Provincialising STS: postcoloniality, symmetry and method ¹

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The Problem

STS is not short of studies in postcoloniality. Collectively we have explored how technoscience works differently in different global locations, and have fine case-studies that explore postcolonial forms of domination. So we have learned about: Indian nuclear power; sub-Saharan therapeutic inequalities; the extractions of bioprospecting; how broken-down European technologies achieve an afterlife in the South; the complexities of transnational movements of Chinese medicine; how psychotropic drugs open people to spirit attack in Chile; about mapping and crafting as alternative modes of knowing; and about the entanglements of dogs and people in colonial histories.² And these are just a few of the many postcolonial case studies in STS. There are, to be sure, also analogous studies of the 'post-colonial' within, since EuroAmerica is not a monolith.³

At the same time, however, the discipline has usually worked with EuroAmerican analytical terms. There are exceptions. Warwick Anderson's beautiful study of the Fore and kuru which draws in part on Melansian gift exchange is a case in point.⁴ So too is the writing of Judith Farquhar and Mei Zhan, both of whom ask what it would be to think through Chinese medicine.⁵ But in this paper – and here we follow Casper Bruun Jensen and Atsuro Morita⁶ – we argue for forms of postcolonial STS that use non-Western analytical resources. And we ask what might happen if the discipline were to make more systematic use of non-Western ideas in STS.⁷

The language needed to make this kind of argument is all contested. In particular, unsatisfactory binaries are difficult to avoid. These include 'theory' on the one hand, and 'practice' or 'case-study' on the other; or 'Western' and 'EuroAmerican' versus 'Southern' or 'Chinese'. The well-recognised difficulty is that postcolonial relations of exchange and extraction are complex, not binary, and even the

² See: Abraham (1998) on the Indian atomic bomb and physics in India (2000); Rottenburg (2009) on the limits of the therapeutic domination hypothesis; Hayden (2007) on bioprospecting; Beisel and Schneider (2012) on the transmutation of a German ambulance into a Ghanaian tro-tro or collective taxi; Zhan (2009) on the transnationalism of Chinese medicine; Bonelli (2012) on psychiatry and spirit possession; Turnbull (2000) on different modes of knowing, cartographic and otherwise; and Haraway (2008) on dogs and their people. On the issue of differential hybridity see Seth (2009) and Adams (2001).

³ For work on difference within see Mol (2002; 2008), Moser (2008), Mol, Moser and Pols (2010), and Singleton (2013).

⁴ Anderson (2008). And perhaps Shiv Visvanathan's call for 'cognitive justice' also counts. See Visvanathan (2003; 2006), SET-DEV Project (2011), and Bijker (2013).

⁵ Farguhar (2002), Farguhar and Zhang (2012) and Zhan (2009).

⁶ Jensen and Blok (2013), Morita (2014).

⁷ The use of non-Western ideas has been explored in anthropology. The notion of 'the gift' (Mauss: 1991) comes from Melanesia. More recently, Marilyn Strathern has systematically used non-binary modes of comparison from highland Papua New Guinea to rethink EuroAmerican topics including kinship (1992) and binarism (2011).

⁸ For recent examples of warnings about the dangers of binaries see Schiebinger (2005) and Abraham (2006, 217). In the context of Chinese medicine see Zhan (2009) and Farquhar (2012).

⁹ So, for instance, in his kuru study Warwick Anderson describes an economy of extraction Papua-New Guinea, He writes about medical scientists and anthropologists and colonial administrators. Many were entirely well-motivated. But the anthropologists and the biologists went to the Fore. With more or less difficulty they extracted stories and brains. And then they removed these to places such as Bethesda, Maryland, or Adelaide, South

term postcolonial is unsatisfactory.¹⁰ In what follows, so far as possible we also avoid writing about 'theory', but before we abandon this term let us cite Itty Abraham. 'Simply put,' he writes, 'in the metropolis they 'do theory' and in the colonies they gather data.'¹¹ He is commenting on George Basalla's account of the spread of Western science. But we are intrigued by the resonance between Abraham's words about theory and data in technoscience, and those of Daiwie Fu, the founding editor of East Asian Science, Technology and Society:

'Haven't we taught our students STS with good case studies still mostly coming from the West? And haven't we theorized our East Asian STS case studies also mostly from established Western theoretical perspectives: SSK, SCOT, ANT, Social World, cyborg feminism, bio-medicalization and all that?'¹²

Fu's question – 'how far can East Asian STS go?' – stands before us as a challenge and a provocation, and this is our point of departure. In most of technoscience, but also in STS we have case studies, EuroAmerican and Southern, on the one hand. And then we have theory on the other. But the latter – together with the theory/case study division itself – comes from EuroAmerica.¹³

Dipesh Chakrabarty describes how these postcolonial intellectual asymmetries are particularly difficult for Southern but Western-trained intellectuals. ¹⁴ In 1856 15,000 tribal people were massacred by the British in Bengal. After the first deaths the victims kept on coming. Why? The survivors said that their God had told them to fight. He would protect them. The story is horrific, but Chakrabarty's problem is this. As a Western-trained historian he knows that Gods are not <u>really</u> powerful. But as an Indian this makes him deeply uneasy. Here, then, is the question. To which should he give priority? Western historiographic convention? Or a world in which Gods (not just <u>beliefs</u> about Gods) cause actions?

