

## Locating Naturecultures

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### Abstract

Building upon two collaborative exhibits created for the 4S (Society for Social Studies of Science) meetings in 2018 and 2019, this essay aims to question established modes of locating matters in STS and related fields. As these exhibits showed, Japan has been an active venue for anthropologists and STS scholars working with a diverse range of approaches and topics that may help us to rethink place and space beyond a humanist spatial politics of globalization. At the same time, science and technology *in* Japan has been a highly fruitful area for scholars located to understand the co-constitution of knowledges and worlds by tracing their multiple trajectories partly outside of English language research agendas. Using the online journal *NatureCulture* as a springboard for these explorations, we hope to contribute to the ongoing debates around situated methodological approaches. The journal is intended to be a medium that on the one hand brings young Japanese researchers into closer contact with related debates elsewhere, and on the other hand exhibits novel and challenging results of Japanese anthropology and science studies to a non-Japanese audience. A handful of themes (multiplicities, cosmopolitics, experimentation) from the journal will be reviewed here in order to further explore their potential in locating matters across, as well as beyond, physical and geographic boundaries.

### Keywords

natureculture; cosmopolitics; multiplicities; experimentation; Japan; open-access publishing

### Introduction

This article draws from our experiences of editing and managing the online journal *NatureCulture* ([www.natcult.net](http://www.natcult.net)) to explore how modes of locating matters in STS and related fields impinge upon questions of place and space. We begin with a seemingly straightforward spatial setting—Japan—that will allow us to both upset and inform the convenient division between place and space in contemporary social theory.

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Science and technology *in* Japan has been a highly fruitful area for scholars located to understand the co-constitution of knowledges and worlds by tracing their multiple trajectories in part outside of English language research agendas in primatology, bacteriology or chemistry, among others ([Chang 2018](#); [Lamarre 1998](#); [de Waal 2003](#)). At the same time, Japan, as well as East Asia, has also been a critical venue for anthropologists and STS scholars working with a diverse range of approaches and topics that may help us to rethink place and space beyond a humanist spatial politics of the “global” and toward more situated modes of acting on difference (see e.g., [Fischer 2016](#); [Jensen and Morita 2017](#); [Lin and Law 2019](#)). How might we bring these two very different lines of argument together? 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 (that means so many things that it has lost its original meaning), war and development? Instead of asking what place and space mean in different local contexts, we suggest following 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.

The authors of this article are anthropologists by training with an ongoing interest in capturing the techno-scientific constitution of heterogeneous worlds, from off-grid communities to robotics laboratories to clinical trials mostly, but not exclusively, *in* Japan. We each have struggled with questions of *where* on different but overlapping levels. Like, *where* will you do your fieldwork? Or, *where* do you locate the theories and methods of your research? Or, *where* (i.e., in which language, what journal) will you publish your articles, books, etc.? Not only have we observed local neighborhoods or institutions and global networks being made and remade, but more often than not we have been actively participating in these changes, if partially, making it even more difficult to locate them in a static sense of the word.

One point of divergence in our intellectual excursions has been *NatureCulture*, an online journal founded in 2012 and hosted by Osaka University *in* Japan. The journal is intended to be a medium that brings young Japanese researchers into closer contact with intellectual debates elsewhere, and also to exhibit novel and challenging results of Japanese anthropology and science studies to a non-Japanese audience. Locating matters of natureculture is as much an intellectual call as an institutional and ontological challenge for us. Below, we review several themes from the journal to further explore their potential in rethinking place and space across, as well as beyond, physical and geographic boundaries. Using the journal as a springboard for these explorations, we hope to contribute to the ongoing debates around situated methodological approaches across STS, anthropology, human geography and histories of science (see e.g., [Blaser and de la Cadena 2018](#); [Law and Mol 2001](#); [Livingstone 2003](#); [Massey 2005](#)).

Anthropology, as Marc Augé, among others, has observed long ago, is obsessed with the notion of place—a constituent of individual identity and local knowledge, as well as cultural, political and, we may add, disciplinary belonging ([Augé \[1992\] 1995](#); [Hirsch 1995](#), etc.). More than twenty years ago, James Ferguson could still aim his critique at this ethnographic obsession with “locality” ([Ferguson 1997](#) in [Jensen and Morita 2017](#), 8), but during the past twenty-five years, place and space have become two sides of the same coin and a major concern in ethnographic theorizing (see e.g., [Raffles 2002](#); [Candea 2010](#)). Despite a long and often heated debate on how to demarcate “place”—lived and embodied by the people social scientists encounters with—from “space”—the metaphoric and rhetoric object of western, scientific,

administrative, etc. discourses. However, anthropologists are left with the modest consensus that both need to be rigorously addressed in our ethnographic descriptions. As anthropologist Matei Candea notes at the end of his article on the spatial politics of fire in Corsica, “it would be equally unwise to dismiss land–people links as metaphors and to believe in them as timeless truths” (Candea 2008, 212).

