TRANSnationalizing STS: Places, Spaces, and Politics

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Abstract

Why, how, and for whom does it matter to walk through, attend and attune to plural and complex STS places/spaces? By building on the *STS Across Borders* and *Innovating STS* exhibits held at 4S 2018 and 2019 meetings, this thematic collection unpacks this question and explores the potentials of TRANSnational STS as a methodological orientation in these uncertain times, in a world where technoscientific knowledges and practices are constantly instrumentalized, reproducing colonial, imperialist, racist, nationalist and toxic relationships. The landscape of analysis in curating this thematic collection begins with the places of STS; this can be either a place where an STS meeting is held, an institution where STS scholars do research and teaching, or a formation that brings people together for social studies of science and technology. We invite readers to slowly walk through such a landscape, observing in detail particular places of STS. The contributors to this thematic collection highlight the importance of thinking and theorizing by starting with lived experiences, investigating each phenomenon within its own reality, and creating and conserving spaces for plurality with responsibility and care. Recognizing that reality is multi-layered, and thus needs a plurality of perspectives, the invitation to think about STS theories and practices through the analytic of place is about opening and holding collaborative spaces for ongoing discussions over the politics of STS without reproducing a form of methodological nationalism. This introductory essay presents what we have learned over the last four years navigating in and through TRANSnational STS places/spaces and constitutes one stop in our journey to slow down, reflect on, and share what it means to TRANSnationalize STS. With this collection, we hope to open a public space in *ESTS* to continue thinking collectively about potential new pathways for the future of the field.

Keywords

TRANSnational STS; STS across borders; innovating STS; places of STS; politics of STS

Introduction

Sydney International Convention Center. August 31, 2018. It was the third day of the Society for the Social Studies of Science (4S) Conference. The exhibition area (see figure 1), allocated to the *STS Across Borders Gallery Exhibit* curated by Aalok Khandekar and Kim Fortun as an entry to a rich digital collection, was not

crowded with people since we were re-designing the space on this day (Khandekar 2019). On the first day of the exhibit (August 30), all exhibits reflecting on the STS trajectories had been organized according to their original conception as "places": Turkey, Japan, Mexico, and so on. Exhibitors were side-by-side and face-to-face with posters hung, materials on the tables, and chairs to rest when curious conversations became lively and extended. On the second day, tables for country and/or program-specific exhibitions were removed and the posters were re-organized around shared questions:

- **Beginnings**. What stories have been told about the beginnings of this STS formation?
- **Conditions**. What external conditions have influenced this STS formation?
- **Events**. What events have marked the development of this STS formation?

Figure 1. Discussing the exhibits at 4S 2018 in Sydney, Australia (Source: Kaşdoğan 2019).

A full set of the above questions are to be found on the STS-Infrastructures platform (2018) and an interview on reflections of the exhibitions are also on STS-I (Khandekar, Fortun, Kaşdoğan, and Okune 2023). While reading posters side-by-side, exhibitors and visitors attended to similarities and differences, feeling through multiple connections and ruptures in different places of STS. As two of around fifteen exhibitors who participated in this flagship experiment, we—Duygu and Angela—had at this moment firsthand

experience of something telling occurring; the conference theme could be felt through the exhibit—we encountered TRANSnational STS.[1]

The re-curation of the exhibition on the second day opened a space to think through the potentials of *TRANSnational STS*: why, how, and for whom does it matter to walk through, attend and attune to these plural and complex STS places? The journey of this thematic collection began with this question, with an intention to explore the potentials of TRANSnational STS as a methodological orientation in these uncertain times,[2] in a world where technoscientific knowledges and practices are constantly instrumentalized, reproducing colonial, imperialist, racist, nationalist and toxic relationships.

TRANSnational STS as a methodological orientation contours a landscape of analysis that directly starts with the places of STS while addressing and challenging US/Euro-centric STS as a field of study. Such a methodology itself emerged from our aforementioned experience in a particular place, in the *STS Across Borders* gallery exhibit hall. As scholars coming from different backgrounds and settled in different geopolitical contexts, we—as the curators of this thematic issue—were both impressed and inspired by the openings of encounters and dialogues fostered through sharing our divergent experiences in different localities. The *Innovating STS* exhibition ([Khandekar, Fortun, and Sanclemente 2019](#), [Khandekar 2019](#)), held following the inaugural *STS Across Borders* exhibition, reactivated such openings at the 4S 2019 conference in New Orleans ([4S 2019](#)) on a different continent. This transnational space extended and deepened previous exhibits as new exhibitors also joined.