The principle of symmetry catches a part of this. In STS we treat all beliefs, 'true' and 'false', in the same terms. But this only catches a part of the problem because it tacitly assumes that we will stick, fairly much, with our own theories. To say this is not to complain. Symmetry between true knowledge claims and those that are false was crucial to SSK. And its ANT extension to human and non-human actants by Michel Callon was equally important.¹⁵ But our suggestion is that it is time to extend it again. Some

Australia. And there they were transmuted into scientific claims, monographs, and academic reputations. Indeed into a diagnosis, if not a cure for this dreadful prion-based disease. Anderson (2008).

¹⁰ Critics argue, inter alia, that it homogenises, bleaches out structural and power relations, is India-specific, and needs to be understood as representing the position of certain southern intellectuals (see . And the specificities of 19th and 20th century colonial medicine have given way to those of 21st century bio-prospecting. Settler states such as Australia, New Zealand and the US also differ, though as Anderson pithily puts it, in such countries indigenous people 'can have 'culture' or government health services, but not both.' (Anderson: 2007, 151). On bioprospecting see, eg. Hayden (2007).

¹¹ Basalla's (1967) account of the spread of Western science is fifty years old, but Abraham's words still pretty much hold. Abraham (1998, 35).

¹² Fu (2007, 1-2). Since then, Taiwanese scholars have edited volumes of local case studies, but they have still used the established Western theoretical perspectives.

¹³ For a recent post-colonial erosion of the theory-empirical divide, see Zhan (2014).

¹⁴ Chakrabarty (2000).

¹⁵ Bloor (1976); Callon (1986).

caution is needed. Related writing in anthropology suggests that there are pitfalls as well as opportunities for those who take this route. It is possible to imagine, for instance, that knowledges from outside EuroAmerica offer special or privileged access to reality; or to get caught up in chauvinist 'national science' projects. ¹⁶ Even so, we want to suggest that STS should explore a third and postcolonial version of the principle of symmetry. In this STS would explore the politics and analytics of treating non-Western and STS terms of analysis symmetrically. Which means that it would stop automatically privileging the latter. It would abandon what Warwick Anderson and Vincanne Adams call the "Marie Celeste" model of scientific travel in which analytical terms (or laboratories or facts) travel, as it were silently from metropolis to a periphery. ¹⁷ Instead in this postcolonial version of symmetry the traffic would be lively, two-way, and contested. Or, better, since there is no single postcoloniality, there would be multiple centres, a variety of post-colonial symmetries, and a series of different STSs. ¹⁸ As a part of this STS would need, as Casper Bruun Jensen and Atsuro Morita have argued, to think about translation and its betrayals – both linguistic and social. ¹⁹

But how might this work in practice? To think about this we want to describe how postcoloniality as an STS issue has unfolded in the work that we have done together.

Disconcertment

In 2009 John was invited to Taiwan to lecture on ANT and its successor projects. The invitation came from Wen-yuan, who'd worked with John at Lancaster University as a PhD student. So John travelled to Taiwan and talked about heterogeneity, relationality and all the rest. At the end of the seminar series he told his Taiwanese audience that the world is not coherent, and argued that it can only be understood if STS uses methods that are also themselves multiple and non-coherent. For good measure he added a lesson that he originally learned from Donna Haraway²⁰: that since what we write is politically performative, in a postcolonial world it is important to do this in non-coherent and tension-ridden ways.

The seminar discussion that followed was disconcerting both for John and his audience. Hsin-Hsing Chen, a professor interested in religious studies, told the participants that he'd just taken his students to the final day of the annual outing of the Goddess Mazu. Mazu is popular in Taiwan and an impossible number of people – around a million – had tried to get into her Taizhong temple. Chen and his students got nowhere near the temple, but the crush and the noise was unbearable.

¹⁶ For a sense of the opportunities, see in particular Viveiros de Castro (1998), de la Cadena (2010) and Blaser (2009b). And for a related series of experiments, Strathern (1992; 2011). For the difficulties, consider the collection edited by Henare, Holbraad and Wastell (1998) where indigenous categories are sometimes taken to offer special access to reality. For similar positions in alternative idioms see Kohn (2013) and Bennett (2010). For comment on the difficulties see Abrahamsson et al. (2015).

¹⁷ See Anderson and Adams (2007, 182).

¹⁸ In this regard what we are hoping for differs from Sandra Harding's otherwise similarly motivated project. See, for instance, Harding (1994; 1998; 2009)

¹⁹ Jensen and Blok (2013), Morita (2014).

²⁰ Haraway (1991)

'religion [said Chen] ... is a theoretical construct, but this isn't a religion. It is a ritual that 'doesn't have a name for itself ... it is just the way we live.' '[T]his [is a] massive event without a straight or coherent narrative for itself.' 21

He went on:

'I was particularly attuned to the messiness of the whole event ... and ... I think I [want] to argue that messy method at this moment here in Taiwan, the struggle against grand narrative in general, is not that productive.'

Helen Verran talks about 'disconcertment'. This, she argues, arises in embodied form when different metaphysical systems collide. This first happened for her in the form of a belly laugh when she realised that quite different systems of Western and Yoruba numbering were at work in Nigerian classroom practices.²² For John and his audience this happened as we reflected on Hsin-Hsing Chen's comments. To say it quickly, these crystallised the following obvious difficulty. STS was telling John that what we know is situated. But he was talking to a Taiwanese audience as if the need for messy method was a decontextualized truth. To put it mildly, this was uncomfortable.

Perhaps John should have seen this coming but he didn't. But what to do about it? It's possible to treat the problem as a formal paradox: to say that the claim that all knowledges are situated is tautological. But more productively, we can also think of it empirically. And this is what we have been exploring since 2008. We have tried to think about the relations between Taiwanese and EuroAmerican Englishlanguage STS. And we have also tried to think about what a Taiwanese or a Chinese-inflected (not a Chinese national) STS might look like.

