

Seabed in the Andes: Exploring “Splace” in Transnational STS

VIVETTE GARCÍA-DEISTER
UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO
MEXICO

Abstract

This commentary engages with the digital materials of STS in/through Turkey, Kenya, Japan, and Ecuador collected between 2018 and 2019, and with the collection of essays inspired by these materials. I use the notion of “*splace*” as an exploratory tool that challenges the division between space and place, and I also invite thinking about STS formations with geological formations I encountered on the Chilean Andes.

Keywords

place; space; global south; geologic formations

Introduction

In December 2020, my husband, son, and I ventured out for one of our first post-lockdown excursions to the Plaza San Jacinto, also known as the “Art Garden” (Jardín del Arte) of Mexico City’s San Ángel neighborhood. In one corner of the plaza, we encountered Irina Yushmanova, a “realist” painter who follows the European tradition and displays her artwork among various other entrepreneurial artists. Her thick Russian accent and business card suggest that she sells and delivers her paintings globally, far beyond the Plaza San Jacinto. Seeing in our family potential buyers, she showed my then nine-years-old son paintings of a cat. A cat beside a window. The same cat on a door landing. But my son was unmoved by the cat; instead, he was transfixed by a landscape ([figure 1](#)). A road view of the snow-covered Andes on the way to Patagonia immediately commanded his attention. He liked it so much that I had the painting framed and it now hangs in my son’s bedroom.

By bringing this image into our domestic space, which is geographically located in North America, we created a connection to a place on the South American continent. Yet the Andes, spanning the western border of South America, comprise the lengthiest mountain range on a single continent, creating an unbroken elevated region. Its own dimensions (8900 km long and up to 700 km wide) and temporal scale (ten to six million years of age) challenge the idea of the Andes as a place, fixed in space and time. Two years later, the opportunity arose for our family to see a part of the Andean mountains in person, and in their presence, the idea of the Andes as a location became further undone ([figure 2](#)).

Copyright © 2023. (Vivette García-Deister). This work is licensed under an Attribution-NonCommercial-ShareAlike 4.0 International license (CC BY-NC-SA 4.0). Available at estsjournal.org.

To cite this article: García-Deister, Vivette. 2023. “Seabed in the Andes: Exploring “Splace” in Transnational STS.” *Engaging Science, Technology, and Society* 9(1): 156–164.
<https://doi.org/10.17351/ests2023.2181>.

To email contact Vivette García-Deister: vivettegarcia@ciencias.unam.mx.



[Figure 1](#). Photograph of a framed watercolor of the Andes, by Irina Yushmanova. (Source Author's own, March 8, 2023).

On a fresh spring October morning in the southern cone, my family and I hopped in a jeep with a guide and another family. We rode an hour and a half from Santiago de Chile to El Cajón del Maipo, a canyon located in the southeastern part of the metropolitan region where the Maipo River is boxed by multicolored hills, ridges, and massifs. As much as I enjoyed the views during the ride, nothing had prepared me for the emotion of standing upon fossilized seabed from 200 million years ago. Charles Darwin himself had, like us, walked over rocks cleaved and broken into large, angular fragments at an altitude of 2300 meters in this region in the 1800s. In his travel diary, Darwin noted that “The shattered and baked rocks, traversed by innumerable dikes of greenstone, showed what commotions had formerly taken place.” ([Darwin \[1845\] 1913](#)). Formidable indeed.



[Figure 2](#). Photograph of the Andes. Cajón del Maipo, Chile, October 23, 2022. (Source Author's own).

I share these vignettes of transnational journeys and geologic formations, in which a welltraveled Russian artist sells a painting of the Argentinian Andes in Mexico City, a Mexican boy transfixed by that watercolor landscape hikes the Chilean side of the mountain range he so admires, and an STS scholar evokes Darwin's recollections of his voyage in South America while she treks over cleaved rocks and fossilized seabed in the Andes, to bring space and place (or rather, *splace*) into focus.

