question: "Could innovation be otherwise?"

The plurality of perspectives that respond to the opening manuscript present innovation deposed of its halo, innovation adjectivized, contested, or rescued in new terms. The essays galvanize in showing several problems with the most widespread views of innovation and open several alternative avenues for research and action.

Regarding the concept and meanings of innovation, Brandão and Bagattolli (2023a and 2023b) explore the intellectual legacy of Benoît Godin and other scholars within the emergent research agenda of critical studies of innovation. The authors show diverse possibilities for engaging STS with innovation, situating it as a political phenomenon, and analyzing innovation discourses, policy narratives, theories, and models. To support teaching and learning with Godin, Brandão and Bagattolli (ibid.) have also contributed the "Syllabus Godin: From the deconstruction of the system perspective to the 'pro-innovation' bias—or how to look historically at STI policies," which includes an outline of relevant research topics and a robust outline for a reading plan.

Becerra and Thomas affirm the limited analytical capacity of the innovation approach, particularly to inform STI policies, R&D strategies, and the solution of social, environmental and productive problems in the context of developing countries (ibid.). But they do not throw the baby out with the bath water: by hybridizing concepts from IS with STS constructivist approaches, they propose the "Interactive Socio-Cognitive Model", a theoretical framework with more explanatory capacity. As a pedagogical supplement, they have also contributed a video presentation with accompanying slides in both English and Spanish that further elaborate on this framework (2023b).

Pankaj Sekhsaria also questions the concept of innovation, from the perspective of its translation. What does innovation mean in other languages and contexts? Not surprisingly, but little recognized until recently, there are many different practices for solving problems with technology in diverse settings. *Jugaad*, in Hindi, is one of them, "a far more complex and colourful idea that innovation could ever be," (Sekhsaria 2023a, 76) as much more complex are the living conditions in India, where about ninety percent of the economy operates in the informal sector. The discourse on innovation needs to move out of its canonical formulation and comfort zone to acknowledge diverse practices occurring in developing countries, Sekhsaria states (ibid.). Scholars and students interested in exploring innovation in relation to language, translation, and objects/materialities may also find Sekhsaria's structured analytic in STS Infrastructures (2023b) a useful starting place. A structured analytic is essentially a set of questions that allow researchers and various publics to collaboratively examine and interpret data artefacts and can help guide further inquiry (there are many examples to be found throughout the STS Infrastructure platform).

Judith Sutz also looks at developing countries' contexts and claims that the solution to problems requires analysis and action using instruments of both IS and STS (2023). Bringing back the concept of development, and placing innovation within it, Sutz calls attention to "unorthodox" innovation, a kind done with restricted scientific and infrastructure capabilities, as responses to COVID-19 exemplified, and also "undone innovations," much needed to solve global problems, North and South. Convergently, according to Shobita Parthasarathy, the rising attention to inclusive innovation may be an opportunity for STS and IS scholars alike to have an influence on technology equity and justice (2023a). Still, examining the case of menstrual health innovation, she notes that each field offers rather different perspectives and solutions to the problem. Although dialogue may be uncomfortable, it is necessary if we want to influence policymakers' growing attention to social equity and justice. Parthasarathy's essay is accompanied by an "Exploratory Framework

for Equity in Innovation" (2023b) that can support technologists, policymakers, and citizens in evaluating equity in innovation.

Sebastian Pfotenhauer (2023) feels cautiously optimistic about a productive conversation between STS and IS that could lead not only to better innovation but also to better innovation studies. Scandals such as Cambridge Analytica and risks prompted by experiments with new technologies have put innovation under public scrutiny, and public authorities and IS are challenged to rethink innovation as deeply social and political processes, bringing to the fore some of the central claims of STS studies.

Influences, however, should be reciprocal, and STS should drink the IS water as well. This is what Sally Wyatt has learned from her experience teaching IS and STS at the end of the twentieth century to unprivileged students in London (she has also put together a reflective photo essay (2023b) of archival materials, "Teaching Innovation Studies at the University of East London in the 1990s," that provides a fascinating window into STS pedagogies in this time and place). She highlights the diversity of meanings of the concept of innovation, including contesting the Thatcherite vision of it from a working-class university at that time. For Wyatt, it is important to retain the STS commitment to understanding the complexity and ambiguity of innovation, but we need the conceptual vocabulary of IS to understand empirical settings and communicate across disciplinary boundaries (2023a). Moreover, STS has to learn from IS policy-oriented perspectives to influence policy, adds Maja Horst (2023), building from her experience at STI advisory boards in Denmark. Boundary scholars, working in both fields, have done this, but STS has paid little attention to policy overall. For Horst (ibid., 116), there is room for STS and IS collaboration to work "with and across policymaking," by being inside the policy room and, at the same time, standing outside to critically assess what is going on. Horst also agreed to an interview with ESTS associate editors Noela Invernizzi and Emily York about her experiences working in policy arenas and her reflections on "doing STS in the world" (Horst, Invernizzi, and York 2023). Organized in a set of readily accessible clips with accompanying transcripts, the interview includes Horst's thoughts on making STS knowledge relevant in policy contexts and on STS training that prepares students to enter into such work.

Offering a general commentary on the collection as a whole, Lilly Irani goes back to Irwin's questions and, dialoguing with various arguments in the collection, adds new topics and provocations to the discussion (2023). Through three interesting cases located in different places, she problematizes what are desirable forms of newness, what types of newness are contained or even criminalized, and the hierarchies of sociotechnical change that emerge as a result. Irani invites us to encounter and counter innovation in solidarity with those ignored by the pervasive ideology of innovation.

Alan Irwin closes the collection with an inspired epilogue (2023b), in which he dialogues with all the contributing authors along with the questions he posed at the start. Traveling autobiographically from a past where STS and IS were in natural interaction, to a present where the frontiers of the two fields are not neat, nor equal in all places, Irwin sees not only fences but finds it possible and desirable to cross them. Finally, he warmly shares with us the exchange he had with Benoît Godin when he was starting this collection, and

goes with it in the final lines, leaving the tasks of continuing this discussion to emerging scholars and students.

Visual Methods of Data Collection

In addition to this collection, this volume of *ESTS* includes the article *Masking (Not Masking) Up* by Susan Bell, Patrick Grzanka, Kelly Joyce, and Laura Senier (2023). The authors take mask-wearing during the COVID-19 pandemic as a case study to explore the potential of combining visual methods of data collection, examining the role of images in the co-constitution of expertise and scientific authority, with an intersectional approach to capture systemic inequity. Based on multi-site fieldwork about visual communication of mask use, the authors show how this simple but highly controversial artefact aligned people on opposite sides of the political debate, made explicit scientific uncertainties amid a public health emergency of unusual proportions, and reinforced existing social, gender and racial fractures and segregation. Moreover, debates about mask-wearing reflected the particular local intersectional realities about the pandemic in each site.

Have a good reading!

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Data Availability

Data published in this issue can be accessed in STS Infrastructures at: https://n2t.net/ark:/81416/p4ds3n.

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