Importantly this is an entirely <u>collaborative</u> process. Post-colonial STS's can be done in other ways, but the benefits of a bi-lingual collaboration have been crucial. Perhaps even more important is the fact that we are immersed in two different worlds: common sense in Hsinchu is often unlike common sense in Lancaster. Indeed Wen-yuan sometimes feels that his head and his body are in different places: as if he has been intellectually beheaded.²³ Or, and to put it less dramatically, he feels that his head is full of EuroAmerican theory and knowledge, while his body inhabits Taiwan. Perhaps Hsin-Hsing Chen was feeling this too – and Dipesh Chakrabarty. Similarly wrenching bifurcations have been explored in feminist writing – and they crop up routinely in another form for those who work in languages other than English.²⁴ But, and importantly here, this sense of difference has taken us to <u>theory</u>: that is to the possibility of Chinese-inflected concepts in STS. It has raised questions about <u>methods and writing</u>: these too are starting to look different. It has led inexorably to <u>metaphysics</u>, for the Chinese language world often rests on assumptions quite unlike those current in much of EuroAmerica. It has taken us to

²¹ This comes from Law and Lin (2011, 140). The present argument is developed more fully in that paper.

²² Verran (2001). But see also her work on different firing regimes in (Verran: 2002).

²³身首異處.身:Body,首:head, 異:different, 處: place

²⁴ See, for instance, Dorothy Smith (1987). On language see Mol (2014) and van de Port and Mol (2015).

<u>institutions</u> and <u>career patterns</u>. And, as a part of this, it has taken us to <u>modes of circulation and</u> exchange: to the movements between Taiwanese and EuroAmerican STS.

Nothing that we propose can be treated as a general truth. But our suggestion is none the less that these are the kinds of issues that <u>any</u> postcolonial STS will need to attend to. Not just in Taiwan or China but, for instance, in the Spanish or Portuguese or Hindi speaking worlds. Our suggestion is that this is likely to be a direction of travel needed for many postcolonial versions of STS.

Institution

So what does this mean in practice?

One answer takes us back to Helen Verran and Dipesh Chakrabarty. It has to do with metaphysics, embodiment and disconcertment. We will return briefly to metaphysics below. For the moment let us touch on institutional contexts. Here are some simple but striking observations.

- One, in Taiwan most social science academics have done their PhDs in EuroAmerica. This usually
 means the US or the UK, and it usually means that they are writing in English.
- Two, they have returned to Taiwan schooled in social constructivism, say, or feminist technoscience studies.
- Three, this means that the (already small) community of STS academics in Taiwan is theoretically fragmented.
- Four, it also means that these academics find themselves at the margins of their particular international academic networks.
- Five, the Taiwanese government encourages all academics to publish in well-ranked SCI journals, and they are materially rewarded if they do so.
- Six, in practice this means that they are encouraged to write in English for English-language journals.
- And finally, seven, they are located in institutions that look (as the old joke puts it) just like any other North American campus.

Some of these conditions are particular to Taiwan. In Beijing, for instance, it works differently. Perhaps it works differently for Spanish- or Portuguese-language STS.²⁵ There are no doubt other exceptions too. But here is our guess. The conditions of academic production and exchange that we have just spelled out are not confined to Taiwan. To the extent that STS is an international discipline, they are at work in many places outside English-speaking EuroAmerica. Indeed this is why we have spelled them out, and why we think that they are important. The message, then is that to think well about postcolonial forms of STS the discipline will need to think simultaneously about theory and empirical research and subjectivities and materialities, but also about some pretty matter-of-fact, not to say crass, institutional practicalities. And somehow it will have to shift all of these together. Otherwise it will carry on reproducing a theory/case-study postcolonial divide, and it will continue to divide minds from bodies for

²⁵ We cannot read Spanish or Portuguese, but the English language publications of authors such as Mario Blaser (2009a), Marisol de la Cadena (2010), Arturo Escobar (2008), and Ivan da Costa Marques (2014) suggest that this may be the case.

those who do not dwell in the English-speaking world – including those who work in other European languages.²⁶

Explanation

So institutions and asymmetrical modes of circulation lock Taiwanese STS – and other academic disciplines – into a position of subordination. Indeed they have also eroded alternative modes of knowing and learning that predated the arrival of the first EuroAmerican adventurers.²⁷ That's point number one. Point number two is about alternative non-Western explanatory logics. As STS theories get carried to Taipei such alternatives, we want to say, get locked <u>out</u> of the discipline, both in Taiwan and elsewhere, and this has real explanatory consequences.

To show what this might mean we turn to an ethnographic moment in a Taiwanese consulting room.²⁸ Dr Lee is a distinguished Chinese medical practitioner who is also popular with her patients. Like many new generation practitioners, she has been university trained in both Chinese medicine and Western biomedicine. And, unlike some of her older colleagues, she works with both too. This comes from our field notes:

'Your pulse is like a guitar string. That means you have 'depleted-fire' ($x\bar{u}$ huǒ, 虛火) in the liver (meridian). ... You are busy and stressed; you're exhausted and irritable. Your emotions relate to fire in the liver (meridian), because the liver (meridian) is like the general in the body. It governs your emotions and your determination.'²⁹

This is the world of Chinese medicine. Our notes continue so:

'The [patient's] biomedical scan revealed no sign of arteriosclerosis. Dr Lee [says that] 'The tests have eliminated some possibilities. ... We'll stick with my previous diagnosis, ... the pulsation at the "chi" position (chě, R) ... shows that you are constantly drawing out energy to keep your body going on a daily basis ... The pulsation tells us about the overall dynamics and

²⁶ See Mol (2014) and van de Port (2015) for analytical differences between different European languages. One of the many inconveniences of binarising EuroAmerica and its Others is that both categories get homogenised. But just as there are multiple practices in technoscience, so too are there endlessly many practices in 'EuroAmerica'. See Latour (1993), Mol (2002), Stengers (2008), Singleton and Law (2013), and Waterton and Tsouvalis (2015).