Splace, as developed by Arturo Vallejo and I, is the amalgamation of space and place into a single notion. We coined the term in May 2021, while drafting a potential contribution to this *ESTS* special issue (a draft that we never finished). *Spaces* are subject to the contingencies of time and the effects of displacement, elevation, collision, erosion, or descent, while their localization along institutional or geologic fault lines may in fact facilitate their transnational and transdisciplinary movement.

The rocky formations in the Andes boast polygonal markings that signify the area was once underwater. These shapes reveal that the water was not deep, and the polygons' size indicates a prolonged period of desiccation that lasted years ([figure 3](#)). Meanwhile, smaller polygons found within cracks suggest shorter periods of desiccation, likely lasting days, or weeks. The environment was once a vast, flat floodplain with

little variation in elevation. The inclination of the rock layers, almost vertical in some places, implies that tectonic forces, specifically the collision of the south American and Nazca Plates, folded these strata. This collision created the stunning geological formations we see today. I once thought of these formations as a place, but our interaction with them and the transnational way in which we came to know them is an important part of the story I want to tell.



[Figure 3](#). Detail of photograph featuring fossilized seabed in the Andes. Cajón del Maipo, Chile. October 23, 2022. (Source Author's own).

By *splace*, Vallejo and I were trying to mark the importance of place, understood as location, for knowledge production, while also acknowledging—with Setha Low (2017)—the relevance of practices and actions that, while occurring in one place, are nonetheless subject to displacement and translocation, thus allowing the

materiality and meaning of otherwise local actions to travel, to take place (happen)—and also to take up space—at different scales (local, transnational, global). The idea behind this notion was to question, as the authors of the Japan essay do ([Mohács, Jun Otsuki, and St. Pierre 2023](#)), “the convenient division between space and place in contemporary social theory,” particularly that which informs STS. I find this notion to be a useful exploratory tool for engaging with the essays ([Albornoz 2023](#); [Alkan, Kaşdoğan, and Erol 2023](#); [Kaşdoğan and Okune 2023](#); [Mohács, Jun Otsuki, and St. Pierre 2023](#); [Okune and Mutuku 2023](#)).

Concern with space, place, and territory has grown over the past decade in STS ([Milne 2012](#); [Garforth and Stöckelová 2012](#); [Phillips de Lucas 2020](#); [Lehuedé 2022](#)), and these subjects have been considered as organizing themes in other areas of research ([Agnew 2005](#); [Withers 2009](#); [Creswell 2014](#); [Krupar 2015](#)). The contributions to this thematic collection acknowledge the importance of place and the spatial turn in the social sciences and humanities, but they differ from the insights offered by the studies that take these elements as objects of scientific investigation or units of historical and political analysis. These reflections also differ from those mainly concerned with vindicating place (and especially places in the Global South) as a feature of knowledge production that provides a corrective to universalistic (though not necessarily dislocated, the location is an unmarked, hegemonic Euro-America) accounts of science and its meta-studies (a discussion taken up by [Kreimer 2022a](#), and [2022b](#)). The contributions to the thematic collection “TRANSnationalizing STS: Spaces and Places” offer a meta-analysis of how the matters of concern to the field of STS are emplaced, displaced, and replaced by a host of heterogeneous actors in Japan, Ecuador, Kenya and Turkey; they also instantiate how attention to the situatedness of these matters inevitably moves us across and beyond disciplinary, geographic, and even ontological boundaries.

As I go through these essays and the online materials that originated them, I learn that in a nation (Turkey) where STS lacks a solid institutional foundation, the advancement of STS involves staking out a position, whether it be within a university program or a publication on the arts and culture. By taking up this position, a broader and more inclusive STS can emerge that is produced publicly and may even become part of the formal curriculum. As such, those involved in the development of STS must seize opportunities available to promote growth and make it accessible to a wider audience.