A similar tendency may be observed in STS, illustrated by the thematic chapters in recent editions of the *Handbook of Science and Technology Studies* that address socio–spatial patterns such as cities or colonies to follow the formation and flow of scientific knowledge between the “laboratory,” the “field,” or “the university,” among other sites (Anderson and Adams 2008; Farías and Blok 2016; Henke and Gieryn 2008). The technoscientific co–construction of place and space is emphasized in one of these articles as follows:

To say that the place of science has become ever more important in all spheres of social life is a truism to scholars of society, to the extent that debates about what formally constitutes “science” are now focused as much on geography as on problems of epistemology. (Anderson and Adams 2008, 184)

In the article mentioned above, for instance, Candea draws on the “sociology of association” as developed by Bruno Latour and Michel Callon to show how watching wildfires becomes a matter of concern for environmental scientists, as well as an activity that links people and places. This situatedness of natureculture has become the trademark of actor–network theory, which began by following scientists in their laboratories back in the early 1980s. There is more than one natureculture, but this does not mean that reality is *fragmented*; rather, they are *multiplied*, generated from “changing and partial connections between natural–cultural elements,” a situation that Danish STS scholar Christopher Gad, drawing on the work of anthropologists Marilyn Strathern and Annemarie Mol calls “postplural” (Gad 2013, 51). Following in these footsteps, our essay questions established modes of locating matters of concern in science and technology by foregrounding the multiplicity of naturecultures and dissecting some of the modes of activating those multiplicities methodologically both in and between technoscientific artifacts, places and spaces.<sup>1</sup>

Inspired by a recent discussion by Casper Bruun Jensen and Atsuro Morita (2017) on the introduction of Western ideas of nature into Japanese anthropology, we explore the consequences of this postplural multiplicity of naturecultures for making place and space matter in other than geopolitical ways. Several themes—multiplicities, cosmopolitics, experimentation—from the journal will be discussed in the second half of this article in order to explore their potential in locating matters across multiple physical, geographic and institutional boundaries, as well as beyond epistemological and ontological divides. By doing so, we invite the reader to think beyond unitary visions of culture and society, naive forms of cultural relativism, or so–called “one–world” metaphysics (Law 2015) in line with what we may call, paraphrasing Bruno Latour, the “re–territorialization” of the human sciences (Latour 2018).

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<sup>1</sup> This essay builds on a group of digital artifacts collected for two collaborative exhibits created for the Annual Meeting of the Society for Social Studies of Science (4S) in 2018 and 2019 respectively (Mohácsi et al. 2018; Namba et al. 2019).

### Locating *NatureCulture*

In “Being One, Being Multiple,” social anthropologist Marilyn Strathern (2015) suggests that academics might be divided into two types, depending on how they imagine the future: either as “a road ahead of them, stretching into the distance” or as already hiding in their surroundings, “jumping out to everyone’s surprise, where you never know what is going to appear or who is going to walk through the door, or for that matter, when you open a door . . . what you are going to see outside” (*ibid.*, 24). Of anthropology’s future, Strathern suggests that anthropology “must be at once recognizable as itself (as one entity) and be able to flourish in numerous and unforeseen circumstances (be multipliable)” (*ibid.*). Whether something appears as one or as multipliable, she argues, is a matter of emplacement, depending on “the relations we draw between such moments” (*ibid.*).<sup>2</sup>

Locating *NatureCulture* reveals some of these shifting relations. The journal is nominally “Japanese” and “anthropological” in origin and institutional affiliation, but its contributors and outlook participate in European, British, and North American anthropologies, philosophies, and STS in ways that place it outside mainstream anthropology in Japan. It is linked to an intellectual moment in these Euro–American disciplines when the “modern constitution” (Latour [1991] 1993) of nature versus society, and the separation of the material from the cultural was undergoing critique, hence the journal’s title. Indeed, many scholars central to such discussions in the “West” have been contributors to the journal. Yet, their presence does not mean that ideas were simply “imported” from these centers to Japan. Rather, the mix of contributors and ideas points to a contact zone of multiple intellectual traditions challenging foundational dualisms of Western academic thought and practice (see Jensen and Morita 2012; Fischer 2016). *NatureCulture* links on one side to particular places, but on the other is multipliable, open to relations that trouble and challenge those placements.

Part of this can be seen in *NatureCulture*’s editorial practices and infrastructure. Unlike other STS-oriented journals in Japan or elsewhere (*ibid.*), *NatureCulture* is not associated with an academic society, publishing corporation, or university. In the past, it has been supported by Japanese government research grants, but today, it is financially independent, or rather paid for directly by its editors. This is possible, in part because of infrastructural choices that the editors have made. Technologically, it relies on a network of free and inexpensive platforms to support its editorial work. The journal has always been presented on low-cost self-hosted Wordpress®, rather than on university or publisher-owned servers. Though requiring some technical proficiency to maintain, this makes the journal’s website exceedingly inexpensive to operate (less than \$50 USD per year). Similarly, its editorial office exists in email, Facebook Messenger®, Dropbox®, and Slack®, and we use standard software such as Microsoft Word®, for composition and typesetting. Many components of the system will be familiar to academics working anywhere in the world. The selection of an “ecosystem” of platforms has allowed us to draw in new ones where we see potential. For example, our exhibits at the 4S meetings took advantage of the [Platform for Experimental Collaborative](#)

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<sup>2</sup> For an earlier version of this text, see [Strathern et al. 2014](#).

[Ethnography](#) (PECE), and this current article has been composed collaboratively on [PubPub](#)<sup>™</sup> ([Mohácsi et al. 2021](#)).

The journal's dispersed "cloudiness" has its counterpart in other dynamics that work to fix it in particular places. Two recent examples are our attempts to attain DOIs (Digital Object Identifiers) and an ISSN (International Standard Serial Number) for *NatureCulture*. Both are necessary for the journal's content to be more discoverable, and to be indexed in the Directory of Open Access Journals<sup>™</sup> (DOAJ) and others. However, the institutional processes for acquiring these connections required placing ourselves with Osaka University. To receive DOIs, for instance, we were required to upload all of the journal's content to Osaka University's institutional open access repository ([NatureCulture 2021](#)), though our own website ([NatureCulture](#)) continues to be the main distribution point for all of its content.