Our encounter in this exhibition hall back in 2018 has turned into an ongoing collaboration in multiple places and spaces, and this thematic issue is one exemplary. This introductory piece presents what we have learned over the last four years by navigating in and through TRANSnational STS places/spaces. The thematic issue constitutes one stop in our journey, and provides us and the initial collaborators who participated in the 2018 and 2019 exhibits at 4S a chance to slow down, reflect on, and share what it means to do STS at a transnational scale. With this collection, we hope to open space in the *ESTS* journal to continue thinking collectively about potential new pathways for the future of the field.

The Problem Space of TRANSnational STS

The notion of transnational/ism is neither straightforward nor innocent. Transnational can stand as a different conceptualization of internationalization alongside other conceptualizations such as

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[1] The *STS Across Borders* exhibition was curated in line with the "TRANSnational STS" theme of the 2018 Conference, capitalized the TRANS prefix to index issues of crossing (across, beyond, to change thoroughly), especially with relation to the "problematic and evolving status of 'nations' in processes of global ordering" ([4S 2018](#)). Translation of the conference theme in different languages is available on the conference website ([ibid.](#)).

[2] Uncertainty as an object/concern of analysis has long been in the radar of STS scholars. When we refer to "uncertain times" here, we address that contemporary times have been widely marked as "uncertain times" at the global scale (e.g. see Human Development report published by [UNDP 2022](#)), especially following the outbreak of the COVID-19 pandemic. In these times, as multiple actors reconfigure new roadmaps, we also find it important to re-question and collectively re-think the politics of STS. The reference to the Transnational STS is basically built upon such a concern.

cosmopolitan, global, glocal, translocal, and so on. Furthermore, "transnational" as an analytic in the social studies of topics ranging from law to non-state corporate actors to migration, has different genealogies and reflects divergent definitions. Different genealogies of the concept in STS can also be traced to postcolonial and feminist STS, global STS, anthropological STS as well as STS initiatives that focus on North–South/South–South relationships, among others. Today, there are a proliferation of initiatives that acknowledge and build the transnational scope of STS as a field of study, including the increasing number of panels organized during the 4S annual meetings. This thematic issue therefore not only builds on the aforementioned exhibits, but also has taken a shape alongside ongoing transnational collaborations and discussions.[3]

We witness different departure points—problem spaces—in scholarly works that address the importance of doing STS at a transnational scale. For example, STS scholars have questioned the spread and translation of STS works developed in US/European contexts into different contexts alongside the critiques of direct adaptation of theories, concepts and methodologies of US/Euro-centric STS. We can also think of the emergence of counter-hegemonic formations and discussions, including, for example, Latin American STS (e.g., Kreimer and Vessuri 2018), the journal *Tapuya: Latin American Science, Technology, and Society*; East Asian STS (e.g., Chen 2012), and the journal *East Asian Science, Technology and Society*; The TransAsiaSTS Network; Singapore STS (Clancey 2018); and Philippine STS (Atienza and Gutierrez 2021). In this landscape, we can also see the critiques of US/European-centered STS developed by scholars located in North American and European countries alongside feminist, postcolonial, decolonial, and anti-colonial STS works.

