

Tidescapes: Notes on a shi (勢)-inflected Social Science*

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What might it be to write a post-colonial social science? And how might the intellectual legacy of Chinese classical philosophy—for instance Sun Tzu and Lao Tzu—contribute to such a project? Reversing the more usual social science practice in which EuroAmerican concepts are applied in other global locations, this paper instead considers how a “Chinese” term, shi (shì, 勢, or “propensity”) might be used to explore the UK’s 2001 foot-and-mouth epidemic. Drawing on anthropological insights into mis/translation between different worlds and their alternative ways of knowing and being, the paper explores that epidemic in three differently inspired shi-inflected “empirical” accounts. The first uses Sun Tzu’s strategic understanding of shi to tell a conventionally representational story. The second resists the causes and background factors implied in standard social science by offering a “light” and shi-inflected form of knowing. And the third combines the referentiality of social science with a Lao Tzu-informed commitment to the paradoxes of normative epigram. This third narrative thus illustrates the possible features of a situated and shi-inflected social science that recognizes that it participates in the contexted and immanent flows and counterflows of things in the world. The paper concludes by noting that such a shi-inflected social science is experimental, and suggests that it is important to explore a range of ways of reversing the flow of concepts between EuroAmerica and other global locations.

Key words: Postcolonial social science; Chinese social science; *shi* (shì, 勢); Dao; propensity; theory; empirical description

1 Introduction

In this paper we take a “Chinese” term and ask what would happen if it were treated as a concept in EuroAmerican social science. That term is *shi* (shì, 勢), roughly translatable as “propensity,” or the “propensities of things.”

The paper considers this question in three ways. First, it shows that a social science interested in *shi* would explore questions not normally of concern to the conventional academy.¹ Second, it suggests that to introduce *shi* would recast the relations between social science theory and the empirical in novel and counterintuitive ways. And third, it explores how this shift would trouble the intellectual asymmetry between “Chinese” and orthodox (and often English-language) social science.² Thus, and despite many counter-efforts, theory in social science is habitually created in EuroAmerica. This is not surprising, since this is where social science was created. But the continuing consequence is that its intellectual terms of trade are asymmetrical. The paper is thus also an interrogation of the consequences of intellectual coloniality or post-coloniality.

Central to this endeavor is the issue of translation. The basic problem is quickly stated: *shi* translates poorly into the major European languages. Questions of mis/translation are politically and analytically central to many disciplines.³ In our own field of science and technology studies (STS), it is a cliché that to translate is to betray (Callon 1986). In anthropology, Eduardo Viveiros de Castro⁴ has drawn on Amerindian cosmology to argue that in translation homonyms refer to different objects in different worlds, and that the differences between those realities tend to disappear. More generally, the idea that the categories of other

cultures might be used to inflect anthropological reasoning also has a long history.⁵ Famously, when asking which metaphors anthropologists should use to make comparisons between cultures, instead of applying dichotomized frameworks (such as part and whole, or nature and culture), Marilyn Strathern⁶ (1991, 1992: 2–11) chose to make use of the non-binary relationality of Hagen comparative reasoning (drawn from the Papua New Guinea Highlands) to rework English understandings of kinship. In this paper we adopt a version of Strathern’s approach by using the notion of *shi* to explore a UK case. If we differ from Strathern, this is perhaps because our effort is collaborative, and we are interested not only in EuroAmerican but also in possible “indigenous” (here “Chinese”) forms of social science.

The interchanges between China and Europe go back millennia, and cultural purity is a chimera. In addition, particular translations reflect irreducibly difficult judgments about what to betray, and how. Thus, in the translations that underpin the present paper, we have displaced the context from which *shi* is drawn by removing the latter from its original institutional location, where it was linked to apprenticeship and a classical literary canon, and inserting it into a (Western-structured) international social science context. Second, in doing this we have placed it in a context where “truth” is more important than “efficacy” (gōng xiào, 功效) and representation is prized over aphorism, irony, or paradoxical anecdotes intended to manipulate that “efficacy.” These differences and their asymmetries reflect the fact that we are deeply embedded in academic disciplinary structures. Nevertheless, we (mis)translate in this way because we would like to shift how social science is practiced. Our argument is that current academic work in Chinese-speaking countries, innovative and critical though it is, often tends to reproduce intellectual asymmetries that are in need of scrutiny (Law and Lin 2017). Our hope is that in due course, alternative Chinese (or other non-EuroAmerican) forms of (non-parochial) social science might be more easily imagined (Chakrabarty 2000).