Similarly, applying for an ISSN entailed establishing another fictive *and* physical relation to Osaka University. As things go, many authors prefer to submit articles to journals that have the ISSN, since their academic institutions will only count papers as acceptable publications if they were published in a journal with an ISSN. When *NatureCulture* applied for this number at the National Diet Library of Japan, the editors were reminded that one of the conditions of the issuance of ISSN is the display of a geographic location—an address—on the homepage of the journal. So, when Gergely Mohácsi, one of the authors of this essay, replied that "our journal is edited in different countries and hosted by Osaka University," he was told that it was not sufficient information and was repeatedly asked to add the *address* of Osaka University to the homepage. What more to say about *locating* matters?

Intellectually, *NatureCulture*'s establishment marks another contact zone between anthropology *in* Japan and elsewhere that troubles its placement *in* Japan. The journal has emerged relatively recently in the milieu of the social and cultural studies of science and technology *in* Japan. Whereas the field identified as STS *in* Japan (*kagaku gijutsu shakai ron*) developed in close conversation with STS in the United States and Europe ([Otsuki 2018](#)), "out of the ivory tower of History and Philosophy of Science and the Sociology of Science" ([Tsukahara 2009, 505](#)), *NatureCulture*'s roots are in the anthropology of science and technology ([Mohácsi et al. 2019a](#)). The latter has developed separately from STS *in* Japan, despite now sharing some institutional spaces (largely under the auspices of 4S, rather than Japanese STS associations) remains independent from it.

Its concerns have therefore not foregrounded Japanese institutions of technoscience or sociological analyses of knowledge production, let alone technoscience policy or science communication, but anthropological problems of nature, culture, and technoscience addressed at the nexus between "Western" and "Japanese" ways of knowing and being. As Jensen and Morita discuss, Japanese thought (for the moment bracketing the problem of whether they can be defined as "Japanese") has long been agnostic of the dualist opposition between nature and culture, seeking, in the work of scholars such as Kinji Imanishi and Tadao Umesao, to "integrate anthropology and ecology in a single, nondualist science" ([2012, 359](#)). Such "non-modern settlements" ([Jensen and Blok 2013](#); cf. [Latour \[1991\] 1993](#)) are among many, which anthropologists in and around *NatureCulture* have explored and elaborated in works that draw eclectically from Japanese intellectuals, past and present (see, for instance, [Ishii 2012](#); [Jensen and Morita 2019](#); [Satsuka 2018](#); [Jensen et al. 2016](#)).

At first glance, *NatureCulture's* position in relation to these intellectual forebears may seem to place it and its contributors in Japan. Indeed, as historian Tessa Morris-Suzuki (1998) has shown, the development of notions of “nature” and “culture” during Japan’s modernization, involving Imanishi and Umesao among many others, were integral to the articulation of its national identity, and its spatialization as a nation state within a world of other powerful nation states. Henceforth, Japanese thought has provided for productive, if sometimes unrecognized, disruptions to “Western” thought, challenging the epistemic hierarchies of academic knowledge. At the same time, this has sometimes had the effect of suggesting, if not reifying, a monolithic image of “Japan” and “Japanese” as alter to the West.<sup>3</sup> We might reasonably expect the same to be true of discussions of their successor naturecultures and non-modern settlements, and this is the case to a certain extent. *NatureCulture* has published work by prominent and emerging scholars located in Japan, in part to increase the visibility of their research internationally, and to make perspectives that have developed in the Japanese anthropology community more salient in the international English-language community. But the networks that have constituted *NatureCulture* have always entailed multiple spatialities that are not wholly contained within Japan.

To be sure, this “discontainment” has not been due purely to intellectual experimentation. After its first few years, *NatureCulture* has struggled to situate and sustain itself as an intellectual forum. Naoki Kasuga, an anthropologist at Osaka University and then Hitotsubashi University, created the journal during a period of intense interest in the “ontological turn” in anthropology. This resonated with his longer concern with the relation between empirical and theoretical aspects of anthropology, and a desire to break through “the stalemate in anthropology set by deconstructionism, feminism and empiricism” (Kasuga and Jensen 2012), associated in part with the Writing Culture moment and the “Crisis of Representation” in American anthropology (Jensen and Morita 2012). One manifestation of this concern was the publication of an edited volume, “Anthropology as Critique of Reality” (*Genjitsu Hihan no Jinruigaku*) that first introduced the idea of the “ontological turn” to the Japanese readers. Importantly, many of the authors of this volume became *NatureCulture's* first generation of editors. Many of the issues discussed in the book became the central focus of a 2010 symposium in Tokyo called “The Human and the Social” (Kasuga 2012). Papers from this symposium written by Kasuga himself, Casper Bruun Jensen, Annemarie Mol, Atsuro Morita, Heonik Kwon, and Eduardo Viveiros de Castro became part of *NatureCulture's* first issue. In the subsequent years, the journal continued to publish work from other scholars from Japan, Australia, Canada, Denmark, France, Hungary, India, Turkey, the United Kingdom, and the United States, some of whom have close connections to Japan as a research site or institutional home, and others who have deep conceptual and empirical connections to *NatureCulture*, rather than geographic ones. Yet, like many open access and open source projects, maintaining *NatureCulture* beyond its initial momentum has proven to be a challenge. When Kasuga stepped back from active involvement, new editors (Casper Bruun Jensen, Gergely Mohácsi, Atsuro Morita, and Grant

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<sup>3</sup> See Jensen and Blok 2013, for one such discussion in the context of STS. This issue has also been explored by Naoki Sakai (1997) and Sonia Ryang (2004), among many others.