In this collection, our departure point is not directly addressing the hegemony of US/Euro-centric development of Science & Technology Studies (STS) as a field of study. We rather frame the problem space in methodological terms, and do not aim to employ "transnational" as a conceptual analytic. This methodological orientation is in direct conversation with the limits of methodological nationalism reflected in various STS works which conceive of the nation–state as the sole unit of analysis or as a container for technoscientific processes. Nevertheless, there is a subtle line in drawing attention to the limits of methodological nationalism. Critiques of methodological nationalism question the approaches to nation–states as a container/unit of analysis in the studies of societal developments, processes and changes. This line of critique is obviously not new; we note here the long standing discussions over globalization. However, for example, as the Covid-19 pandemic and the ongoing war between Ukraine and Russia have depicted in recent years, the nation–state is still a required scale of analysis. Therefore, rather than using notions like "global STS," our emphasis on "TRANSnational" seeks to acknowledge the perplexing importance of the

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[3] As one example, on June 24, 2021, the Transnational STS Network convened a new kind of event series which we called "STS on Edge" (Kaşdoğan and Fortun 2021). For this first "STS on Edge" event series, the conveners invited faculty from Istanbul's Boğaziçi University who had mobilized over a year ago to address escalating threats to academic autonomy and freedom at the university. The event was notable in its ability to both speak in and from its place of struggle in ways that were able to reach and resonate with others in their own distinct struggles and locations around the globe.

nation-state as a scale of analysis without adopting a form of methodological nationalism. We therefore inquire about novel methodological approaches in exploring the histories, presents and futures of STS.

Our emphasis on "TRANSnational" also draws attention to the fact that technoscientific developments, throughout history, have largely been shaped by the travel of people, ideas, etc (and vice-versa). Historians of science and technology have extensively unpacked this point (e.g. Livingstone 2003; Shapin 1998). Therefore, with a capitalized usage of the prefix "trans," we also want to speak to a question of temporality—the questions/concerns of STS go back to times earlier than the establishment of nation-states as the hegemonic form of governance. Therefore, we propose the analytic of place as a departure point for doing and reflecting on STS. This collection begins with the places of STS and claims for *TRANSnationalizing STS.*

The Landscape of Analysis: STS Places/Spaces

Ranging from geography to anthropology to other social sciences, space and place have been conceptualized and employed analytically in diverse ways (e.g. see Lefebvre [1974] 1991; Soja 2003; Massey 2005; Hubbard and Kitchin 2010; Low 2017; Jabareen and Eizenberg 2021). A full discussion of such diversity goes beyond the scope of this collection but it is clear that place matters.[4] As sociologists of science Christopher Henke and Thomas Gieryn (2008) underline in their essay titled "Sites of Scientific Practice: The Enduring Importance of Place," whether and how place matters for science has largely been debated in STS.[5] Pushing back against universal and positivist understandings of science as producing absolute truth, as well to global standardizations of scientific activities that make science appear supposedly placeless, STS scholars have studied the sites/locations/territories/geographies of scientific activities, and demonstrated how and why place matters for science alongside divergent concerns and analytical points.[6] Thus to most STS scholars, neither these debates nor the questioning of places/spaces of STS are unfamiliar.

The landscape of analysis in curating this thematic collection begins with the places of STS—this can be either a place where an STS meeting is held, an institution where STS scholars do research and teaching, and/or a formation that brings people together for social studies of science and technology. These are the places where STS as a field of study is made. Furthermore, these places are also re-produced while

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[4] In human geography, "[t]he insistence that 'place matters' became something of a clarion call during the 1980s" (Merrifield 1993, 516). The discussion here draws attention to a similar call in STS. Intellectual interactions between STS scholars and human geographers in the 1980s and 1990s can be explored further to contextualize similar calls.
[5] This essay can be read as a literature review of a body of discussions on how place matters for science. Ophir and Shapin (1991) and Livingstone (2003) can be also consulted for a literature review.
[6] Although our aim here is not to provide a systematic form of survey study mapping and discussing various contributions to this debate, it is worth drawing attention to particular lines of discussions, including historical geographies of science and scientific knowledge (e.g., Naylor 2005; Finnegan 2008) that underline the spatiality of science, and develop a relational view of space; and postcolonial STS (e.g., Verran 2002; Anderson and Adams 2008) that criticize the hegemony of technoscientific ideas and imaginaries from places in Euro-America, and feminist postcolonial STS (e.g., Pollock and Subramaniam 2016) that traces local and global circulations of knowledge.

doing STS. In other words, this landscape of analysis focuses on the co-production of places/spaces and STS. We invite readers to slowly walk through such a landscape, observing in detail particular places of STS (specific locations), therefore, seeing what is actually happening in these places, reflecting on how they shape and are shaped by particular spaces of STS, and discuss the innovative ways to produce STS spaces together that are required in response to the multiple problem spaces that STS scholars are concerned about.

