## Transnational STS: Theories, Practices, and Pedagogies | 4S-EASST Prague Conference

Transnational Transformations: Daoism, the Neurosciences, and the Politics of Knowledge Johanna Pokorny, University of Toronto

When I began fieldwork in a neuroscience lab located in a city in Eastern Canada, the scientists were hosting a workshop with a visiting group of Taiwanese researchers: a few graduate students of varying disciplinary backgrounds, though mostly biomedicine, headed by Chih-hao Chen, a professor of philosophy at a university in Taiwan. At the time, the lab was focused on an area of research called the resting state, a new and popular area in neuroimaging research that re-examines the importance of the brain "at rest," rather than engaged in a task, and how this is understood as a baseline for neuroscience experiments using neuroimaging technologies, specifically functional Magnetic Resonance Imaging (or fMRI). When the brain is "at rest" it is surprisingly full of spontaneous, noisy activity that requires a great deal of energy. In resting state research, neuroscientists are reconsidering the physiological role of this spontaneous activity rather than subtracting it from neuroimaging data. The lab was collaborating with physicists in developing complex mathematical modelling to help them understand this dynamic neural activity. I was curious about how these researchers were reconsidering the nature of the brain as lively and challenging reductionist and deterministic approaches elsewhere in the neurosciences.

Instead, the week-long workshop I arrived to attend, with full 8-hour long days filled with discussion, was on connections between, what was termed "Eastern and Western philosophies." In it Chih-hao presented a brief account of the theoretical background of Chinese medicine practices, specifically drawing on the Daoist text the *Zhuangzi* by the philosopher of the same name, who lived during the Warring State period, some 2,500 years ago. During the course of the workshop, Chih-hao explained, among many other things, that *qi*, which was ambiguous and non-physical, was naturalistic, and that it allowed for a different notion of nature and the human in Daoist thought. Walter, the principal investigator of the neuroscience lab and whom I had heard explain that even cognitive neuroscientific approaches were not naturalistic enough, expressed that he was interested in *qi*, and suggested it might be useful for understanding the brain. Given the lab's focus on understanding the physiology of the brain in resting state research, this was a surprising start; what could the nature of this transnational collaboration be?

But then, as the neurosciences had in part been changed with efforts to think the brain as embodied, extended, and plastic, perhaps the field was in part transforming. I was aware that the neurosciences had been in dialogue with Buddhism more broadly, and several neuroscientific studies have involved Buddhist practitioners. The Dalai Lama had been the key speaker at the largest and most highly attended neuroscience conference. Even further, the past decade has seen the popularization of mindfulness and meditation practices in psychology and the neurosciences where they are sometimes framed as replacing or extending cognitive-behavioral therapies. The lab's interest in Daoism and *qi* might seem less surprising given these changes in the field.

Instead, the lab discussion of Daoism's applicability to the neurosciences is symptomatic, rather than surprising, of changes having occurred more widely in the field, where discussion of the failure of the promises of the neurosciences has resulted in a turn to (imaginative) elsewheres, such as the "East," for new notions of the human and nature. In this paper, I follow

the politics of this transnational collaboration, considering how and why neuroscientists might be drawn to what they term "Eastern" philosophies connected to traditional Chinese medicine and Buddhist practices, which provoke imaginaries of the neurosciences as transforming "Western" ontological commitments towards the human in nature. But these also reactivate the unevenness in this exchange: Daoism has already impacted the sciences through sideways connections, but has been repeatedly displaced. Instead, the transnational collaboration might cue us into an account of the neurosciences (and science more broadly) in which the human is not as "Western" or singular as made out to be.

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In considering traditional Chinese medicine, anthropologists Mei Zhan (2009, 2011, 2016, 2019) and Wen-yuan Lin (2012, 2017), challenge readers to consider what Daoism could offer as an analytic rather than an object of study. As an object of study, most often categorized as a religion, Daoism is unevenly positioned in a politics of knowledge. Postcolonial scholars have been challenging this unevenness by unsettling theoretical constructs and "provincializing Europe" (Chakrabarty 2000). For example, Zhan recommends thinking with tianrenheyi ("oneness") from Daoism as generative of new theoretical insights emerging from "an immanent mode of analysis that inhabits and transforms the material-semiotic conditions from which it emerges and that moves sideways and analogously from particular to particular" (2011:108). She suggests "In oneness there is a possibility for us to think and live with rather than within the legacy of European intellectual tradition. Imagine that." (2011:123). Wen-yuan Lin (2012, 2017) prompts readers to think about shi ("disposition," "capacity," or "potential") from Chinese medicine, which foregrounds process and movement, as a means for rethinking theoretical terms, such as relationality, heterogeneity, and agency in a hospital in Taiwan. For example, Lin shows how the agency of patients undergoing haemodialysis in, can be understood as displaced rather than lost or obscured in uneven interactions between the biomedical system and Chinese medicine, as the patients might choose the latter when the dialysis fails. Both Zhan and Lin attempt to provincialize the anthropological and STS toolkit by drawing on Daoist concepts analytically and working to unsettle the centrality of the "West's" theoretical terms to consider contemporary Chinese medical practices and their continued use alongside "Western" biomedicine.