I also learn that STS in Africa is quite literally “in formation” and the field is taking its place across a highly diverse continent (a movement that may bring about folding and collision). Rather than using an incorrect binary framework that pits African and Western cultures against each other, the digital essays establish a continuous range of STS communities in Africa, encompassing those who have yet to identify as such. Additionally, survey findings suggest that the development of STS in Africa will be multinational and globally influenced, highlighting the need for collaboration and open forms of North–South and South–South communication. Against this backdrop, the essay written by Angela Okune and Leonida Motuku examines the production of the “Kenyan Techpreneur” through a two-way ethnography (that involved the experience of both researching and being researched) of the iHub co-working space in Nairobi’s “Silicon Savannah.” This “double vision” afforded by the authors’ own positioning as a White-Asian American woman and a Black African woman placed within the tech ecosystem of Nairobi, allowed them to see beyond

the—“previously deficient, now patriotic, friendly-to-the-West, African Techpreneur.” an alleged product of capacity building through venture capitalism in Post-Election Violence Kenya. Instead of passive techies, recipients of international assistance and technological do-gooding, they found autonomous, self-sufficient actors that neither conform to the image of the citizen-entrepreneur projected onto them by the West, nor fully escape imperial power dynamics. A key contribution of this ethnographic analysis of tech developmentalism is how to bring a cosmopolitan STS to the study of an agenda to use ICTs for national development. This essay is also a reminder of how continental history cannot be cleaved from the more familiar space-time scales of more recent technopolitical endeavors.

The collection of digital artifacts on Japan illustrates how anthropology and STS converge, acknowledging their common interest in areas like materiality, embodiment, environment, and infrastructure ([Albornoz 2023](#); [Alkan, Kaşdoğan, and Erol 2023](#); [Kaşdoğan and Okune 2023](#); [Khandekar, Fortun, Kaşdoğan, and Okune 2023](#); [Mohácsi, Jun Otsuki, and St. Pierre 2023](#); [Okune and Mutuku 2023](#)). By incorporating and deviating from conventional Western scholarship, the blending of these previously separate fields highlights the universal impact of STS in and from Japan. This fusion not only extends the geographical scope of STS but also emphasizes the significance of disaster as a central aspect of study in Japan (something that has become painfully real for Turkey, as the devastating earthquake of February 6, 2023, exposed multiple objects requiring STS attention and the urgency of supporting more-than-institutional knowledge infrastructures). Overall, the convergence between anthropology and STS in Japan broadens our understanding of the world and its systems in one recognizable way: one world is at best a figuration, and its systems are never readily recognizable units. The written article that draws from these materials addresses *splace* not by asking—keeping with the one-world hypothesis—what place and space mean in different local contexts, but rather by “following different modes of locating matters of nature-and-culture” within the journal *NatureCulture*. The diagnosis is one of overflow and “discontainment”: there are multiple *splacialities*, worlds and ways of knowing these diagnoses that create a unique zone of epistemological contact that is at once Japanese and cosmopolitan.

If the previous material made us turn East to re-orientate ourselves in the STS landscape, the essay about Ecuador has a centering effect. This “story about the middle of the world” had me thinking how the guided reading and didactic abridgement of canonical books, including a Spanish translation of a book considered to be foundational of the “practice turn” in the philosophy of science (a translation made by one of my mentors in Mexico’s National Autonomous University), in turn facilitated other kinds of translations and methodological interventions. Ian Hacking’s *Representar e Intervenir*¹ ([\[1983\] 2001](#)) argues that what is philosophically interesting are matters of intervening in the world, not of representing it. And this is exactly

¹The book, translated by the philosopher Sergio Martínez, is currently out of print, but I have it on good authority that a reprint of the book is being considered by UNAM’s *Instituto de Investigaciones Filosóficas*.

what happened in Ecuador. STS laboratories such as CTS LAB [*Ciencia, Tecnología y Sociedad*], Kaleidos, and others, were *spaces* where Hacking's call for "intervening" and Latour's invitation through the allusive subtitle of his book, to "follow scientists and engineers through society" ([Latour 1987](#)) were first and foremost actionable tactics for a grounded community building rather than theoretical frameworks for doing STS about a place. In Ecuador, there were institutional barriers and tangible impediments that prevented the simple importation or adaptation of theoretical frameworks and institutional models. Therefore, STS had to break new ground and innovate, establishing itself as a unique field, more equidistant than marginal, to pre-established disciplines. In Turkey, too, translation—understood not merely as a language operation, but as a bringing-in/to—has played a crucial role. The translation of "could-be-STS": works, perspectives, and knowledge that are brought in from non-academic *spaces* to academia did the work of creating a coeval STS practice that is simultaneously "local/national" and "transnational."