The contributors to this thematic collection highlight the importance of thinking and theorizing by starting with lived experiences, investigating each phenomenon within its own reality, and creating and conserving spaces for plurality with responsibility and care. Recognizing that reality is multi-layered, and thus needs a plurality of perspectives, the invitation to think about STS theories and practices through the analytic of place, and addressing transnational scope of STS in a collaborative spirit is about opening and holding spaces for collaborative, critical thinking. This can be read as an invitation to re-think about the politics of STS, and we believe that, following Hannah Arendt's understanding of politics ([1978]), STS needs its own public spaces, and transnational STS can be one among others.

When we re-think STS with the analytic of place, methodologically speaking, we do not simply aim to reiterate what is already acknowledged in the social sciences regarding the importance of context in producing knowledges and technologies. As we have learned from the 2018 exhibition, the field of STS has already been transnational in multiple, layered ways. But this collection reveals how transnationalism has been unevenly in/visible. In the years of engagement that led to the making of this collection, scholars coming from different regions and countries of the world taught us about extensive discussions over scientific practices and institutions, and technological developments in their own localities, and many have yet to be institutionalized and/or recognized under the banner of STS. This led us to question how to approach such plurality without quickly naming these works as STS, or incorporating them into the world of STS with a form of disciplinary maneuver. We witnessed that the conversations among divergent exhibitors constituted a public space to discuss the politics of STS. We learned that scholars sharing similar concerns have been addressing these concerns by authentically navigating within their own contexts, largely shaped by national aspirations and predicaments. Furthering the exhibition aim, this thematic collection is therefore designed to render visible how STS scholars located in different countries struggle to make critical social analyses of technoscientific worlds meaningful practices—towards creating more just and equitable societies. As such, TRANSnational STS activated alongside this thematic issue can be read as holding a public space for ongoing discussions over the politics of STS without reproducing a form of methodological nationalism.[7] To hold this space, we highlight the need for careful collaborations and sociotechnical infrastructures that we turn to below.

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[7] It is obvious that the politics of STS are entangled with the politics of the university and performances of rigorous scholarship. A meaningful exploration of such an entanglement goes beyond the scope of this introductory piece. Nevertheless, this note can be read as an invitation for a required analysis on the relationships between the politics of STS and of universities/institutions.

Infrastructuring Collaborations

To us, transnational collaboration pushes individuals outside of relatively comfortable zones towards public spaces where new epistemologies and politics can be imagined. We approach TRANSnational STS as a collaborative public space that is in search of new forms of investigation of technoscientific worlds to enact the potential of STS in creating radical change on this planet by being conscious about the limits of what STSers can do. Producing and holding such a public space is an act of TRANSnationalizing STS, and requires sociotechnical infrastructures to establish and strengthen interpersonal and inter-organizational bonds.[8]

Recognizing that STS has already always been across borders is not to say that it does not need further infrastructuring. TRANSnational collaborative learning requires a lively reflexive and response-able[9] space (Kenney 2019) that focuses on forming new relationships, learning how to improvise in relationships, moving in step through different scales and double-binds (Fortun 2001). Through the organizational, technical, and intellectual work required to put on the 2018 and 2019 exhibits in physical and digital spaces, we were reminded of the effort needed to actively continue building, designing, and holding public spaces for collective thinking. Acknowledging the ways that the scholarly communities we work with are TRANSnational in different ways, as STS scholars we were put to task to design and build new infrastructures and genres to enact TRANSnational STS ourselves for this thematic collection.

The 2018 and 2019 exhibitions were built in *STS Infrastructures*, which is an instance of the *Platform for Experimental Collaborative Ethnography*, a digital archive, workspace, and publishing platform designed and built by STS scholars. The platform has also since provided the digital infrastructure for the Student Section of the Society for Social Studies of Science (6S), data publishing infrastructure for the *ESTS* journal (ESTS Editorial Collective 2022), and other initiatives by individual STS scholars.