However, in both Zhan and Lin's work, Chinese medicine is somewhat separate from biomedicine. For example, Lin, in collaboration with John Law, write:

To state the obvious, there is no room for meridians or chi in biomedicine, because they cannot be found anatomically or physiologically—they simply don't exist. [...] This tells us that the logics of the two systems are profoundly different. To make the argument quickly, biomedicine is reductive. [...] This is a way of knowing and being in which "facts are facts are facts" (Farquhar 2015: 227). And that is the end of the story. (2017:218)

But this is not the end of the story here. Attempts by researchers at discussing Daoism in a neuroscience lab, trying to find connections between the "two systems," suggests that these are not as bounded or as reductive as they might seem to be—though reduction, boundedness, difference and asymmetries do still haunt this moment. The moment in the lab cues us into transformations of the neurosciences, the incompleteness of facts, and the intersection with "Eastern" philosophies. Following this collaboration prompts us to reconsider what counts as the

human and knowledge for neuroscientists engaging in "Eastern" philosophies, how these are produced, circulated, contested, and, importantly, transformed in transnational interactions shaped by the transnational travel of knowledge.

These transnational interconnections are symptomatic of changes in the ontological commitments of the neurosciences, but these changes have already been happening, though in partial, uneven and unacknowledged circumstances. In making this claim, I am drawing on Atsuro Morita (2017) who writes—responding to Law and Lin (2017)—that the entangling of Chinese medicine and Daoism in these theoretical renewals is reformulated most often as a "future possibility," rather than an already changing present *and* as partially failed pasts, and that its potential is premised on the alterity of Chinese medicine. Significantly, Morita, in considering that there have already been past attempts at similar theoretical interventions, writes that "alterity resides not only on the other side of the encounter, such as in the incomprehensible practices of Chinese medicine, but also on the side of our own practices" (2017:246).

I take this as a provocation to consider the changing presents and possible pasts of transnational science and its politics that might, in part, precipitate the moment in the neuroscience lab of discussing Daoism such that it is (not) surprising. I draw on Zhan's suggestion of using the Daoist notion of oneness and sideways connections analytically, Lin's use of displacement in his consideration of the intersection of Chinese medicine and biomedicine, and also Chih-hao's own "taking seriously" of the *Zhuangzi*. I argue that oneness can prompt us into seeing the sideways collaborations of scientists and philosophers, their comparative practices and connections making. But, we can also notice the ways in which these sideways moments are displaced, though not lost, in this comparative practice, and that the dialogue reproduces ways in which certain things count as knowledge ("Western" philosophy), while others (Daoism) continue to be made strange, even though attention shows their past and continued entanglement and transformation in transnational science.

Transformation hinges on translation. To borrow from Shiho Satsuka (2015, 2019), this can be thought of as "science as translation," but where translation attends not just to equivalence, but also differences and strangeness. Drawing attention to translation also needs acknowledging the inequalities that occur in this practice (Asad 1986, Liu 1995, Sakai 2010). Extending Satsuka's considerations, Anna Tsing (2017) critiques science studies for paying attention to what she terms the "machinic" translation of science, that is, machinic in its attempts to unify knowledge, "to chop off excess parts and to hammer those that remain into their proper place" and suggests this is a result of science studies "only too rarely been willing to stray outside that imagined entity, the West" (2017:217). Part of my consideration of Daoism in the neuroscience lab is to challenge histories and critical accounts of the neurosciences, which tend to affirm an especially "Western" narrative. Two strands emerge in this uneven translation: the (re)production of "East" and "West" binary and the complicated relations between "science," "religion," and what counts as knowledge or not. Borrowing and transforming Michel-Rolph Trouillot's (2003) term for anthropology's place in power asymmetries that shape the discipline, insofar as STS has taken up the "science" slot, how does this contend with a discursive field that is already politically uneven in terms of what is constituted as knowledge and what is not? Perhaps transnational STS can provincialize and unsettle "science," as well as the STS toolkit, by drawing more astute attention to the discursive field in which it is situated, its asymmetries, not only as a future possibility, but also an already happened past and present.