Jun Otsuki) took the reins with the intention of continuing the journal, but developing it also as a venue to showcase the work of Japanese scholars, particularly those early in their careers, which the editors recognizes as important but which may only infrequently appear in English, and in forms easily accessible to audiences outside of Japan. One cause of this difficulty, which has also been diagnosed by anthropologist Gordon Mathews, is that the anthropology community *in* Japan and in Japanese is large enough that the merits of publishing in English for Japanese researchers are often marginal. As Mathews notes, “there are enough anthropologists, and a big enough reading public of anthropologists, students, and lay people, to make the anthropological worlds of these nations [including Japan] more or less self-sufficient, without need for English” (2008, 57). One result of this has been that those who *have* gravitated towards *NatureCulture* are scholars who both have intellectual commitments to the kinds of debates it fosters, but who also are neither completely within nor able to separate from anthropology *in* Japan. Thus, while *NatureCulture* is ostensibly “Japanese” in some respects, it is not *only*,<sup>4</sup> and indeed it cannot be only; rather, its place is multipliable. To develop this point further, however, will require a close examination of what “multiple” means at the contact zone between the social, infrastructural, and epistemological relations discussed up to here, and its consequences for how we think about the world.

### Multiplicities

As John Law has argued, in a “European way of thinking” the world is singular and pre-exists humanity; it is “*outside* us and we [humans] are *contained* inside it” (Law 2015, 126). Under this “one-world world” doctrine, “spaces” and “places” of human and non-human practice are always already located within a pre-given world. The formulation of this “oneness” harbors a problematic metaphysical assumption. Take the “world”; in this doctrine, the “world” is the singular space in which things and events are emplaced. We might call it the “space of all spaces” or “place of all places,” which must be imagined as a non-place outside of culture and practice that “goes on by itself” (ibid., 127). It is figured as the omnipresent background of whatever accounts scholars can give of what happens within it. Such a world gives rise to “protagonists” (Kasuga 2012) or what Latour calls “figurations” (2005)—such as “nature,” “society,” “culture,” and “the human,” which become imagined as discrete and commensurable agents in the world that interact to shape the world’s myriad manifestations.

Thinking beyond this doctrine, the attention of scholars in *NatureCulture*’s orbit has focused on *multiplicity* of worlds and key “protagonists” in anthropology and the social sciences more broadly. Partaking of a broader intellectual moment, which has been characterized as a turn to ontology in anthropology, and towards networks and symmetrical approaches to humans and non-humans in STS, Kasuga, diagnoses this as part of a “tremendous upsurge of questioning classical ways of understanding the universe” in which there has been a “drastic collapse of the distinction between language and world,

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<sup>4</sup> “Not only” here draws on Marisol de la Cadena, who uses the phrase to foreground postplural multiplicities emergent in her work (2015); see also the interview with her in *NatureCulture* (de la Cadena and Taguchi 2017).

epistemology and ontology” (2012, ii). This necessitates an approach to consider the world and its protagonists, not as “undeniable objects, given realities susceptible to simple observation, description, and analysis,” but as effects of heterogeneous linkages of other things, living or non-living, tangible or intangible (ibid., i), or, as Gad et al. put it, to see actors as engaged in *constituting worlds* (2015, 75). Thus, a significant analytical motif in *NatureCulture* has been the subversion of metaphysical “oneness” in favor of attention to the multiplicities immanent in worldly practices (ibid., 72; Jensen 2021).

These multiplicities are not figured as the mere accumulation of formally similar things or “options” for reality, but as effects of “practical compilations that consist of changing and partial connections” among many things (Gad 2013, 51; Escobar 2020; Otsuki 2021b). The elements of such multiplicities are not discrete units, but networks of relations that are partially connected with each other. Multiplicity is, to borrow a phrase derived from Marilyn Strathern (2004), “more than one and less than many” (see also Omura et al. 2019). One example of such multiplicity is demonstrated in Jensen and Morita’s (2017) historical discussion of the Western concept of “nature” and its translation into Japanese as *shizen*. Today, *shizen* and “nature” are taken to be more or less equivalent, both referring to a realm of forces and entities independent of human activity, but also available to humans as a resource. But when the “nature” concept was introduced to Japan during the 1800s, no corresponding concept existed. Through a partial similarity in meaning, “nature” came into contact with *shizen*—derived from the Chinese *ziran*—which can refer to an action or artifact independent of human will (Jensen and Morita 2017, 5).<sup>5</sup> While this led to the adoption of *shizen* as a translation of nature, *shizen* continued to mean more than “nature,” carrying differences originating with *ziran* that were incompatible with the Western notion of nature. *Shizen*, for instance, could not, at the time, refer to “a general domain nor to a collection of entities” (ibid.) in the way that “nature” can. These other meanings were not erased under the influence of Western thought on Japan, but neither were they simply adjacent to “nature” as an alternative. Rather, they generated multiple “minor traditions” in Japanese anthropology entailing knowledge and world-making practices that were different to, but not wholly separate from those of the Euro-American social sciences that were becoming hegemonic. Nature and *shizen* are both diverse and inter-related (Otsuki 2021a).