We utilized the *STS Infrastructures* platform as a workspace where the various contributors could share materials with each other as we worked on writing our respective manuscripts. We wanted authors to think with and hold discussions across the contributing teams while drafting their own pieces. Here we were pushing back against the traditional journal publishing model where a paper is already largely developed prior to submission (or incorporation) into a thematic collection. Instead, we wanted to work through the thematic collection to deepen and strengthen the collaborative ties in dialogue as the works were in progress.

Contributors to this collection were identified by their originally-curated digital exhibit developed as part of the 2018/2019 4S exhibitions. As *ESTS* editors who had also been involved in building exhibits, we

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[8] We are proud to be part of a current editorial collective of *ESTS* that is explicit about its firm commitment to deepening the transnational character of the field (ESTS Editorial Collective 2021) and we have also been part of the convening team behind the Transnational STS Network, a group of STS scholars and practitioners interested in fostering mutual learning among STS communities across borders. Nevertheless, we also acknowledge and shoulder the responsibility that needs to be taken to develop the TRANSnational scope of STS in a meaningful way.

[9] Feminist STS scholar Martha Kenney describes "response-ability" as about "cultivating the capacity for response" (Kenney 2019, 7). She noted that what counts as response-ability is not known in advance: "it emerges within a particular context and among sometimes unlikely partners, who learn how [to] affect and to become affected by one another" (ibid.).

invited these teams to revisit the exhibit that they had previously curated towards developing a new genre form in the journal that links a narrative essay published in *ESTS* with data artifacts published on the *STS Infrastructures* platform. We anticipated that this interplay would offer exciting analytic richness and invite greater engagement and discussion between authors and readers.

The essays in this collection provide commentary on the associated data that can be found on the *STS Infrastructures* platform. We asked contributors to think about their original gallery materials curated in 2018/19 from a fresh angle and to add new materials if needed. On our first call with invited contributing authors in early October 2020, contributors decided to also share with each other artifacts (either literature or otherwise) to help the group think collectively about why we as STS scholars should think with the analytic of "place/space."

Through the curation of this thematic collection, we re-learned that TRANSnational collaborations attend to the pluralities and interferences of STS formations in the "same" places as well as the limits of region and/or nation-state-based categorizations in any form. This point of discussion came to the fore during one of our last online meetings with authors when we reflected on the feedback from peer-reviewers and noted the multiple requests from reviewers for situating certain STS formations—e.g., IstanbuLab and the journal *NatureCulture*—in the context of the countries in which they are located. Authors noted this almost felt like a reviewer habit or default response to push people back into their geographic "places," emphasizing the need for building up new analytic capacities of reviewers to move beyond methodological nationalism in social scientific analyses.

The rich discussion about the artifacts helped establish shared grounds for the first draft essays. In between our conversations, contributors were tasked with small sketch assignments which were circulated with each other for review and discussion. First draft essays were also circulated with the contributors for review and discussion. Through these methods, we sought to go beyond the usual scope of a thematic collection, striving towards not only producing peer-reviewed journal articles, but also establishing and strengthening TRANSnational relationships between contributors and their communities, and producing additional open data for critical thinking together with broader STS publics, hopefully sparking new insights into the histories, presents and futures of STS.

An Orientation to the Essays

Leveraging her standpoint as both a witness and protagonist in the institutionalization of "El laboratorio de ciencia, tecnología y sociedad" (The Laboratory of Science, Technology and Society) (CTS Lab) in Ecuador, María Belén Albornoz (2023) applies a symmetrical approach to follow the people, places, artifacts, institutions, imaginaries, as well as the theoretical traditions, mentors, and research programs that shaped the making of CTS Ecuador. In her re-telling, place is not only linked to a territory but becomes a reference point, a way to constitute a "thirdspace," for the identity formation of the STS community. Albornoz argues that institutions like CTS Ecuador have become obligatory passage points, the locus of local STS practices and the production of situated knowledge. This reflection on the dynamic processes that have been part of the institutionalization of CTS Ecuador and STS in the region more broadly is an important part of the documentation needed to teach and learn from diverse genealogies of STS around the world.