#### **Possible Pasts**

Much of the literature on the history of the neurosciences follows a dominant account of the field's particular emergence and relation with "Western" canonical philosophy. References to this canon fill neuroscience textbooks, popular science texts, and even research articles: Descartes, Hume, Kant, Spinoza—these philosophers among others are often mentioned. There is a strong partnership between the science and philosophy, as is evidence by the fact that there were two philosophers affiliated with the neuroscience lab and the principal investigator, Walter, also had a philosophy doctorate along with neuroscience and medical training. The contemporary partnership between philosophy and neuroscience has prompted the formation of a field termed "neurophilosophy" which can take an especially reductive stance. One such neurophilosopher, Thomas Metzinger is known for making the argument that the self is merely an illusion. The most polemical neurophilosophical theorists take the view that "folk beliefs" will be eliminated through neuroscientific knowledge production, just like—they explain—ghosts were in the past. This hints at how the reductive neurophilosophical position is situated in a genealogy of secularism<sup>1</sup>. More critical accounts of the neurosciences (Rose 1996, 1999, Abi-Rached and Rose 2010, Rose and Abi-Rached 2013, Vrecko 2010, but also Rees 2016 and Langlitz 2013, Vidal 2002, 2009), many which follow a Foucauldian analytic extending technologies of the self and longer Christian histories of the body, soul, and the human, still predominantly take Euro-America as a centre. But then, what is the Zhuangzi doing in this reductive neuroscientific and philosophical conversation?

The *Zhuangzi* ostensibly became more internationally popular beginning in at least the 1960s, gaining increased attention in the 1980s when a dedicated group of scholars produced two edited volumes in order to "introduce Chuang-tzu [Zhuangzi] to a larger audience than he now enjoys. Currently, knowledge of the *Chuang-tzu* in the West remains almost entirely restricted to sinologists and a few students of comparative religion" (Mair 1983:v). While this literature is useful in expanding knowledge about the *Zhuangzi*, especially through repeated textual attention and exegesis, most of the entries struggle with using terms that entrench it in a Western philosophical toolkit, while failing also to pin down the text: Does Zhuangzi reject metaphysics? Is he a skeptic? An anti-rationalist? A relativist? Is the text a form of mysticism? (see Mair 1983 and Kjellberg 1996). The *Zhuangzi* resists easy translation, many of the scholars note, both at a linguistic level and into recognizable philosophical traditions: indeed, in the introduction of one of these early edited volumes, the editor calls the text "imaginative literature" (Mair 1983:xv). When I queried the philosophers in the lab of their knowledge of Daoist philosophies and philosophers, they answered that they had not been schooled in "Eastern philosophy."

This disciplinary omission speaks to what Mei Zhan (2011) notes as the fragmentation and objectification of Daoism, its being an ambiguous subject as either "indigenous religion" or

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<sup>&</sup>lt;sup>1</sup> Talal Asad's (2003) discussion of the historical construction of the category of religion has bearing here for scientific knowledge production. I am also intentionally *not* making the claim, using an anthropological conceit, that scientists become religious at the moment of taking up Daoism in the lab or when their work slips from being physical to being "metaphysical." Anthropologists and science scholars sometimes tack a complex route to trace out the "secular religion," religious rhetoric, mysticism or "spirituality" of their scientist interlocutors (e.g. Traweek 1988, Helmreich 1998, Sunder Rajan 2006, Pickering 2010, Langlitz 2013). I want to push back against these readings through learning from my interlocutors: to call something "religious" or "spiritual" is embedded in an uneven relation vis-à-vis the anthropologist or science studies scholar, who becomes in some sense "secular."