There are many ways in which this might be done. Elsewhere we have used Chinese criteria to reinterpret contemporary Taiwanese medical practices, suggesting that the apparent subjugation of Chinese medicine (CM) by biomedicine in conventional social analysis is much less obvious if the practice of Chinese medicine is understood in its own conceptually “correlative” terms. And we have worked with further CM ethnography to explore how conceptual tools drawn from CM such as *shi*, *ziran* (zì rán, 自然) and patterning might re-work social science approaches in disciplines such as STS.⁷ In what follows we take a different route. Shifting from Taiwan to the UK we use *shi*, together with resources from classical Chinese philosophy (Sun Tzu’s *Art of Warfare* (孫子兵法) and Lao Tzu’s *Dao de jing* (道德經)), to elaborate alternative ways of understanding selected strategies and ways of being in the UK’s 2001 foot-and-mouth disease epidemic.

To achieve this, we tell three stories about foot-and-mouth disease. The first is a brief and conventionally representational empirical description of the epidemic. This draws on previous work undertaken by Law, and is simply intended as a context for what follows. The second is a non-standard attempt to write a “light,” locally referential but non-explanatory, *shi*-inflected account of a foot-and-mouth episode. This story is an attempt to reflect some of the concerns of Lao Tzu. And the third is an even less standard narrative, again Lao Tzu-inspired, written in a mode that mimics his aphoristic and non-explanatory normativity.

The Art of Warfare and the *Dao de jing* have been widely explored in the literatures.⁸ Though we locate our analysis in these literatures, we do not explore these in detail, partly for reasons of space, but primarily because our concern is neither exegesis nor comparative analysis, but rather with how a sensitive (mis)translation of the *shi* concept in parts of these texts might make it possible to imagine a postcolonial social science. Our first focus—the idea of *shi* as strategy, which we develop with the first story—is relatively familiar to Western academic audiences. Thus, in social science *shi* has sometimes been understood as situated dispositions of power/knowledge⁹ (Farquhar 2017), and the resonance with Foucault’s concern with the conduct of conduct is obvious. Our second epistemic move is less familiar, though it has

parallels with the concern in postcolonial studies with alternative styles for describing “the same” empirical events (Smith 2012). So our second story is an attempt to pass lightly across the immanent surface of events and bring out contextual possibilities that would not necessarily be relevant to standard social science concerns with causality, teleology, or network relations. It is, as we just said, locally referential. The third focus—*shi* as a situated way of being—is even less familiar in academic social science. Here the concern is with way-making and the multitude of things in contextually unfolding patterns of immanent necessity. Our third epigrammatic “empirical” story might have been written differently, but since we are interested in post-colonial intellectual translations, here we have created a Lao Tzu-inspired set of aphorisms which draw attention to some of the dilemmas, paradoxes, tensions, and normativities of being and living in foot-and-mouth.

A final caution: our object is not to essentialize the notion of *shi* but to experiment with the potential of *shi* as a term of art for social science. Indeed, to essentialize the term would precisely be contrary to the situated character of *shi*-inflected reasoning.¹⁰ This also means that since *shi* works in different ways in different contexts, we use a range of terms (including “flexibility,” “subtlety,” “efficacy”) to reflect the equivocations inherent in its translation into English. Alongside this, our use of European material is necessary if we want to show that it is possible—and indeed interesting—to *reverse the direction of intellectual trade* by translating Chinese “theory” into a EuroAmerican framework.

2 First Story: Shi (勢) as Strategy

A Standard Brief Account

Foot-and-mouth disease is found in much of the world, but it is not endemic in Europe. Accordingly, it was a shock when it was discovered in an abattoir in Essex on February 19th, 2001. An infectious, notifiable animal disease not seen on a large scale in the UK since 1967, it attracted immediate large-scale state action and intervention. Movements of animals were halted, and state veterinarians traced the disease to a pig farm near Newcastle-upon-Tyne. The farmers should have reported the infection but had not done so, and it had been going on for weeks.

Further investigations found almost sub-clinical signs of infection on neighboring farms. One of the neighboring farmers, suspecting nothing, had sold a few of his sheep. Mixed with nearly 25,000 other animals, these had gone to auction, and had been bought by 181 farmers and transported to farms all over the UK. The result was a major disease outbreak. Within three weeks there were infections on 67 farms and, by the time the epidemic was brought under control in September 2001, over 2000 farms had been infected. More than six million animals were slaughtered in large part to prevent further infection, and the overall cost of the disease was estimated at around £6 billion.

This was a national emergency. Government ministries took control. There was no thought of vaccination. Instead, the slaughter policy went through several iterations. There was political and economic pressure, and it was also headline news. The numbers of infections grew very fast through March and April. Burning pyres of animal carcasses were on the television news every night. There was also farming pressure for a quick response. And, in the heart of government, rival epidemiological models lined up with political disagreements about how to handle the crisis.