Their example also suggests a different way of thinking about place. If conventionally, *shizen* is interpreted narrowly as a Japanese notion of nature or something like the costume that “nature” wears as a protagonist of the world in Japan, then Jensen and Morita’s analysis suggests that *shizen*, “nature,” and Japan should be seen as constituted or figured as protagonists in connection with each other. In this case, neither *shizen* nor nature are simply in Japan. Instead, Japan is also constituted between the “major” and multiple “minor” traditions, in the gaps or *Umwelt*<sup>6</sup> between “nature” and *shizen* (Uexküll [1934] 2010). It is one and multipliable.

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<sup>5</sup> Jensen and Morita draw here on work by Akira Yanabu (1977; see also 1982), who has been a key inspiration for re-thinking *shizen* in relation to “nature” (see also Satsuka 2015).

<sup>6</sup> The concept *Umwelt*, as developed by the Baltic German biologist and philosopher Jakob von Uexküll, refers to the unique perceptual world that shapes an organism’s interactions with its environment.



In Issue 4 of the journal, anthropologist Goro Yamazaki (2017) explores a similar kind of multiplicity in an ethnography of organ transplantation in Japan. Organ donation in Japan is anonymous, meaning that an organ recipient can never know the identity of the donating individual or their family. However, this does not prevent the organs from producing connections between donor families and recipients. Yamazaki describes how donors' families and organ recipients come together at events to acknowledge the donors' gifts and express gratitude to the families. It is unlikely at these meetings for the organ recipients to be facing anyone related to their actual organ's donor. Yamazaki argues that this gives the donated organ an ambiguous and multiple existence. On the one hand, the organ connects the recipient with their organ's actual donor, whom the recipient can never know. On the other hand, the organ creates a connection with donors and their families in general, even without a direct bodily connection. Simultaneously, the organ is also part of the recipient's own body. In addition to these relationships, this multiplicity is manifest in linguistic practice. In different situations, recipients may refer to their organs as "mine," "yours," or "theirs." We can say that the organ—as well as its related bodies, practices, and socialities—are enacted in practice, but also constituted, like "Japan" above, in the gaps between "mine," "yours," and "theirs." The organ is like a material-semiotic kaleidoscope that can enact place (and therefore become placed) in multiple ways.

This line of analysis leads further. In the "one-world world" populated by discrete units, comparability among units is the basis for politics. Protagonists like *shizen* or nature can be compared and be evaluated for their proximity to reality. Thinking with multiplicity, however, does away with this form of comparability (see Otsuki et al. 2019). How then can politics be thought? As the above suggests, it must consist, at least partially, in recognizing and fostering possibilities of divergence from conventional figurings of protagonists. Contributors to *NatureCulture* have examined this question through their attention to cosmopolitics.

### Cosmopolitics

The concept of *world* in its universalist sense of all nations, or the globe, would suggest a singular unit superseding all *places*. A similar argument has been made about multiculturalism being framed by the assumption of a single nature (Viveiros de Castro 2012). Yet if the relationship between people and their worlds are emergent through their co-actions with things and vital relations as anthropologist Miho Ishii (2012) suggests, then worlds are not above being caught up in more-than-human processes of poiesis. Where the *one-world world* reduces difference to different ways of knowing the same assumed reality or to one *space* containing many places, world-as-poietic-process raises the problem of this assumed knowability, making neutral *space* or world itself into a co-constitutive, vital place among many.

As Morita and Jensen (2012) argue, this question of incommensurability or absolute difference was much more pronounced in the European reception of the ontological turn in anthropology. What is reflected in the first *NatureCulture* series "More-than-human Worlds" (Hansen et al. 2018) are instead various attempts to expand cosmopolitics (Stengers [2003] 2010) beyond the human; not radical incommensurability but practicing a pluriverse in the risky interplay of existences without guarantees of a single shared reality. Though there are multiple blog posts dealing with Japan in the series, the diversity of worlds extends beyond the focus on Japan and those that could be said to be about Japan are also more often

situated in between (e.g. in between Canada and Japan, or Shinto and Catholicism). Each of these entries, we argue, take the diversity of worlds seriously and show us ways of knowing what these lived worlds make possible. Often taking the form of an editorial field note or analytically-tinted vignette more than a miniature article, authors have taken these as an opportunity to explore their own ontological uncertainties, speculate with material outside their main fieldwork, as well as play with form, images and pop culture. If there is a difference with most of the main body of works in the *NatureCulture* journal, it is in this methodological aspect of writing against journal form as a matter of coming to terms with the species and worlds around us.

Scott Simon ([2018](#)), in his contribution to the *More-than-human Worlds* series, raises the problem of knowing across species through a parable about Daoist philosopher Zhuangzhi. Zhuangzhi is walking along the river with a companion, when Zhuangzhi comments on how the fish are joyful. His companion asks how he knows the fish he sees are joyful, to which he replies he knows it from the Hao River. Simon's analysis of the language suggests that a shared experience of traveling leisurely along the Hao river, attentively watching the fish allows Zhuangzhi to say this. Simon expands Mi'kmaq Elder Albert Marshall's teaching about "two-eyed seeing" ([Marshall 2017](#)) and Gregory Bateson's ([1979](#)) "binocular vision" to say that beings with different knowledges can and do learn from one another by being in place together over time. It is in this way that Truku hunters in Taiwan know how to read the movements and meaning of the Sisil bird in relation to omens and potential hunted game. Slowing down and *being with* is where working towards coexistence with others can become possible ([St. Pierre 2021a](#)).