We should be careful not to consider the labs in Ecuador and Istanbul or the STS formations in Africa, Japan, or Turkey as the "the built environment" ([Lawrence and Low 1990](#)) of STS-nonliterate societies: folk constructions where one might take temporary intellectual shelter while waiting for the cover of more robust (presumably Euro-American) STS edifices to arrive. They also should not be considered "truth spots" ([Gieryn 2018](#)) in the sense of these places being important because they lend believability and authority to claims or assertions associated with that spot. As the collection of digital materials and essays shows, STS knowledge produced in Turkey, Kenya, Japan, and Ecuador escapes the tidy arrangement of observational statements or assertions about place (matters of representing the "one-world"), thus complicating the application of long-established criteria for what is true.

I'd rather think of Turkey, Kenya, Japan, and Ecuador as *spaces* where noninsular STS is being made. Although they are vulnerable to the uncertainties of time and geopolitical transformation, their positioning along institutional and geologic faultlines can facilitate their transnational and transdisciplinary movement. Overlaps and frictions bring into relief what might have once been hidden or invisible. However, over time, these same overlaps and frictions may also serve to hide things that were once displayed openly and held authority.

By reflecting on my own encounter with fossilized seabed, a structure that seemed at once completely at home and out of place in the Chilean Andes, I have suggested how geologic formations might help us to think about STS formations. Duygu Kaşdoğan and Angela Okune address in their introduction to the thematic collection as the "problem space of TRANSnational STS." I offer this commentary serves to think with these authors about the problem *space* of transnational STS, where old structures and novel foundations are not-so-strange seabed fellows.

Acknowledgements

I'd like to thank the editors of *ESTS* for the invitation to engage with a collection of stimulating texts and materials. Thanks also to Meg Krausch for their keen reading of this commentary and for the suggestion to embrace its collage approach.

Author Biography

Vivette García-Deister is a Professor of the Faculty of Sciences of the National Autonomous University of Mexico (UNAM). She is interested in collaborative research, interdisciplinarity, public STS scholarship, and the impact of science on issues of racism, health, and justice. Vivette is the 2023–2028 Editor-in-Chief of *Tapuya: Latin American Science, Technology and Society* (Taylor & Francis).

References

- Agnew, John. 2005. "Space: Place." In *Spaces of Geographical Thought: Deconstructing Human Geography's Binaries*, edited by Paul Cloke and Ron Johnston. Thousand Oaks, California: SAGE.
<https://doi.org/10.4135/9781446216293>.
- Albornoz, Maria Belen. 2023. "Chakana and Thirdspace: Engaging Ecuadorian STS in Places of Knowledge Co-Production." *Engaging Science, Technology, and Society* 9(1): 63–80.
<https://doi.org/10.17351/ests2021.1239>.
- Alkan, Aybike, Duygu Kaşdoğan, and Maral Erol. 2023. "Placing STS in and through Turkey." *Engaging Science, Technology, and Society* 9(1): 104–124.
<https://doi.org/10.17351/ests2023.1091>.
- Cresswell, Tim. 2014. *Place: An Introduction*. Second Edition. Chichester, West Sussex: Wiley-Blackwell.
- Darwin, Charles. [1845] 1913. "Chapter XII: Central Chile." In *Journal of Researches into the Natural History and Geology of the Countries Visited During the Voyage of H.M.S. Beagle round the World, under the Command of Captain Fitz Roy, R.N. (The Voyage of the Beagle)*. A new edition with illustrations by R. T. Pritchett of places visited and objects described. London: John Murray.
<https://gutenberg.net.au/ebooks/fr100126.html#chxii>.
- Garforth, Lisa, and Stöckelová, Tereza. 2012. "Science Policy and STS from Other Epistemic Places." *Science, Technology, & Human Values* 37(2): 226–240.
<https://doi.org/10.1177/0162243911417137>.
- Gieryn, Thomas F. 2018. *Truth-Spots: How Places Make People Believe*. Chicago, Illinois: University of Chicago Press.
<https://doi.org/10.7208/chicago/9780226562001.001.0001>.
- Hacking, Ian. [1983] 2001. *Representar e Intervenir* [Representing and Intervening]. Translated by Sergio F. Martínez. First Reprint. Mexico City, Mexico: Instituto de Investigaciones Filosóficas/Paidós.
- Kaşdoğan, Duygu, and Angela Okune. 2023. "TRANSnationalizing STS: Places, Spaces, and Politics." *Engaging Science, Technology, and Society* 9(1): 50–62.
<https://doi.org/10.17351/ests2023.1577>.
- Khandekar, Aalok, Kim Fortun, Duygu Kaşdoğan, and Angela Okune. 2023. "Revisiting STS Across Borders: Interview with Aalok Khandekar and Kim Fortun, conducted by Duygu Kaşdoğan and Angela Okune." *Engaging Science, Technology, and Society*. STS Infrastructures (Platform for Experimental Collaborative Ethnography). 9(1): 165–172.
<https://n2t.net/ark:/81416/p40p48>.
- Kreimer, Pablo. 2022a. "Constructivist Paradoxes Part 1: Critical Thoughts about Provincializing, Globalizing, and Localizing STS from a Non-Hegemonic Perspective." *Engaging Science,*