The story of policy change is complicated and there were important regional and national variations, but roughly it ran so. Initially animals on infected farms were killed, while those on neighboring farms were watched. From March 15, as the epidemic grew, sheep on neighboring farms in the major epicenter of the disease were also killed. But still the number of infections

went on rising. At this point administrative conflicts and the differences between epidemiological models became important. Some (and one of the models) said that the epidemic was under control. It was just a matter of waiting and the numbers would fall. Others (and the alternative major model) said that the epidemic was still growing, and that if it was to be stopped then all the animals on neighboring farms needed to be slaughtered. The need, then, was for a major escalation. The latter argument prevailed, and on March 27, policy changed. The result was a large increase in killing, except in Scotland where the guidelines were interpreted differently.

A few terrifying and distressing weeks passed, and then the epidemic peaked and slowly started to decline. At this point the policy of slaughter was somewhat relaxed. However, even after the epidemic ended, arguments about policy, epidemiological models, the perceived incompetence of the slaughter, and the effects on rural communities continued. And, though this is controversial, the statistics quite strongly suggest that the big increase in killing was indeed unnecessary: that the disease would have been controlled without this escalation.

Flexibility

This summary story is conventionally representational in form: it is “about” the 2001 foot-and-mouth disease outbreak in the UK. It draws on a wide range of academic and policy research which we cannot explore here,¹¹ and in the present context it is simply a place-marker, a point of departure. Even so, it is easy to understand it in *shi*-inflected terms if we turn to Sun Tzu’s *Art of Warfare*.¹² Sun Tzu often uses fluid metaphors: “[w]ater configures its flow in accord with the terrain.”¹³ Writing in the unstable warring states period (403–221 BCE), the author advises his prince that like water, an army should be able to change its form as circumstances demand: “the army controls its victory in accord with the enemy. Thus the army does not maintain any constant *shi* [勢, strategic configuration of power]” (Sun Tzu 1994: 193ff).

So here is a first Sun Tzu-inspired question, and it is about *strategy*: was the 2001 foot-and-mouth strategy sufficiently *flexible*? Though this evolved as the epidemic progressed, and there were some variations between locations¹⁴, policy-making was also centralized. People in the regions were given little room for maneuver, and it was assumed that a single optimal policy could be derived from epidemiological models. There were several such models—another sign of flexibility—but a Sun Tzu-informed sceptic might note their similarity. Each combined a “spatial kernel” (a link between distance between farms and the likelihood of disease transmission) with “heterogeneities” (other factors reflecting differences between farms) (Kao 2002). This suggests that the state operated with a fixed framework for understanding the conditions for transmission, and by implication, the appropriate strategy for fighting the disease.

Does this sound like Sun Tzu? We cannot know, but given his enthusiasm for the flexibility of propensity or *shi*, this seems unlikely.

Subtlety

But is this right? Perhaps *shi* asks us to attend not to the flexibility of strategy, but rather to contextual fluidities. At the beginning of *The Art of Warfare*, Sun Tzu writes: “[...] to gauge the outcome of war we must appraise the situation on the basis of five criteria [...] [bringing] the thinking of people in line with their superiors, [...] climate, [...] terrain, [...] command, and [...] regulation” (Sun Tzu 1993: 103).

EuroAmerican common sense reads this as suggesting the need for an accurate understanding of context. If some things are fixed and others are manipulable, then a strategy is needed to respond to this. And indeed the quote is taken from “On Assessment,” the first chapter of *The Art of Warfare*. This explores the range of factors to be assessed, and advice about

tactics and calculation is distributed throughout the book. Perhaps, then, the epidemiologists and the policy makers were following Sun Tzu's advice. But the latter also writes:

For gaining strategic advantage in battle, there are no more than surprise and straightforward operations, yet in combination, they produce inexhaustible possibilities. Surprise and straightforward operations give rise to each other endlessly just as a ring is without a beginning or an end. And who can exhaust their possibilities? (Sun Tzu 1993: 119–20)

If there are inexhaustible possibilities for combining the straightforward with surprise then what does this suggest for strategy? Sun Tzu:

The expert at battle seeks his victory from *shi* (勢, strategic advantage) and does not demand it from his men. He is thus able to select the right men and exploit the *shi*. He who exploits the *shi* sends his men into battle like rolling logs and boulders (Sun Tzu 1993: 120).

Here is the subtlety. Beneath endless calculations like the selection of men, there lies the art of anticipating how things will inevitably unfold. This is why he talks about rolling logs. So strategy is about apprehending positional relations, but since these change, strategy is situated too. What is needed is total foreknowledge of the way in which the ten thousand things (*wan wu*, 萬物) are connected.¹⁵ The general knows how they are positioned and (crucially) how they will *move* in relation to one another. This leads to the most distinctive feature of Sun Tzu's strategic doctrine, the idea that artful early manipulation of small things secures major subsequent advantage:

[...] a victorious army is like weighing in a full hundredweight against a few ounces [...] It is a matter of strategic positioning (*hsing*, xíng, 行) that the army that has this weight of victory in its side, in launching its men into battle, can be likened to the cascading of pent-up waters thundering through a steep gorge.¹⁶

So victories are channeled by manipulation, not brute force. “To win a hundred victories in a hundred battles is not the highest excellence; the highest excellence is to subdue the enemy's army without fighting at all” (Sun Tzu 1993: 111).