a "comparative philosophy." These divisions suggest how disciplines can be Eurocentric, universalized, and have inbuilt unevennesses not just in terms of what is constituted an object of study, but also how they are studied, the terms that get worked up into theory and science. At the same time, Zhan also points out the unworlding of past influence: drawing on the work of philosopher Reinhard May, Zhan explains that key passages of the *Zhuangzi* and Heidegger having striking similarities, suggesting that Heidegger may have drawn his ideas from this and other Daoist and Buddhist texts. Reinhard May suggests that this is not surprising given the longer interest in Chinese texts among German thinkers, with Leibniz, Goethe, Kant, Herder, Humboldt, Hegel, Schelling, and Schopenhauer all expressing interest or writing specifically on topics from Chinese philosophy and language. As Zhan suggests, similarities between texts, such as Heidegger and the *Zhuangzi*, "does not come out of universal truth about being human or deep structural unity in how we think. Rather, it emerges through concealed, sideways associations and out of specific personal and sociohistorical conditions" (2011:113). Thus, it is possible that although Daoist texts like the *Zhuangzi* are described as resisting easy translation, their impact has already been felt in "Western" philosophical tradition and science.

Daoism and the Zhuangzi has already impacted the sciences, specifically physics. Most notable is the popular *The Tao of Physics* ([1975] 1991) by physicist Fritjof Capra, who suggests that the new physics of the 20<sup>th</sup> century, that is, quantum physics, has more in common with Buddhism, Hinduism, Daoism, or the "Far East." Capra's argument is that the "mystical" notions of "spirit" are captured by these "religions" and are more in line with developments in physics in the 20<sup>th</sup> century—and are more humanist, as he notes that this new physics is physics "with heart." Capra's reading is not unique, and is symptomatic of an orientalist reading of the "East" and science. It has become one route through which "Eastern" philosophies are acknowledged, though problematically. Capra draws on work from physicists J. Robert Oppenheimer, Werner Heisenberg, and Niels Bohr to substantiate these connections. However, tracing the citation (i.e. intellectual trajectory) of the impact of Daoism on these physicists is difficult. For example, Niels Bohr's Collected Works (1999) includes little citation of influence from "Eastern" philosophies, crediting the philosophers Buddha and Lao Tse in only one address he gave in 1937. In contrast, in an introduction to the Collected Works (1999), physicist Jørgen Kalckar explains that Bohr, who never received any formal training in philosophy, was deeply attracted to "philosophers of life" such as the Buddha and Lao-Tse and had a deep and last impression from visiting China and Japan. When Bohr was awarded the Order of the Elephant by the Danish government for his contributions to physics, he designed his own coat of arms to included the taijitu, the yin and yang symbol from Daoism, along with his motto Contraria sunt complementa ("opposites are complementary"), though there is little explanation. It is striking that he would make such a choice with little reference to Daoism in his writings. We are left only with a sense that Bohr had a sideways connection with Daoism, but making this connection materialize in the record is difficult.

I focus on Bohr not only because of this curiosity in the record, but also because he is the main physicist that Karen Barad (2007) draws on for inspiration for her own feminist STS theory of agential realism. Considering Bohr's own intra-action with Daoism and its past possible impact on his approach to nature, we might see STS as similarly symptomatic of these transformations affecting physics and the neurosciences in their attempts to include nature and the human in analytic focus differently. It also suggests the displacement of Daoism.

Japanese theoretical physicist Hideki Yukawa, who received the Nobel prize in 1949 for predicting the existence of the subatomic particle the pi meson, is another example of a physicist citing influence of Daoist texts and the unevenness in which this is situated. In a collection of essays by Yukawa, part memoir, part discussion of scientific practice, titled *Creativity and Intuition: A Physicist looks East and West* (1973), Yukawa recounts that the Chinese classics, such as the *Zhuangzi*, played a formative role in his early childhood and young adult life. The recollection of a passage about "chaos" from Zhuangzi provoked his thinking on elementary particles in physics. Yukawa explains that "One wants to get at the most basic form of matter, but it is awkward if there prove to be more than thirty different forms of it; it is more likely that the most basic thing of all has no fixed form and corresponds to none of the elementary particles we know at present. [...] Expressed in familiar terminology, it is probably a kind of 'chaos.' It was while I was thinking on these lines that I recalled the fable of Chuangtse [Zhuangzi]" (1973:57). Yukawa explains that the physicist Werner Heisenberg was similarly concerned about elementary particles, and "while alike in some respects, [his ideas] also have their differences," implying the differences might be about what sort of inspiration one can draw on.