- Technology, and Society* 8(2): 159–75.
<https://doi.org/10.17351/ests2022.1109>.
- . 2022b. “Constructivist Paradoxes Part 2: Latin American STS, between Centers and Peripheries.” *Engaging Science, Technology, and Society* 8(3): 87–106.
<https://doi.org/10.17351/ests2022.1893>.
- Krupar, Shiloh. 2015. “MEMO: The EAGLE Collective.” In *Critical Landscapes: Art, Space, Politics*, edited by Emily Eliza Scott and Kirsten J. Swenson. Oakland, California: University of California Press.
- Latour, Bruno. 1987. *Science in Action: How to Follow Scientists and Engineers Through Society*. Cambridge, Massachusetts: Harvard University Press.
- Lawrence, Denise, and Setha M. Low. 1990. “The Built Environment and Spatial Form.” *Annual Review of Anthropology* 19(1): 453–505.
<https://www.jstor.org/stable/2155973>.
- Lehuedé, Sebastián. 2022. “Territories of Data: Ontological Divergences in the Growth of Data Infrastructure.” *Tapuya: Latin American Science, Technology and Society* 5(1).
<https://doi.org/10.1080/25729861.2022.2035936>.
- Low, Setha. 2017. *Spatializing Culture. The Ethnography of Space and Place*. London: Routledge.
<https://doi.org/10.4324/9781315671277>.
- Milne, Richard. 2012. “Pharmaceutical Prospects: Biopharming and the Geography of Technological Expectations.” *Social Studies of Science* 42(2): 290–306.
<https://doi.org/10.1177/0306312711436266>.
- Mohacsí Gergely, Grant Jun Otsuki, and Émile St. Pierre. 2023. “Locating Naturecultures.” *Engaging Science, Technology, and Society* 9(1): 125–147.
<https://doi.org/10.17351/ests2023.1085>.
- Okune, Angela, and Leonida Mutuku. 2023. “Becoming an African Techpreneur: Geopolitics of Investments in “Local” Kenyan Entrepreneurship.” *Engaging Science, Technology, and Society* 9(1): 81–103.
<https://doi.org/10.17351/ests2023.1095>.
- Phillips de Lucas, Amanda K. 2020. “Producing the ‘Highway to Nowhere’: Social Understandings of Space in Baltimore, 1944–1974.” *Engaging Science, Technology, and Society* 6: 351–369.
<https://doi.org/10.17351/ests2020.327>.
- Withers, Charles W. J. 2009. “Place and the ‘Spatial Turn’ in Geography and in History.” *Journal of the History of Ideas* 70(4): 637–658.
<https://doi.org/10.1353/jhi.0.0054>.