So how does 2001 policymaking look in this respect? Again, various responses are possible. Perhaps the first policy of slaughtering on infected farms and watching adjacent farms counts as efficient strategic moderation, but killing all the animals on adjacent farms surely does not: it magnified the number of battles, and if it was about manipulation then it happened late in the day and it was far from efficient. Although Sun Tzu never fought a virus, and vaccination was not part of his arsenal, it is a little easier to imagine that he might have recommended preventative vaccination around infected areas (as was practiced in Scotland). It is also possible that he would have resisted the EU “no vaccination” policy, for he also noted that: “the best military policy is to attack strategies” (Sun Tzu 1993: 111).

So here we have two different *kinds* of strategies: if slaughter is a first order way of attacking viral strategies, then vaccination is a second order way of taking aim at the strategic *positions* of the virus. The issue is where to intervene—a topic widely explored in conventional social science. Thus Machiavellian political theory and Foucault's governmentality both explore the subtlety and flexibility of position and relations in the practical manipulation of people and things.¹⁷ Much more might be said about manipulative strategy, but we hope that our argument is clear. To translate *shi* as “situated dispositions of power/knowledge” (Farquhar 2017) is the

easiest way to make sense of the term in present day English-language narratives, and has been rehearsed in social science. It is appropriate, but there are also other possibilities.

3 Second Story: *Shi* as Knowing

Shi in the Dao de jing

To understand *shi* as knowing, some context is needed. Look first at this:

Tao gives birth to one,
One gives birth to two,
Two gives birth to three.
Three gives birth to everything [ten thousand things; 萬物] (Lao Tzu 2007: Chapter 42, 62ff).

This comes from the *Dao de jing*. *Shi* is not the term most commonly used to explore the manifold implications of *Dao*. Nevertheless, Lao Tzu describes the genesis of the ten thousand things so:

Tao gives them life,
Virtue nurses them,
Matter shapes them,
Shi perfects them.¹⁸

On one mis/translation, the *Dao de jing* is offering a vision of the cosmos, and suggesting the *Dao* as a way of living that renounces complexity in favor of the simplicity of “way-making.”¹⁹ And *shi* (勢) is central to this vision: it is both a way of *knowing* and a way of *living*. We start with *shi* as a way of knowing.

Note first that the world-view articulated in the *Dao de jing* has much in common with that of *The Art of Warfare*. Both recommend seeing through the complexities that exist between the immanence of things to their simplest connections in order to work on the complexities with the least action. This is what Lao Tzu called *wu wei* (wú wéi, 無為), roughly translatable as “doing not doing.” He advises the need to “See the Simple and embrace the Primal, Diminish the self and curb the desires” (Lao Tzu 1993: Chapter 19, 39ff).

Lao Tzu uses water as a metaphor for the fundamental character of the *Dao*.²⁰ There is nothing simpler than water, he writes. The world is a set of *flows*. “The great *Dao* is universal like a flood. How can it be turned to the right or to the left? All creatures depend on it, and it denies nothing to anyone” (Lao Tzu 1993: Chapter 34, 69ff). Crucially, however, there are *proper* forms of flow, and these move to and fro: “The highest form of goodness is like water. Water knows how to benefit all things without striving with them” (Lao Tzu 1993: Chapter 8, 17ff). “Return is Tao’s motion. Yielding is Tao’s practice” (Lao Tzu 1993: Chapter 8, 17ff).

The *Dao de jing* predates the formal elaboration of *yin* (陰) and *yang* (陽) but its sensibility is similarly cyclical, and this endless cycle of change is also a major metaphor in *The Art of Warfare*. At the same time these ebbs and flows are non-dualist. They are opposites that are also rooted in one another:

Heaven’s way (tiān zhī dào, 天之道) is like stringing a bow: drawing down the higher, raising the lower.
Possessing abundance? Diminish it. Not enough? Supplement it.

Heaven's way reduces surplus and supplements insufficiency (Lao Tzu 2007: Chapter 77, 113ff).

But how does this *shi*-related desire for simplicity relate to academic ways of knowing?