Extending the question of what it takes to institutionalize STS, Aybike Alkan, Duygu Kaşdoğan, and Maral Erol (2023) begin their discussion in "Placing STS in and through Turkey," by asking "[w]hy and how does it matter to undertake an STS praxis in a country where the field lacks adequate institutional recognition and capacity?" Employing translation as an analytic, the authors explore the production of STS places in Turkish university settings and show how these places of STS also make the translation of technoscientific knowledges into Turkey's context possible. The authors recognize that ongoing limits to inserting STS in universities have encouraged an innovating of loose structures through which STS can be translated in different ways. They share insights based on their experiences as founding members of IstanbuLab, a "hybrid knowledge space" developed as an experiment to search for ways of doing STS in Turkey outside university settings. For this author team, the Turkish concept of *memleket* or "place-locality" is helpful for thinking about the analytic value of place and STS. They explain that *memleket* refers both to the country, but also carries a sense of belonging to a place of origin. Sensitive to *memleket*, the authors point to it as their motivation for telling a story of STS "*in and through*" Turkey.

In "Locating Naturecultures," Gergely Mohácsi, Grant Jun Otsuki, and Émile St. Pierre (2023) draw from their experiences editing and managing the online journal *NatureCulture* to complicate a seemingly straightforward spatial setting ("Japan"), using the journal to follow how different modes of locating matters of nature-and-culture are deployed on the pages of a journal—"based in Japan and aimed at an audience of anthropologists and STS scholars somewhere in the world who read English" (ibid.). They ask:

> . . . how can we deploy place and space in accounting for the situated nature of technoscience without ever falling back to the endless plurality of local perspectives or a worn-out geopolitics of centers and peripheries, war and development? (ibid.)

They employ the concept of re-territorialization to move beyond passive undertakings of the concepts of place and space while troubling the "one-world world" approach (Law 2015), and dissolve already assigned meanings of "Japanese" in their publication processes about "naturecultures." The journal appears as a nodal point to be re-located in and through the "pluriverse" (Blaser and de la Cadena 2018).

In "Becoming an African Techpreneur," Angela Okune and Leonida Mutuku (2023) question a notion of place that focuses on the nation-state layer without attention to entangled histories of imperialism. Weaving a political economy analysis with post-colonial perspectives, Okune and Mutuku point to how supposedly local scientific subjectivities, in this case, of Kenyan technology entrepreneurs, are in fact heavily interpellated by an array of international investments in the local—from national government, American philanthropists, and international donors. Their story situates a strand of social studies of technology that emerged from a flagship African technology hub within a broader context of Kenyan ICT policy and investments. Okune and Mutuku remind us of the limits of thinking in simple binary terms and call for STS scholars to help bring new and more complex subjects into relief by attending to the ways that transnational geopolitics and capital heavily shape what happens within the bounds of the nation-state.

Overall, contributors to this collection approach STS places in different ways, e.g., as obligatory passage points, nodal points, and as a thirdplace, as a hybrid knowledge space. They also offer thinking about

STS places/spaces alongside other analytics such as re-territorialization and translation, and in reference to the questions of institutions and structures. As this collection unpacks differences across these STS formations, so do the individual articles in their different play with similar analytics and questions, thus, complicating multiple questions like institutionalization, and preventing us to propose any simple roadmaps to TRANSnationalize STS. For example, while Albornoz's article claims the importance of institutionalization as well as inviting us to think about place beyond the sense of territory, Alkan et al.'s article draws attention to what emerges new when institutionalization processes fail and Mohácsi et al. (2023) highlight why and how thinking of place within the terms of re-territorialization can become an opening. There is lots to play with across these four articles, and we hope readers will pull out different threads that lead to new questions by juxtaposing these plural trajectories of STS in different places/spaces. Towards this end, the authors have all also submitted open data to contribute towards the making of a public archive of STS data. We encourage readers to explore the data layer of the articles and look forward to collectively reflecting on potential new pathways for TRANSnationalizing STS.

Acknowledgements

Author Biographies

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Data Availability

Supplemental data published in this original research article can be accessed in STS Infrastructures at: https://n2t.net/ark:/81416/p4t01p.

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