²⁷ Shiv Visvanathan cites Dharampal who devastatingly argued that 'agriculture in India was an <u>epistemology</u> that the colonial British destroyed.' Visvanathan (2006, 167). Perhaps there is a case for breathing life into a term that has only rarely been found in STS. This is the notion of epistemocide. See Scholte (1983, 250) and Bonelli (2014, 108). Perhaps, however, the complexities of non-binary exchanges suggest that often the fate of ways of knowing and being, albeit embedded in dominatory relations, are more subtle. Practices, knowledges, and the grounds for knowing – the argument is that <u>all</u> of these were undone together. For the complex struggles in medicine to come to terms with the professional, political, epistemic and metaphysical requirement to relate to western technoscience and its versions of reality see Farquhar (2012; 2015) (for the People's Republic of China) and Adams (2001) (for the People's Republic and Tibet).

²⁸ What follows draws on Lin and Law (2014).

²⁹ Lin and Law (2014, 812).

function of the meridians, but it doesn't tell us about all somatic morbidity. So we can also make good use of biomedical tests...'30

Note the last thing she says. 'We can <u>also</u> make good use of biomedical tests.' This is important because it tells us that Dr Lee's practice <u>includes</u> biomedicine but that it does not fit with its <u>logic</u>. For, and to state the obvious, there is no room for meridians or <u>chi</u> in biomedicine. They cannot be found anatomically or physiologically, so they simply don't exist. But in Dr Lee's world it is different. Here there is room for both scans <u>and</u> meridians. This tells us that the logics of the two systems are profoundly different. To make the argument quickly, biomedicine is <u>reductive</u>. In practice it is probably different,³¹ but in principle it takes it for granted that the body of a patient is a particular way, it tries to describe this, and it searches out background <u>causes</u>. Medical anthropologist and STS scholar Judith Farquhar puts it so:

'A signifier must be supplied for the signifier, an object must come forward for every noun to make the technical term consistently meaningful to a large group of interlocuters.' 32

In a beautiful phrase she describes this as <u>epistemological foundationalism</u>.³³ This is a way of knowing and being in which 'facts are facts are facts'.³⁴ And that is the end of the story.

In contrast with this, by EuroAmerican standards the Chinese system is <u>syncretic</u>. (This English-language term is scarcely neutral, but never mind³⁵). It works by <u>hybridising</u>. It looks for <u>patterns of association</u> by seeking out <u>analogies</u>. It searches for contextualised <u>propensities</u> and <u>imbalances</u>. And it is <u>situated</u>, in the sense that <u>objects are contextual</u>. They are 'gathered', as it were, relationally:

'Duixiang things', writes Farquhar describing the work of PRC practitioner Guangxin Lu, 'are our partners in perception, not the mere objects of our perception.'³⁶

None of this is news. Post-colonial anthropologists including Mario Blaser and Marisol de la Cadena have worked on analogous issues.³⁷ And sinologists and medical anthropologists such as Farquhar and Mei Zhan have explored these kinds of differences and considered their Chinese-inflected explanatory potential.³⁸ Indeed both these authors draw on STS language to articulate Chinese medicine for a EuroAmerican readership.³⁹ And both have explored the question we are asking here: what might it be to understand the world through the lenses of Chinese medicine?

³⁰ Lin and Law (2014, 809).

³¹ For this argument, see Mol (2002).

³² Farquhar (2015).

³³ Farguhar (2012).

³⁴ Farguhar (2015).

³⁵ Law et al. (2014)

³⁶ Farguhar (2015). Emphases added. Farguhar is drawing on Bruno Latour (2005).

³⁷ Blaser (2009b); de la Cadena (2010); see also Hetherington (2009); for commentary from an STS perspective see

³⁸ Farguhar (2002), Farguhar and Zhang (2012), Zhan (2009) and Zhan(2014).

³⁹ Here she is drawing on Bruno Latour (2005).

But what would happen if <u>STS</u> also started to think symmetrically? What would happen if this way of thinking were absorbed into our academic work? No doubt there are a variety of responses. But one answer is that a Chinese-inflected STS would not go looking for causes or strong explanations. Instead it would observe <u>what goes with what</u>. <u>Situationally</u>. And (if we push the argument a step further) it would ask questions about <u>whether what it is observing is in balance or not</u>. It would, in short, work more like Dr Lee's Chinese medicine than biomedicine.

So what might this mean in practice?

This is for discussion. But one answer is that it gives us two radically different postcolonial STS stories about the intersection of biomedicine and Chinese medicine in Taiwan. We know that biomedicine is being taken into Chinese medicine in Dr Lee's practice, but we can understand this in at least two ways. On the one hand, we can treat it as an expression of biomedical, colonial and post-colonial power. This story is pretty persuasive. It's even more convincing if we add that after fifty years of Japanese colonisation, a post war period of Americanisation, and the subsequent creation of a public health insurance system, 96% of Taiwan's health care budget goes to biomedicine, with just 4% left for Chinese medicine. The argument is that Chinese medicine has been pushed to the margins. And (as in Dr Lee's practice) where it is hanging on, it is under pressure to absorb biomedical realities.