In one way the question makes no sense: the *Dao de jing* famously rejects erudition (Laozi, Hall and Ames 2003: Chapter 81, 203ff) because the latter reifies, instead of seeking the simplicity of the *Dao* (Laozi, Hall and Ames 2003: Chapter 18, 103ff). We touched on a further difficulty in the Introduction. As François Jullien (1995: 17–8) observes, the notion of “truth,” the idea of reliable representation of something elsewhere, makes little sense (1995: 211–13). If things are situated and specific and there are no external causes or teleologies, then the distinction between theory (the art of enunciating these as generalities) and practice melts away²¹ (1995: 34–8; 213–8, Mol 2008). So what displaces these? The answer is that sensing *shi*²² (disposition or propensity) replaces erudition. The *efficacy* (功效) of *shi* displaces truth. *Shi* is traced *locally* by examining and sensing the spontaneously changing circumstances, and is not pinned to larger explanatory schemes. Rather than asking about the quality of representation, the question rather becomes: was the *diagnosis* (tǐ chá, 體察)²³ effective? Which means, did it operate with the tensions and the possibilities of *shi*?

So what might this signify for social science if we ignore what the *Dao de jing* says about erudition? To explore this, we offer a second foot-and-mouth story.

A Light Note on Efficacy and Imbalance about Foot-and-Mouth

The Waughs farm their pigs near Newcastle-upon Tyne. But one of the brothers isn't well. He's going to and fro from the doctor. And the farm is doing poorly too. Bad prices for the pigs. Wait and see what happens if they don't get sold straight away. See if the price gets better.

And then working singlehandedly (the brother being so poorly), it is hard to keep things going. Feeding the pigs, cleaning them out, keeping the boars and the sows separate. The state vet complaining about the welfare of the pigs. Next time if there's something wrong it will go in the records that the welfare of the pigs isn't being looked after.

And then there is the feeding. Into the van. Off round the schools and the restaurants. Buckets of catering waste. Heave them up. Heavy. Dirty. Stinking. They need to be boiled. That's what the law says. But time is short. So no boiling. It's only a small shortcut. Straight into the barrows with the feed. Round the farm. The pigs get hungry. They eat greedily. Ah, good, more slop! But then again, the pigs are getting poorly too. Dribbling. Off their food, a lot of them. Lame. They've got something. They're all catching it. But they've been poorly and recovered before. Let's hope everything works out.

Lightness

How to tell stories in a *shi*-informed social science? The answer is that this has to be invented. Pulled between the referential narratives of social science and the correlative epigrams of Lao Tzu, we need to imagine ways of writing that might be at least partially recognizable to both. Our first thought is that *crafting small but exemplary descriptive stories* might be one way of doing this, and this is what we have attempted above.

To think about this, let us return for a moment to the *Dao de jing*.

Though vague and indefinite,
There are images within [...] [the *Dao*].
Though indefinite and vague,
There are events within it.

Though nebulous and dark,
There are seminal concentrations of [energy, 精] within it.²⁴

Treated as methodological advice this suggests that we might look for “images,” “events,” and “seminal concentrations of energy.” And this is what we have attempted by creating this *light and locally referential relational narrative patchwork*. Social science knows about contexts and relations, but its stories also take us to causes, teleologies, or networks that underlie the visible.²⁵ The academic project is to uncover deeper truths. Lao Tzu has been interpreted in many ways, but often he is read as refusing this kind of decomposition, and this is a refusal that we have tried to mimic here at least in part.²⁶ What this might mean becomes visible if we ask what this patchwork is “about.” It might be about the beginning of the foot-and-mouth outbreak, so tugging us to a causally referential social science-shaped decomposition (Law and Moser 2012).²⁷ Alternatively, it might be about difficult lives and their problems. This account, then, is an attempt to write *lightly* and move across the surface without asking too many deep questions. It is an attempt to recognize the propensities of things *within* it rather than looking behind or beyond it. It is to see how things move within the world—or the worlds—of Mr. Waugh. It is to attend to a man who is sick; to where a farmer drives to get feed for his pigs; to struggle in adversity; to the price of a pig; or to being tired and overworked.

Efficacy

This way of thinking opens possibilities that are not necessarily relevant to social science in its most obvious explanatory modes. But we need to look for *shi*-informed *simplicity* too. Instead of piling up efforts to explain and intervene, we need to find ways of sensing how things *should* be going. The Waughs are exhausted, sick, selling at a loss, and faced with hungry pigs. How do they act? The answer is that *they take the line of least resistance*. They do nothing about the disease. But does this mean they follow Lao Tzu? Are they acting “simply?” The answer is “no.” To see this we need to confront a seeming paradox. This is the fact that the behavior of the Waughs is simultaneously lazy *and* effortful; it takes them a great deal of effort to keep the old patterns stable when the latter actually want to change. Then we need to remember that, for Sun Tzu or Lao Tzu, description is not just—or mainly, or perhaps even at all—a representation of something that happened. Rather it is *advice*, an *exemplary* advisory suggestion.²⁸ Such is the point of our locally referential narrative. This is a patchwork that isn’t just about what was going on. It is also about what was *not* going on but should have been. *Shi*-relevant action would have been simple action that was also efficacious. It would have been action *responsive to contextually shifting patterns of immanent necessity*. It would not have rested on the divide we discussed earlier between that which is given by context, and that which is manipulable.