In another post in the same series, Line Marie Thorsen ([2019](#)) argues that in the work of French experimental artist Sonia Levy, space is what is opened up for slipping and sliding between worlds: "place is displaced, it becomes a space in-between indiscernible worlds and ways of knowing them" ([Thorsen 2019](#)). In particular, the audiovisual piece *I Roam*, places the viewer at the intersection of human language, technologies and the point of view of a whale—displaced through a camera, and a narration from a nineteenth-century book written by a whale hunter itself reinterpreted to be from the whale's perspective. Drawing on the philosophy of Jacques Rancière, Thorsen sees in this aesthetic engagement the potential for stories and speculative affinities between worlds to explore more-than-human connections and multiple, layered ways of knowing. The potential of this uneasy in-between afforded by making space also resonates with Stengers' cosmopolitics. Perhaps just as something *had to happen* in the world of physics in the late nineteenth century when experimental physics gained access to once invisible forces ([Stengers \[2003\] 2010](#)), new ways of relating are already percolating in the space afforded by new ways of using audiovisual capture and reinterpretations of historical texts, allowing us to slow down and be with another's world ([St. Pierre 2021b](#)).

Capture is also a metaphor and another way to relate to more-than-human worlds. Chakad Ojani ([2020](#)), drawing on Didier Debaise's ([\[2006\] 2017](#) cf. [Ojani 2020](#)) interpretation of English philosopher and mathematician Alfred North Whitehead ([\[1929\] 1978](#)), argues that "capture," as a relation that transforms rather than reduces to the same through force, is generative of worlds. In the hills near the Peruvian capital Lima, biologists studying the fog-capturing ability of trees found their hydrological models overturned, as they realized that a river in these *lomas*, or "fog oases," was not in fact sourced in land but continuously replenished by the cycle of fog capture. The traps here, Ojani argues, function as a material interface between

worlds, not simply connecting but also disconnecting; changing scientific knowledge to become more fog-like and the unexpected power of fog traps to become more invested with ecological importance ([St. Pierre 2021c](#)).

Cosmopolitics, similar to natureculture, is not rooted to place as it is indeed defined by the potential of in-betweens. Yet it also has a specific focus on practices for an “openly constructivist approach that affirms the possible, that actively resists the plausible and the probable targeted by approaches that claim to be neutral” ([Stengers \[2003\] 2010, 57](#)). As Simon, Thorsen and Ojani argue, these worlds are already there; this is not a liberal politics of recognition, but rather one that assumes and takes seriously the reality of these other worlds and builds its relations on this possibility of their existence.<sup>7</sup>

Ojani’s contribution in particular poses a problem for cosmopolitics and place that is not immediately accounted for in the other entries, namely that of mutual influence. What happens to *our* world and *our* places through these other ways of knowing and being? What happens to *our* nature in a world where Japanese and other versions of nature still find expression? To avoid recreating another kind of neutrality, these reflexive questions should also be given attention.

## Experimentation

Experimental practices, like fog capturing—as Ojani reminds us in the essay mentioned above—are important sites of the mutual influences between multiple worlds and partially connected places:

Through *experiments* such as the one carried out by Sergio, fog, an otherwise elusive and ephemeral atmospheric phenomenon, becomes enrolled in environmental infrastructures that enfold atmospheres, humans, vegetation, and even aquifers, thus casting into uncertainty what and where fog can be, and what fog can index and do. ([Ojani 2020](#). Emphasis added by co-authors—Mohácsi, Otsuki, and St. Pierre)

From laboratory tests to field trials, it is this liminal position between different and emergent worlds that makes experimentation a critical practice for locating natures and cultures in their everyday encounters.

Rather than a pronounced topic of its own, epistemological and ontological experimentations at the crossroads of the conceptual and the empirical have been an underlying theme throughout the first five volumes of *NatureCulture*, too. From ethnographic explorations of experimental knowledge practices (e.g., [Suzuki 2015](#); [Bardini 2017](#); [Ojani 2020](#)) to thought experiments in science fiction ([Jensen and Kemiksiz 2019](#)),

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<sup>7</sup>These three contributions from authors—with connections to Japan but conducting fieldwork outside of it—show similarities in approach with Goro Yamazaki and Miho Ishii discussed in the previous section. It should be noted that other contributions, like those of Qieyi Liu, Dan White, Paul Hansen and Andrea De Antoni also deal with the ways of knowing other worlds, and the speculative commitment to the possibilities they offer within China and Japan. In all these *NatureCulture* contributions, the authors have distanced themselves from clichés of radical alterity and endless networks to deal with difference in ways that are closer to Morita and Jensen’s discussion of nature *in* Japan, and thus resonate well with Strathern’s notion of partial connections and French philosopher Isabelle Stengers’ cosmopolitics ([\[2003\] 2010](#)). While they share a theoretical orientation, the places they inhabit and their means of relating to them are multiple, if specific.

this line of inquiry aimed to capture the ongoing and recursive relatedness of scientific and social worlds in the making ([Mohácsi 2019a](#)). Building on the multiple and cosmopolitical reconfiguration of place and space as outlined in the previous two sections, here we explore two different aspects of locating matters of naturecultures in experimental practices. One is the changing role of the laboratory as a place of cultivation and care. The other aspect is what we call here a lateral movement of science fiction into STS and anthropology with its promise to open up our thinking to experimental methods and alternative topologies.