That is postcolonial story number one. But in version number two – in a Chinese inflected STS – the story starts to look quite different. Why? The answer has to do with hybridity, the refusal to embrace reductionist forms of explanation, and the assumption that objects are relational, not given. So, for instance, two thousand-plus years of Chinese medical history reveal that this has always worked by <u>absorbing</u> newcomers. When something new came along this did not overturn previous practices or ideas. Instead it was <u>added</u> to the canon. So, for instance, the classic <u>Yellow Emperor's Inner Canon</u>, assembled between two and five centuries before the Common Era, and the oldest major Chinese medical text, is itself a hybrid of five schools of ancient medical practice. And this is a logic of addition that has been at work ever since.

So what does this history of accretion imply? The answer is that biomedicine is nothing very special. Indeed, from a Chinese medical point of view, it is nothing more than the most recent arrival. And like its predecessors it has found its place within the syncretic and non-reductive and object-as-relation world of Chinese medicine. The conclusion is that if we do away with the epistemological foundationalism described by Farquhar, then what we are seeing in Taiwan has as much to do with Chinese medical business as usual as with biomedical domination.

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⁴⁰ Anonymous (2002).

There is much more that might be said.⁴¹ But at its simplest, we are suggesting that there are two kinds of postcolonial STS at work here. Two versions of understanding.⁴² To be sure, neither is pure. In this conjoined world both work by bringing STS and Chinese realities together. But they do so in very different ways. One absorbs a Chinese explanatory sensibility. Chinese-inflected, it does Chinese-related explanatory business as usual. And it starts to undo Anderson and Adams' 'Marie Celeste' mode of theoretical travel. It starts to undo the centre-periphery distinction. While the other, by contrast using STS explanation as usual, does not.

Method

Most recently – though this is work in progress – we have pushed this postcolonial symmetry one step further by asking: what would happen if we were to <u>reverse</u> the STS terms of analytical trade? What would happen if we used a Chinese term to make sense of a <u>European</u> case? Again there are complexities. For instance, the term 'theory' – and the theory/empirical divide – simply fails to work in Chinese medicine. For reasons explored by Zhan and Farquhar and which we have hinted at above, the terms of art of the latter are essentially practical⁴³. But this suggests in turn that a Chinese-inflected STS might be quite unlike its English language cousin.

In order to get a sense of the possibilities we have taken a Chinese term of art, <u>shi</u> (shì, 勢), moved it to Europe, and used it to explore the 2001 UK foot and mouth disease epidemic. The term <u>shi</u> means something like '<u>propensity</u>'. ⁴⁴ In many Chinese contexts including medicine, things have propensities to shift and change their form. If the changes and the flows that run through them are blocked, this leads to imbalance. Such is the basis of much Chinese medicine: diagnosing and undoing blockages and imbalances. But propensities aren't fixed. Things don't 'have' propensities, for the latter are situated and relational, ebbing and flowing between non-binary opposites. (Think of yin and yang). There is a methodological point here. The art of knowing and intervening well is the cultivation of a sensibility to propensities and their changing ebbs and flows. And working with, rather than against, these.

Methodologically the implications of this shift are potentially profound if we take them into STS. Representation becomes relatively less important, and sensibility more so. A relational version of 'the empirical' is important in Chinese medicine, but epistemological foundationalism is not. And the sensibility is not simply about bodies — it is at work in social and material relations too. It is easy to see this at work in classical Chinese philosophy. Here accounts of the world — usually in the form of advice to

⁴¹Interesting, here, for instance, is the issue of scale. It is tempting to say that the 'macro-social' distribution of the Taiwanese health care budget tells the real story, while particular practices, such as those of Dr Lee, while interesting, are microsocial phenomena and thus tell us little about domination or hegemony. This argument works fine, but only if we also buy into the scaling assumptions – the macro-micro distinction – upon which it depends. But scaling can itself be understood an effect of practices, and it is not clear that it works in this way in many Chinese – and indeed EuroAmerican – practices. For discussion see Law (2000).

⁴² See also Lin (2013) for a similar double reading of patients' actions from ANT and displacement theory.

⁴³ This is somewhat ironical, because the theory-empirical shouldn't really work in EuroAmerican STS either. After all, we all tell one another that theory and practice cannot be teased apart. But here (forgive us) our practice trails behind our theory!

⁴⁴ Jullien (1995).

princes – look quite different. Indeed, they don't look like descriptions at all. So, for instance, the Daoist <u>Daodejing</u> is paradoxical, aphoristic, allusive and poetic.⁴⁵ This is because the world and its propensities are not fixed, cannot be pinned down, are contextual and therefore elusive to representation. Our thinking about this is work in progress, and we do not want to recreate the world of classical Daoism, which has many analytical and political inconveniences. Nevertheless, we have been experimenting with <u>Daodejing</u>-inflected accounts of the British foot and mouth epidemic, and some of these look as much like aphorism as empirical story. The conclusion, then, is that in a Chinese-inflected STS the empirical may be quite profoundly unlike the current STS case study.

But there are also more straightforward potential methodological implications. For instance, Sun Tzu's Art of Warfare is one of the few Chinese classics on the bookshelves of Western business schools. ⁴⁶ For Sun Tzu military strategy is about maximising advantage by detecting and working with propensities rather than against them. Once again subjectivities are on the move. In Sun Tzu's world a great general is someone who cuts an unheroic figure. He (yes he) doesn't flaunt himself but turns himself into an invisible, subtle and flexible manipulator. He influences circumstances precisely in order to avoid battle. Indeed, in this world, slaughter in warfare is always a sign of failure. Applied to the 2001 foot and mouth epidemic the story that emerges is distinctive. The disease was eradicated, yes. But in this Chinese way of thinking the mass slaughter immediately tells us that the strategy was catastrophic. Effective but, as Sun Tzu might have said, inefficacious and unwise. And the supposed heroism of the politicians? This simply underlines the fact that they were lousy generals commanding a strategy that was equally flawed. There are, of course, many people in the UK who would agree with this for other reasons. But the Chinese-inflected story starts to tell the story in a different way.