This tells us that efficacious action is *not* the same as successful action. There are successful actions that are not efficacious (such as the brutal strategy of foot-and-mouth eradication.) Efficacious action works with less disturbance. It does not fix things, for to do so generates obstacles. It does not focus on a single dimension. Instead it responds to the fluidity of propensities and weaves these together in ways that are productively in balance.²⁹ Lao Tzu calls this “heaven’s way” (天之道), sometimes poorly translated as “harmony” when it is rather about ebbs and flows. “Harmony” cannot be imposed. When things are allowed or encouraged to follow their propensities then the flows will balance themselves.³⁰ The implication is that a *shi*-inflected social science will be one that senses the efficacy (功效) of action. But how will it make that judgement?

Our locally referential relational patchwork offers three clues. One, the actions of farmers were inefficacious. Effortful they may have been, but as we have just seen, it took inordinate effort to resist propensities. Two, and as a part of this, they were also careless about

the changing composition of local propensities. *Wu wei* this was not. And three, this carelessness was to lead to their own destruction. Unlike the expert in war whom Sun Tzu commends, the Waughs are like inexperienced generals trying to stem an overwhelming flow rather than seeking to use it. They were insensitive to the propensities of relevant things.

Imbalance

But then, sometimes taking the line of least resistance does not lead to disaster. So what was special about this farm?

To think about this in a *shi*-related way we again need to avoid large scale causes or teleologies and look at the situated patchwork of the farm, the patternings of local propensities, and the ebbs and flows being expressed in those propensities. How to do this? Again we need to experiment, but one way is to ask what is flowing. Answers might include feed, pigs, and money. The farm's character as a small enterprise demands their circulation, together with a whole lot more, including air, water and waste, market intelligence, and official paperwork.

How well does this world of circulation map onto a sensibility of ebb and flow? There are economic metaphors in the *Dao de jing*, but accumulation forms no part of Lao Tzu's world view, and EuroAmerican economic metaphors are closely linked to external cause or telos, so this is a (mis)translation that has its limits. Indeed, there are alternatives: we could, for instance, turn to *yin* and *yang*. Nevertheless, the farm might have been in balance if feed had ebbed into pigs, and pigs had flowed first into increasing bodyweight and then ebbed into slaughter and money which had flowed into the farm and then back into feed. In this way of thinking the farm would have been a set of ebbs and flows. There would have been returns, and moving balances and things with propensities, *shi*, here and now, because this was in their situated nature, *ziran*.³¹ It would have been a set of changes and complementary counter-changes. But this was not happening because the pigs were growing but not flowing from the farm, and money was not coming into the farm either. The flows had been interrupted.

Before we move on, note that there are no stable background causes, so individuals in the patchwork such as pigs or farmers do not themselves *have* propensities. Instead propensities are embedded in the local situation, or in the relations between local situations. We need to look for *shi* in (this)pig-and-(this)feed-and-(this)farmer-and-(this)market-and-(this)size-and-(this)world. We are close to some version of relational social theory here, actor-network theory for instance, but also not, both because the latter decomposes, but also because it neither shares the concern of a *shi*-inflected social science with balance or tidescape, nor attends to contextually unfolding patterns of immanent necessity. There is no *shi* in ANT.

4 Third Story: *Shi* as Living

Addressing efficacy and imbalance in a way that is lightly descriptive, the second story offers possibilities that are not necessarily relevant to conventional social science. It pushes us towards the existential propensities of specific situations. The issue is no longer to know foot-and-mouth in general or in the abstract. Rather it is to explore ways of understanding *shi* in (this particular moment in) foot-and-mouth—a context that extends to the intellectual or analytical location.³² For circumstances never repeat themselves, and those circumstances include those like us who work in social science, for story-telling does not stand aside. There *is* nothing outside. Immanent and underdetermined, circumstances emerge in particular ways in particular contexts and are shaped by those caught up in them. For both Sun Tzu and Lao Tzu the art is thus to know both how things will move within those flows, and how to respond well to these cycling shifts.