Differences emerge in Yukawa's discussion that point to the displacement of Daoism. When Yukawa qualifies a passage from the *Zhuangzi* as "a mode of thinking usually described as 'Oriental'—but it is far from irrational" (1983:59), he touches upon the partial discounting of precisely his own inspiration. When he writes, following a claim drawn from Erwin Schrodinger that "where there was no influence from Greek thought, science underwent no development," and that science developed mostly in Europe, the uneven differences multiply. But Yukawa ponders "when one considers the future, there is surely no reason why Greek thought should remain the only source for the development of scientific thought" (1983:58). Yukawa became a part of this transforming entanglment. There is a longer version of this entanglement that also involves the Buddhism and the uptake of mindfulness and meditation in biomedicine, psychology and the neurosciences, which I also trace out in a longer version of this paper. However, this entanglement with physics is notable, given the "new" physics, physics that aims at a notion of nature as lively, changeable, and creative, also influences the neurosciences as the neuroscientists I worked with turn to collaborations with physicists to better understand spontaneously active, inherently noisy, and dynamic brains.

## **Changing Present**

I joined the rest of the lab and the visiting researchers for the workshop on Daoism. I should pause to briefly explain that the lab itself was, as Walter liked to point out, highly interdisciplinary and multicultural. On the wall in the entrance to the lab, there was a National Geographic map, and all the lab's research collaborators were pinned there. It was evident that the collaborations spanned the "world" in specific places with neuroscientific research, specifically China and Taiwan where there were several research groups pinned on the wall. In both China and Taiwan, the neurosciences have been expanding. China has been growing its own national neuroscience projects at a larger scale, often explicitly compared to the U.S. BRAIN initiative. In 2015, China launched the China Brain Project (CBP), approved by the Chinese National People's Congress as a 15-year program (from 2016 to 2030). The China Brain Project is discussed as bringing several unique contributions to the field of the neurosciences, one of which is the input from Chinese medicine; however, this unique contribution tends not to circulate in the Euro-American accounts of China's contributions the neurosciences (Poo et al.

2016, the focus is contribution to pharmaceuticals, see also Normile 2018, Wang 2017). It will be seen in what way Chinese Medicine continues to be a part of the neurosciences in China, however, Daoist philosophical concepts might inspire theoretical changes, as they are in the lab.

Walter introduced Chih-hao as a from a university in Taiwan. Chih-hao had come to present some commentary on some of Walter's neuroscientific and philosophical projects in relation to certain ideas from Chinese philosophy. The workshop itself was a more free-range discussion, during which Chih-hao usually started by providing passages from the Zhuangzi, on which he would provide a bit of background. Often this would result in the philosophers asking for clarification of some kind, but just as often spiralling out into their own discussions of how this would relate to philosophers they were familiar with or how this might translate scientifically. These discussions were an attempt to make the unfamiliar Zhuangzi more familiar to the lab. But this was also marked by awkward moments that simply did not translate, and many that indicated the unevenness of the exchange. For example, the question of whether qi was part of a larger framework of religion was asked during the course of the workshop. Though the answer was no, the fact that such a question can be raised highlights that the "comparative" in "comparative philosophy" might mark an equivalence that is not entirely equal. Chih-hao was frustrated that at times translations of qi had been rendered "spirit.' He repeatedly emphasized the text was naturalistic, despite the fact that the naturalism was expressly "different" insofar as he explained the human was a part of this nature, though "nature" is not a word that easily translates into Chinese. At the same time, Chi-hao expressed his own frustrations with the text, discussing a passage about the sitting and forgetting meditation, he paused to reflect "When I was younger, I would not have taken this kind of passage seriously."

During fieldwork, I travelled to visit Chih-hao in Taiwan. Chih-hao explained that he had left Taiwan as a young man to attend graduate studies and study philosophy in New York, and was still engaged in this area of research. He explained to me that it took him a long time to return to Chinese philosophy—to take it seriously, though as he pointed out a number of times in the workshop, many of these stories, such as "The Dream of the Butterfly," were well-known to him when he was young and to many of his fellow Taiwanese, Chinese, Japanese and Korean colleagues.

Perhaps as a result of this past, Chih-hao was able to do comparative and connective work and connect the *Zhuangzi* to philosophers that the lab was familiar with. For example, during the workshop, Chih-hao explained that Zhuangzi made a claim that there was no self. This claim, and he paused to dwell on this point, the lab might be familiar with from philosophers such as David Hume and Thomas Metzinger, but, he explained, Zhuangzi presents it much earlier. Chih-hao added, bemused, that his students liked to tell him that David Hume copied Zhuangzi.