Conclusion

It is our hope that Chinese language STS scholars might imagine creating a Chinese-inflected STS. As a part of this – indeed a precondition – we also hope that they are able to find ways of levering themselves out of the grip of the EuroAmerican analytical-institutional complex and its attendant epistemological foundationalism.⁴⁷ But the point of the present paper is not to suggest that the rest of the STS community should take up a Chinese-inflected STS. Most of us in the discipline (one of the present authors included) do not speak Chinese, and such a goal would make no sense. Instead our broader object is to suggest that our STS is surprisingly parochial, and then to show that it is possible to 'provincialise' it by imagining it in different modes in different contexts.

STS should be proud of its collective work. It has developed powerful tools for understanding and raising critical questions about technoscience practices. As a part of this it has developed a healthy theoretical pluralism. It has studied and questioned postcolonial knowledges and practices. But what it has not quite brought into focus is the way in which STS itself remains a creature of place and time. Of course it is not wrong that it started in EuroAmerica. Neither is it wrong that it uses English language tools and sensibilities. But our argument is that it would be wise to make our terms of international analytical

⁴⁵ Lao Tzu (2007).

⁴⁶ Sun Tzu (1993).

 $^{^{47}}$ Here we play with Londa Schiebinger's (2005) 'European colonial science complex'.

trade a topic in their own right. The issue is not the creation of national STS's. Our object is not to reproduce hegemonies in other forms. 48 Rather it is to think about the implications of exploring what we have called postcolonial symmetry: the idea that our terms of art might not simply come from English-language EuroAmerica. To think about STS in ways that are indeed Chinese- or Spanish- or Hindi-inflected.

This will not be easy. STS is dominated conceptually, linguistically, bodily, metaphysically and institutionally by provincial EuroAmerican and especially English-language practices. But if we were to succeed? Then we would have created a plurality of intersecting STSs and sensibilities. And we would be able to say that we have undone the provincialism of STS.

References

Abraham, Itty (1998), The Making of the Indian Atomic Bomb, London and New York: Zed Books.

Abraham, Itty (2000), 'Landscape and Postcolonial Science', <u>Contributions to Indian Sociology</u>, 34: (2), 163-187.

Abraham, Itty (2006), 'The Contradictory Spaces of Postcolonial Technoscience', <u>Economic and Political Weekly</u>, 41: (3), 210-217, (21-27 January, 2006).

Abrahamsson, Sebastian. *et.al.* (2015), 'Living with omega-3: new materialism and enduring concerns', <u>Environment and Planning D: Society and Space</u>, 33: (1), 4-19, also available at <u>http://www.envplan.com/abstract.cgi?id=d14086p</u>.

Adams, Vincanne (2001), 'The Sacred and the Scientific: Ambiguous Practices of Science in Tibetan Medicine', <u>Cultural Anthropology</u>, 16: (4), 542-575.

Anderson, Warwick (2007), 'The Colonial Medicine of Settler States: Comparing Histories of Indigenous Health', Health and History, 9: (2), 144-154.

Anderson, Warwick (2008), <u>The Collectors of Lost Souls: Turning Kuru Scientists into Whitemen</u>, Baltimore: Johns Hopkins University Press.

Anderson, Warwick (2009), 'From subjugated knowledge to conjugated subjects: science and globalisation, or postcolonial studies of science?', <u>Postcolonial Studies</u>, 12: (4), 389-400, (2009/12/01), also available at http://www.tandfonline.com/doi/abs/10.1080/13688790903350641.

Anderson, Warwick, and Vincanne Adams (2007), 'Pramoedya's Chickens: Poscolonial Studies of Technoscience', pages 181-204 in Edward J. Hackett, Olga Amsterdamska, Michael Lynch, and Judy Wajcman (eds), <u>The Handbook of Science and Technology Studies</u>, Cambridge, Mass.: MIT Press.

⁴⁸ The point is made by Anderson (2009, 394) who is drawing on Abraham's (2006) where he talks of the dangers of Hindu nationalism in India.

Anonymous (2002), <u>The Yellow Emperor's Classic of Internal Medicine</u>, translated by Ilza Veith, Berkeley: University of California Press.

Basalla, George (1967), 'The Spread of Western Science', <u>Science</u>, 156: (3775), 611-622, (5 May 1967).

Beisel, Uli, and Tillmann Schneider (2012), 'Provincialising waste: the transformation of ambulance car 7/83-2 to tro-tro Dr.JESUS', Environment and Planning D: Society and Space, 30: (4), 639-654, also available at http://www.envplan.com/abstract.cgi?id=d9610.

Bennett, Jane (2010), <u>Vibrant Matter: a political ecology of things</u>, Durham and London: Duke University Press.

Bijker, Wiebe (2013), 'Good Fortune, Mirrors and Kisses', <u>Technology and Culture</u>, 54: (3), Da Vinci Medal Address: Good Fortune, Mirrors and Kisses.

Blaser, Mario (2009a), 'Political Ontology: Cultural Studies without 'cultures'?', <u>Cultural Studies</u> 23, 873-896.

Blaser, Mario (2009b), 'The Threat of the Yrmo: The Political Ontology of a Sustainable Hunting Program', American Anthropologist, 111: (1), 10-20.

Bloor, David (1976), Knowledge and Social Imagery, London: Routledge and Kegan Paul.