In a *shi*-inflected cosmology, like the ebbs and flows, or the flows and counterflows, things shape and displace themselves in relation to one another. Again, this is a sensibility to interconnectedness that has resonated in the conventional academic imagination since the invention of systems theory. But what is *not* shared in that tradition is the additional sensibility to patterned change as ebb and flow. If we are to think with *shi*, propensity³³, it becomes crucial to cultivate a sensibility to (local) dispositions, directions of movement or change, predilections, inclinations, all within non-dualist immanent and non-repeating ebbs and flows that tend to fill and empty, grow and contract, or expand and withdraw. For since it is the tendency of all things, including models or ways of thinking, to seek shifting balance and subsequent rebalance, it becomes necessary to appreciate the world as a constantly changing but non-dualist *tidescape* (xíng shì, 形勢): that is, as patterned but never exactly repeating movements of flow and counterflow.³⁴

So what is it to *act* and act well in this world? The answer is that it is to follow the ebbs and flows by cultivating a sensibility to the patterning of tidescapes. Action is not necessarily heroic, and sometimes it is best to be quiet. Doctrines, cleverness, rites, and politicians—these appear when the simplicity needed to sense and act on the changing propensity of things is lost (Laozi, Hall and Ames 2003: Chapter 18, 103ff). Rather than seeking explicit forms of representation, it instead becomes important to sense how different propensities in the ever-changing field of experience might be appropriately fitted together. The best way to come to terms with complexities is not to study their endless particular forms, but to know them in non-knowing. To put on hold the desire to find an answer to the question at hand, and instead to ebb and flow between the endless possible ways of asking questions and responding to them. Once again, what is required is *wu wei*, the “doing of not doing.” The need is to respond to propensity, *shi*, and to assimilate, reflect on and incorporate this in a way that works productively across the patterns of changes and “follow[s]... their natural acuity” (Laozi, Hall and Ames 2003: Chapter 27, 118ff).

An Aphoristic Translation of Living with Foot-and-Mouth

Dao gives things life. Virtue nurses them. Matter shapes them. *Shi* perfects them. The Waugh's farm changes the propensity for disease to flow with the ten thousand things.

From one pig to another, from pigs to sheep, and from farm to farm. What is it? Scientists can say it is a virus, the farmers discover sick animals, the media hunts for striking images, villagers find themselves confined and helpless, while epidemiologists and policy makers are called upon to control it.

We follow the earth, earth follows heaven, heaven follows the *Dao*. *Dao* follows *ziran*. Nevertheless, they have known about the sky. You have known about the earth. And we have all known about nature, about what lies in between. Have we not? But though this is not *ziran*, everything has its propensities. Scientists have their viruses, epidemiologists debate their models, the media are blaming the bureaucrats, and the market has turned on its next victim. The farmers, with their animals burning on the pyres, have lost their words. Viruses, fears, information, knowledges, animals, people, everything now forms tidescapes (形勢) flowing at different paces and in different directions.

Waxing and waning. Flowing and ebbing. Halting the movement of the tides. When the great *Dao* is forgotten, doctrines of justice and mercy prevail. The changing and ever-stronger tidescapes of science, markets, and politics flood ways of living in the twenty-first century. But what if knowledge does not see, but blinds? What if models do not anticipate, but confine? What if the market does not make exchanges possible, but instead destroys? And what if nature has lost the propensity of ten thousand things?

We have learned and lost everything. Though learning consists of daily accumulating, practicing *Dao* is a matter of daily diminishing. Have we diminished enough? Have we

sufficiently reduced our confidence in modern technology? Our faith in the knowledges that fight the disease? Our resistance to the flowing and ebbing?

Have we lost the ways of flowing with the tidescapes of ten thousand things?

Have we? Or have we not?

Normativity

This third story is an attempt to combine some of the referentiality of social science with a *shi*-informed commitment to normative epigram.³⁵ Its language, largely borrowed from translations of the *Dao de jing*, could be otherwise, for “[d]ao that can be put into words is not really dao, and naming that can assign fixed reference to things is not really naming” (Laozi, Hall and Ames 2003: Chapter 1, 77).

This is a diagnosis that also hints at how we might proceed. It implies that instead of seeking general explanations, it would be better to live with processual and provincial ways of knowing that do not ground themselves on a literal version of reference. And that resisting the decomposition that goes with the discovery of principles, it would be better to create situated moral tales that recognize themselves as situated.

If we think in this way, then the chapters of the *Dao de jing*, with their questions and their paradoxes, may be understood as methodological advice. To be sure, tinkering with English-language traditions of empirical description is not to be lightly done, but if we follow Lao Tzu, such referential academic descriptions are both too much and too little: too much because they reflect principles or patterns of cause and effect, and too little because they are not light enough to understand the disease as an expression of contexted and immanent flows and counterflows. And it is this sensibility that generates a *shi*-sensitive normative or diagnostic description. As in Chinese medicine, it will reflexively characterize particular and situated to-and-fro flows, specific tidescapes.³⁶ And then it will ask whether what we can see here and now is an effect of moving balance, of continuing ebb and flow, or whether instead the flows were out of balance, disrupted—and if so, how.