But, Chih-hao went on, he felt that the Zhuangzi provided a *better* argument, which he evinced in "The Dream of the Butterfly." The passage goes:

Once Chuang Chou dreamt he was a butterfly, a butterfly flitting and fluttering around, happy with himself and doing as he pleased. He didn't know he was Chuang Chou. Suddenly he woke up and there he was, solid and unmistakable Chuang Chou. But he didn't know if he was Chuang Chou who had dreamt he was a butterfly, or a butterfly

dreaming he was Chuang Chou. Between Chuang Chou and a butterfly there must be some distinction! This is called the Transformation of Things.

As is evident from the passage, Chih-hao explained, Zhuangzi uses dreams, much like other philosophers do, as a resource to make a philosophical argument about this search for finding the location for his self, which he does not locate in his body. To this end, the argument of self as an "illusion" was similar, Chih-hao suggested between Zhuangzi, Metzinger, and Hume. But even further, this passage expressed a key Daoist aspect, that is, a naturalistic version of identity as expressed by Zhuangzi, one which is continuous with all the other natural things Zhuangzi is known for drawing on, such as butterflies, cicadas, cows, and horses, plants of different kinds, winds and water, for, Chih-hao added, Zhuangzi writes "Heaven and earth were born at the same time as I was, and 10,000 things are one with me." Thus, Zhuangzi takes the argument further, Chih-hao explained, by his understanding of qi, and its naturalistic connection of the human to nature. In this distinction, Chih-hao seemed to imply that Hume and Metzinger were naturalistic in a different way, making an absolute cut, whereas for Zhuangzi, the distinction between dream and reality, human and nature, self and non-self was not absolute but transformative, intraconnected as singular and multiple. Part of this, explained Chih-hao, was that qi was a sort of continuity, where mind and body were not a dichotomy.

This continuity and qi caught Walter's interest. He explained that there were some similarities in the neurosciences in resting state research, where interest reorients to the brain's background energy and how this activity is spontaneous, lively, but also connects to the body and surrounds. Elsewhere in my research, I show that the lively brain has captivated neuroscientists, but how to get at and understand the brain as a dynamic, spontaneously active, and inter-active, process, is a challenge for the scientists and suggests the ways in which the brain is not an "ordinary" scientific object. One way of dealing with the challenges, is to turn to Daoism as a possibility, to go "sideways," to borrow from Zhan. This move might seem surprising. But I hope it has become evident how that the workshop and the similarities that were raised are not surprising. Instead, the moment is symptomatic of changes occurring more widely in the neurosciences, which result from multiple sideways connections between the (neuro)sciences and Daoism. These multiple sideways connections have been transformative of the human and nature emerging in this scientific work, and to raise the question of whether the neuroscientific human is (has been?) so "Western." This to say: the uptake of "Eastern philosophies" through transnational exchange is an already happened past and a changing present, but this uptake is fraught, and points especially to the unevenness and asymmetries that shape the collaboration. The sideways connections are often not taken seriously, not cited or acknowledged and interpreted as science intersecting with religion or mysticism. A question that emerges is how to read these moments in the sciences critically without relying on approaches that inadvertently reiterate uneven representations or analytic constructs. Chih-hao and Walter both struggle with the difficulty of translating Daoism and science, they struggle to recast the human in nature. Chih-hao's struggles continue differently, however.

# **Epilogue:**

When I visited Chih-hao in Taiwan, much later in my fieldwork, I wanted to ask him more about this collaborative work. But he was excited about something else he wanted to share with me.

"Have you heard of the book *The Philosophical Baby*?" He asked. I had not.

He explained that one of his students had told him about an American philosopher and author of this book (it turned out to be the philosopher and psychologist Alison Gopnik), and who had revealed something startling for him. Chih-hao explained that she had shown that Jesuits who had travelled East had encountered philosophers and their works and had brought some back to Europe. In Europe, in France, they had translated the work. Coincidently David Hume had travelled to France prior to writing his philosophical treatise. The suggestion was that Hume had been influenced by the texts he possibly had access to about "Eastern" philosophies. This story suggested once again a displaced sideways connection.

"This is the story of my life, but in reverse," Chih-hao observed.

But, the reversal is different, due to the unevennesses in Gopnik and Chih-hao's life stories. In the story told by Gopnik (2009, 2015), a passionate account of personal and scientific travel, "Eastern" philosophies are ultimately *again* displaced in the story, which focuses on David Hume and his originality, on the Jesuits and their intellectual pursuits. This ends up reproducing a story of the "West" rather than undoing its totality, provincializing, or making apparent its alterity. I wonder then how transnational STS can come to account for asymmetries and displacements and make space for better reversals.

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