Bonelli, Cristóbal (2012), 'Ontological disorders: Nightmares, psychotropic drugs and evil spirits in southern Chile', <u>Anthropological Theory</u>, 12: (4), 407-426.

Bonelli, Cristóbal (2014), 'What Pehuenche blood does: Hemic feasting, intersubjective participation, and witchcraft in Southern Chile', Hau: Journal of Ethnographic Theory, 4: (1), 105-127.

Callon, Michel (1986), 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of Saint Brieuc Bay', pages 196-233 in John Law (ed.), <u>Power, Action and Belief: a new Sociology of Knowledge? Sociological Review Monograph</u>, 32, London: Routledge and Kegan Paul.

Chakrabarty, Dipesh (2000), <u>Provincializing Europe: Postcolonial Thought and Historical Difference</u>, Princeton and Oxford: Princeton University Press.

de la Cadena, Marisol (2010), 'Indigenous Cosmopolitics in the Andes: Conceptual Reflections Beyond "Politics", <u>Cultural Anthropology</u>, 25: (2), 334-370.

Escobar, Arturo (2008), <u>Territories of Difference: Place, Movements, Life, Redes</u>, Durham and London: Duke University Press.

Farquhar, Judith (2002), <u>Appetites: Food and Sex in Post-Socialist China</u>, Durham and London: Duke University Press.

Farquhar, Judith (2012), 'Knowledge in translation: Global science, local things', pages 153-170 in Lesley Green and Susan Levine (eds), <u>Medicine and the Politics of Knowledge</u>, CapeTown: Human Sciences Research Council Press.

Farquhar, Judith (2015), 'Metaphysics at the Bedside', pages 219-236 in Howard Chiang (ed.), <u>Historical</u> Epistemology and the Making of Modern Chinese Medicine, Manchester: Manchester University Press.

Farquhar, Judith, and Qicheng Zhang (2012), <u>Ten Thousand Things: Nurturing Life in Contemporary</u> Beijing, New York: Zone Books.

Fu, Dawie (2007), 'How Far Can East Asian STS Go? A Position Paper', <u>East Asian Science</u>, <u>Technology and Society</u>: an International Journal, 1: (1), 1-14.

Haraway, Donna J. (1991), 'A Cyborg Manifesto: Science, Technology and Socialist Feminism in the Late Twentieth Century', pages 149-181 in Donna Haraway (ed.), <u>Simians, Cyborgs and Women: the Reinvention of Nature</u>, London: Free Association Books, also available at http://www.stanford.edu/dept/HPS/Haraway/CyborgManifesto.html.

Haraway, Donna J. (2008), When Species Meet, Minneapolis and London: University of Minnesota Press.

Harding, Sandra (1994), 'Is Science Multicultural? Challenges, Resources, Opportunities, Uncertainties', Configurations, 2: (2), 301-330.

Harding, Sandra (1998), <u>Is Science Multicultural? Postcolonialisms, Feminisms, and Epistemologies</u>, Bloomington: Indiana University Press.

Harding, Sandra (2009), 'Postcolonial and feminist philosophies of science and technology: convergences and dissonances', <u>Postcolonial Studies</u>, 12: (4), 401-421.

Hayden, Cori (2007), 'Taking as Giving: Bioscience, Exchange, and the Politics of Benefit-sharing', <u>Social Studies of Science</u>, 37: (5), 729-758.

Hetherington, Kregg (2009), 'Privatizing the private in rural Paraguay: Precarious lots and the materiality of rights', American Ethnologist, 29: (2), 224-241.

Jensen, Casper Bruun, and Anders Blok (2013), 'Techno-animism in Japan: Shinto Cosmograms, Actornetwork Theory, and the Enabling Powers of Non-human Agencies', <u>Theory, Culture & Society</u>, 30: (2), 84-115.

Jullien, François (1995), <u>The Propensity of Things: Toward a History of Efficacy in China</u>, translated by Janet Lloyd, New York: Zone Books.

Kohn, Eduardo (2013), <u>How Forests Think: Toward an Anthropology beyond the Human</u>, Berkeley: Univ of California Press.

Lao Tzu (2007), Dao de Jing, a Philosophical Translation, London: Ballantine Books.

Latour, Bruno (1993), We Have Never Been Modern, Brighton: Harvester Wheatsheaf.

Latour, Bruno (2005), 'From realpolitik to dingpolitik', pages 14-41 in Bruno Latour and Peter Weibel (eds), <u>Making Things Public: Atmospheres of Democracy</u>, Karlsruhe and Cambridge, Mass.: ZKM and MIT Press.

Law, John (2000), 'Transitivities', Society and Space, 18, 133-148.

Law, John (2015), 'What's Wrong with a One-World World', in <u>Distinktion</u>, 16, 126-139 also available at http://www.heterogeneities.net/publications/Law2011WhatsWrongWithAOneWorldWorld.pdf.

Law, John *et.al.* (2014), 'Modes of Syncretism: notes on non-coherence', <u>Common Knowledge</u>, 20: (1), 172-192, also available at http://www.cresc.ac.uk/medialibrary/workingpapers/wp119.pdf.

Law, John, and Wen-yuan Lin (2011), 'Cultivating Disconcertment', pages 135-153 in Michaela Benson and Rolland Munro (eds), <u>Sociological Routes and Political Roots</u>, Oxford: Wiley-Blackwell, also available at http://www.heterogeneities.net/publications/LawLin2009CultivatingDisconcertment.pdf.

Lin, Wen-yuan (2013), 'Displacement of Agency: The Enactment of Patients' Agency in and beyond Haemodialysis Practices, Science, Technology & Human Values', <u>Science, Technology & Human Values</u>, 38: (3), 421-443.