The laboratory has long been considered in STS as the ultimate place of scientific knowledge production: a space of experimental pursuit where laws of nature and “experimental publics” could perform and validate each other ([Livingstone 2003, 21–29](#); [Shapin and Schaffer 1985](#)). In recent years, however, a growing body of work has started to revisit laboratories to show that the multiplicity of natures and cultures is more than a social fabric; at experimental sites it is also a matter of knowledge and affect ([Mohácsi 2020](#)).

As Natasha Myers ([2015](#)) in her article in the third issue of the journal argues, common sense ideas of nature and culture are challenged again and again in the laboratory of plant scientists. She introduces the reader to the emerging sciences of plant sensing through ethnographic conversations in American and German molecular biology laboratories. Building on her earlier ethnography of protein modelers, Myers explores the affective and experimental entanglements of plants and scientists that tunes the latter into the rich sensory worlds of the former. “Is it possible,” she asks “that practitioner ‘sensoria’ get ‘vegetalized’ over the long duration of their experimental inquiry? If so, how might their vegetalized perceptions and imaginations shape the direction of their inquiry and the ways they think and talk about plants?” ([ibid., 2015, 42](#)). Exploring this vegetal sensorium, thus, points to an ongoing commitment to the cultivation and care of plants where “becoming with and alongside plants” ([ibid., 37](#)) displaces the experimental and public gaze with the experimenter’s careful attention. This laboratory is not the sacred house of science any longer, but a changing spatial configuration where matters of concern have taken residence in and across practices of care and experiment ([Mohácsi 2019b](#)).

Wakana Suzuki ([2015](#)), in the same issue, carries this argument further to suggest that matters of care in the laboratory are not only crucial but integral to the production of scientific facts. Her ethnographic study focuses on the daily work of molecular biologists who are engaged in the research of iPS (induced pluripotent stem) cells in an attempt to develop transplantable tissues to find cure for eye diseases and injuries. One important part of their work is to grow iPS cells that had earlier been harvested from the patient’s body and will later be transformed into functional cells. It is a novel and experimental procedure that as of yet lacks a refined and standardized protocol or a technical language. Comparing and eventually understanding the results of cell culturing therefore requires the deployment of a rich vocabulary of Japanese onomatopoeia that describe the state and unexpected behavior of cells, while also creating a space of collaborative work by connecting embodied experiences of the laboratory staff. “Scientists and technicians,” Suzuki tells us, “care for their cells and develop affective relations with them” in their quest to relocate matters of life ([Suzuki 2015, 89](#)).

Experimenting with plants and cells, these two articles suggest, can change the very meanings of sense and cognition—both for humans and for other living beings by allowing scientists and their non-human subjects to tune themselves into each other’s sensory worlds. In these laboratories, the scientific knowledge of life is becoming with the sensory worlds of plants and cultured cells. This affective state toward

the future illustrates Michelle Murphy's argument about "experiments as future-making assemblages . . . that arrange and gather data about interventions into the world toward the possibility of making something different happen" (Murphy 2017, 80). But while Murphy's argument is grounded in historical—i.e., spatially and temporally specific—events like large-scale family planning field trials in Bangladesh during the 1970s and 1980s, and Suzuki and Myers locate the shifting matters of care in the ethnographic present of the laboratory, the fifth volume of *NatureCulture* is a direct invitation to experimental and alternative futures.

The editors of the special issue titled "Experiments in Thinking across Worlds: Anthropology and Science Fiction" (Jensen and Kemiksiz 2019) highlight the permeability between fiction and reality and its consequences for enacting different spaces. In speculative science fiction, or so they tell us, these seemingly distinctive dimensions are replaced with topological interfaces, such as "looping, recursive implication, lateral movements, and blurred zones of interaction" (ibid., iv). More than the co-production of science and society in the laboratory or at field sites, these ethnographic engagements with alternative futures suggest that the multiplicity of naturecultures is grounded in a fluid sense of place and space.<sup>8</sup>

Steven Brown's (2019) evocative reading of SF writer China Miéville's work and its relevance for an experimental social science of spatial organization is a case in point. The specific site of the mediation Brown is concerned about is the figure of the "Embassy" and the conceptual questions of territorial distinction that it evokes. "Embassies" are presented in three of Miéville's novels as channels of communication between two different, if overlapping, dimensions (*The City and the City*, 2009), humans and non-human animate beings (*Kraken*, 2010), or two different life forms (*Embassytown*, 2011). Whether it is bioengineering, police investigation, or spiritual conflicts, communication between these worlds seem to be loaded with misunderstanding and ambiguity.<sup>9</sup> The interesting bit is that these ongoing exchanges between different communities, different species, or different worlds, made possible and maintained by the embassy, help to shape ontological difference and its politics as a series of *territorial* relations and/or divisions. "As a figure of spatial and territorial organization, the embassy is that through which two bodies can communicate in an authorized, governed fashion. Inversely, the destruction of the embassy marks a new order of things" (Brown 2019, 111).

The figure of the embassy is a site of conflict, experiment, as well as misunderstanding; it is an organic place, reminiscent of our damaged planet, or "Gaia," and all the problems of climate change as discussed by Bruno Latour (2018 in Brown 2019, 113) and other anthropologists and science studies scholars. The epistemic separation of nature and culture that has reduced Earth to a stable and passive geological entity makes it close to impossible to respond to its calls. What happens when the layers of human and

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<sup>8</sup> For a parallel, although historical case, one could think of the nineteenth-century bacteriologist Mori Rintarō. The experimental blending of biological facts with historical fiction in his later writings attempted to demonstrate how Chinese "characters should function like objects in the laboratory" (Lamarre 1998, 627).