Lin, Wen-yuan, and John Law (2014), 'A Correlative STS? Lessons from a Chinese Medical Practice', <u>Social Studies of Science</u>, 44: (6), 801-824, also available at doi:10.1177/0306312714531325.

Marques, Ivan da Costa (2014), 'Ontological Politics and Latin American Local Knowledges', pages 85-107 in Eden Medina, Ivan da Costa Marques, and Christina Holmes (eds), <u>Beyond Imported Magic: Essays on Science</u>, <u>Technology</u>, and <u>Society in Latin America</u>, Cambridge, Mass.: MIT Press.

Mauss, Marcel (1991), The Gift, London: Routledge.

Mol, Annemarie (2002), <u>The Body Multiple: Ontology in Medical Practice</u>, Durham, N. Ca., and London: Duke University Press.

Mol, Annemarie (2008), <u>The Logic of Care: Health and the Problem of Patient Choice</u>, London: Routledge.

Mol, Annemarie (2014), 'Language Trails: 'Lekker' and Its Pleasures', <u>Theory, Culture & Society</u>, 31: (2/3), 93-119.

Mol, Annemarie, Ingunn Moser, and Jeannette Pols (eds) (2010), <u>Care in Practice: on Tinkering in Clinics, Homes and Farms</u>, Bielefeld: Transcript Publishers.

Morita, Atsuro (2014), 'The Ethnographic Machine: Experimenting with Context and Comparison in Strathernian Ethnography', <u>Science, Technology and Human Values</u>, 39: (2), 214-235.

Moser, Ingunn (2008), 'Making Alzheimer's Disease Matter: Enacting, Interfering and Doing Politics of Nature', <u>Geoforum</u>, 39, 98-110.

Rottenburg, Richard (2009), 'Social and public experiments and new figurations of science and politics in postcolonial Africa1', <u>Postcolonial Studies</u>, 12: (4), 423-440, (2009/12/01), also available at http://www.tandfonline.com/doi/abs/10.1080/13688790903350666.

Schiebinger, Londa (2005), 'Forum Introduction: the European Colonial Science Complex', Isis, 96, 52-55.

Scholte, Bob (1983), 'Cultural Anthropology and the Paradigm-Concept: a Brief History of their Recent Convergence', pages 229-278 in Lauren Graham, Wolf Lepenies, and Peter Weingart (eds), <u>Functions and Uses of Disciplinary Histories</u>, Dordrecht: D. Reidel Publishing Company.

SET-DEV Project (2011), 'Knowledge <u>Swaraj</u>: An Indian Manifesto on Science and Technology', Hyderabad: University of Hyderabad and Knowledge in Civil Society Forum.

Seth, Suman (2009), 'Putting Knowledge in its place: science, colonialism, and the postcolonial', Postcolonial Studies, 12: (4), 373-383.

Singleton, Vicky, and John Law (2013), 'Devices as Rituals: notes on enacting resistance', <u>Journal of Cultural Economy</u>, 6: (3), 259-277.

Smith, Dorothy E. (1987), <u>The Everyday World as Problematic: a Feminist Sociology</u>, Milton Keynes: Open University Press.

Stengers, Isabelle (2008), 'Experimenting with Refrains: Subjectivity and the Challenge of Escaping Modern Dualism', <u>Subjectivity</u>, 22, 38-59.

Strathern, Marilyn (1992), <u>After Nature: English Kinship in the Late Twentieth Century</u>, Cambridge: Cambridge University Press.

Strathern, Marilyn (2011), 'Binary License', Common Knowledge, 17: (1), 87-103.

Sun Tzu (1993), The Art of Warfare, translated by Roger T. Ames, New York and Toronto: Ballantine.

Turnbull, David (2000), <u>Masons, Tricksters and Cartographers: Comparative Studies in the Sociology of Scientific and Indigenous Knowledge</u>, Amsterdam: Harwood Academic Publishers.

van de Port, Mattijs, and Annemarie Mol (2015), 'Chupar frutas in Salvador da Bahia: a case of practice-specific alterities', <u>Journal of the Royal Anthropological Institute</u>, 21: (1), 165-180, also available at http://dx.doi.org/10.1111/1467-9655.12151.

Verran, Helen (2001), Science and an African Logic, Chicago and London: Chicago University Press.

Verran, Helen (2002), 'A Postcolonial Moment in Science Studies: Alternative Firing Regimes of Environmental Scientists and Aboriginal Landowners', <u>Social Studies of Science</u>, 32, 729-762.

Visvanathan, Shiv (2003), 'Cultural Encounters and the Orient: A Study in the Politics of Knowledge', <u>Diogenes</u>, 50: (4), 69-81.

Visvanathan, Shiv (2006), 'Alternative Science', Theory, Culture & Society, 23: (2-3), 164-169.

Viveiros de Castro, Eduardo (1998), 'Cosmological Deixis and Amerindian Perspectivism', <u>Journal of the Royal Anthropological Institute</u>, 4, 469-488.

Waterton, Claire, and Judith Tsouvalis (2015), 'On the political nature of cyanobacteria: intra-active collective politics in Loweswater, the English Lake District', Environment and Planning D: Society and Space, 33: (3), 477-493.

Zhan, Mei (2009), <u>Other-Worldly: Making Chinese Medicine Through Transnational Frames</u>, Durham and London: Duke University Press.

Zhan, Mei (2014), 'The Empirical as Conceptual: Transdisciplinary Engagements with an "Experiential Medicine", Science, Technology and Human Values, 39: (2), 236-263.