<sup>9</sup> "As Miéville puts it, the embassy is situated on the "membrane" of things (..), as a porous spatio-temporal site of copulation, where barely understood exchanges occur. It communicates over time as much as space." (Brown 2019, 114)

physical geographies overlap? Where are the matters of environmental disaster located? These kinds of questions will have to be asked again and again in order to allow our concepts of place and space to feed into the experimental affordances of natureculture.

### Re-placing naturecultures?

*NatureCulture*, the journal that has been the protagonist of our essay so far may be considered as an experimental place where these questions are articulated and engaged in multiple ways of knowing. If it is indeed a *place*, though, it is anything but stable; it actively participates in locating matters of nature-and-culture across disciplinary boundaries, and thereby *replaces* them from being bounded and apart to being enacted in multiple and mutually related spatial configurations. We do not claim that re-placing naturecultures is an easy thing to do. There are powerful forces and structures that would rather put them, and you, into stable places. Like geographically meaningful locations. Or, even better, administrative compartments marked by unique numbers. Recall the difficulties of acquiring DOI and ISSN without an address as told at the beginning of this essay. Places and spaces of science can be more stable than we would like to admit!

A critique commonly levelled at science studies in the anthropological literature has been its relatively blunt sense of place.<sup>10</sup> In contrast, be they culturally embedded, historically emerging or topologically in the making, anthropological concerns, more often than not, are framed as local or regional matters. One could argue that place, in the ethnographic imagination, stands against almost everything that a universalist notion of science encompasses (see e.g. [Cramblit et al. 2014](#)). Situating itself *between* minor and major traditions, *NatureCulture* has embraced these concerns not only as a conceptual conundrum, but also as an organizational ethos. Thus, it is all the more intriguing to ask how ethnographically invested STS accounts of hospitals, laboratories, fog-oases, or embassies, among other places, have contributed to locating matters of natureculture across disciplinary boundaries.

As we have seen above, the historical trajectory of the word “nature”—translated from the English, and written in Chinese characters, but loaded with semantic layers of contingency in Japanese—had a profound impact on the methods and concerns of anthropology in postwar Japan that emphasized the regional as well as the ecological contexts of modernization. Even as Japanese anthropologists “developed a specialized vocabulary, inspired by Western ecology and in direct competition with it, its core concepts embed Chinese traces of nature as spontaneous becoming” ([Jensen and Morita 2017, 8](#)). The correlations of societies and their environments, in Japanese anthropology, came to be imagined as emergent dynamism, or a series of situated trials and errors across multiple nature-cultures.

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<sup>10</sup> But, also to illustrate how outdated such a critique might be, see the following reflexive statement by the authors of the fourth edition of *The Handbook of Science and Technology Studies*: “Our efforts to be attentive to different places where ideas and perspectives develop are tempered by the acknowledgment that resources and ways of seeing the world are distributed very unevenly in the field” ([Felt et al. 2017, 14](#)). They call this attitude “reflexive landscaping” of the discipline itself.

From human organs moving between bodies, institutions and languages, to whale perspectives that connect modes of knowing across different species, to plants whose senses can transform scientific disciplines, the articles reviewed above attest to this contingent dynamism. This does not mean however that there is anything inherently Japanese about them. Quite on the contrary, these texts remind their readers to be weary of quick fixes that misconstrue the constant emergence of place to an idealized and radical notion of difference and belonging, on the one hand, or try to escape those differences altogether on the other. Places like art installations, life science laboratories or intensive care units are situated at the intersections of locating natures-and-cultures and, at the same time, they are the very agents of making these interfaces inherently political. It is what Bruno Latour, in a different context, has called the geosocial politics of living on a damaged planet as an all-encompassing agent of being human.

As long as the earth seemed stable, we could speak of space and locate ourselves within that space and on a portion of territory that we claimed to occupy. But how are we to act if the territory itself begins to participate in history, to fight back, in short, to concern itself with us—how do we occupy a land if it is this land itself that is occupying us? The expression “I belong to a territory” has changed meaning: it now designates the agency that possesses the possessor! ([Latour 2018, 41–42](#))

Locating naturecultures, in this sense, is a challenge to more passive notions of place and space and a call for actively engaging with core concepts of our existence: a re-territorialization of social theory ([Mohácsi et al. 2023](#)).

These re-territorializations work together to challenge the “one-world world” doctrine, foregrounding situated practices, partial connections, and cosmopolitical associations. They highlight what Arturo Escobar calls “pluriversal politics,” in which “the seemingly firm boundaries between the Global North and the Global South . . . between what might be considered modern or not,” and in our case, what is “Japan” and “Japanese” or not, “weaken significantly and, eventually, begin to dissolve” ([Escobar 2020, xvii](#)).

If we consider *NatureCulture* not only as a venue that broadcasts intellectual views from a particular place, but as a nodal point in networks of heterogeneous relations, then we can see how similar multiplications—social, infrastructural, conceptual, and disciplinary, among them—continue to promise the potential for re-locating matters of concern, as well as for imagining emerging ways of emplacing studies of technoscience and the worlds they conjure forth. *NatureCulture* plays a small, but we hope not insignificant role, in the struggle to think of ways to reinhabit the pluriverse.

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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/p42g6k>.

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