Looked at in this way, it becomes clear that the farmers carelessly and inefficaciously changed the balance of propensities on the farm³⁷, but to blame them for the catastrophe is to fight flies rather than tigers. Two points. One, the ground for the flows of foot-and-mouth disease was a slope—indeed a precipice—made by many. And two, if the farmers did not cause the problem, then neither did the epidemiologists and policy makers solve it. For they, like the farmers, also ignored the propensities of things. The epidemiological models were as effortful and careless as the farmers, because they exerted themselves to make general predictions whilst erasing most of the specificities of farms and regions.³⁸ And the policy outcome, large-scale slaughter, followed the same pattern too, dealing with completely different ways of living and farming across the nation in the same terms. It was effective, yes, because the disease was eradicated, but it was utterly inefficacious (Jullien 2004: 120–136).

So this is normative: an account of *shi* and tidescape is also advice for living. If a slope has been produced in an ebb and flow, then there is nothing to be done: it cannot be resisted. But it is different if the precipice was a product of artifice, of heroic attempts to resist tidescape or the movement of things by sustaining imbalance. In sum, our referential tale is a locally cultivated *diagnosis* (體察). The principles of things (wù lǐ, 物理, Western physics) and the principles of human order (lún lǐ, 倫理, Western ethics) are being held together.³⁹ The story is *value-laden*, and it tells us that living with virus is part of life. But the virus was kept out as part of a European commitment to a high-productivity, disease-free industrialized agriculture (Woods 2004). So there was *no viral ebb and flow*. And the consequence? A precipice, such that when that flow did start, it swept everything before it. This is not heaven’s way.

What follows? In practice we cannot go back to the past and live in the simple country imagined by Lao Tzu. There are artifices and propensities in the form of technologies,

knowledges, and complex ways of farming. We will find imbalanced flows. But what thinking through *shi* suggests is the importance of imagining new ways of making room to live with the ten thousand things; detecting and manipulating imbalanced propensities in the ten thousand things rather than fighting or blocking them; thinking less about finding definite causes, tracing networks, or discovering theoretical and predictive models; and instead feeling, detecting, and following the local and immanent tendencies of things as these pulse and flow.

5 Conclusion: Provincializing Social Science

We have drawn on Sun Tzu's *Art of Warfare* to argue that *shi* may be understood as strategy. But we have also tried to show that the sensibilities to description, theory, knowing, and normativity implied in Lao Tzu's *Dao de jing* hint at the possible character of a *shi*-inflected social science—and, to be sure, its potential limits. Such a social science:

- 1 would not describe *things-in-themselves* but would tell of *things-on-the-move* and relationally and *immanently generated but shifting vectors*, with *shi*, rather than of objects.
- 2 knowing that movements take the form of non-binary counterflows, it would seek the non-dualist flows and counterflows of *tidescapes*.
- 3 being sensitive to movements of increase and decrease and to their *balance* (中), it would ask if these are indeed balanced or whether they have been blocked. Its descriptions would be *normative*, not in the form of explicit rules as in Confucianism, but implicitly as a search for ways of doing not doing.
- 4 It would distinguish between *effectiveness* and *efficacy* (功效), privileging the latter. Effectiveness can be measured from outside, but efficacy lies in its own unique course of unfolding and cannot be generalized.
- 5 It would therefore be a locally cultivated form of *diagnosis* (體察), searching for flows and blockages and suggesting contexted interventions.
- 6 Since there is nothing behind what there is, pure description or theory cannot catch more than a small part of the pattern of tidescapes. Instead, *paradoxical* (正言若反) *fable* might become a way of sensing changing propensities, ebbs, and flows. Though in such fables, the moral would lie not behind the story but rather within its flows and its counterflows. For the paradoxical fable would not be about principles. It would be about what it is about, including us.

Since translation is also mistranslation, these suggestions necessarily betray *The Art of Warfare* and the *Dao de jing*. To pick just one example, we have not touched on the crucial role of *qi* (氣). And there is much that we would not want to translate from classical China.⁴⁰ Even so, we hope that this paper has suggested ways of thinking unusual in social science. *Shi* (勢), tidescape (形勢), balance (中), efficacy (功效), and locally embedded descriptive normativity: all of these challenge academic convention. Perhaps, then, they (or other terms) can be persuaded to do social science work. Our first suggestion is thus that there are terms of art in (and beyond) the Chinese world, classical and otherwise, that might be used to change the scope of social science. Taken seriously (our second suggestion), terms such as these might also recast what it is to tell social science stories. They might, that is, reorganize empirical description on the one hand, and understandings of “theory” on the other. And then there is our third concern, the issue of asymmetries between EuroAmerica and “the rest.” So while we hope that our experiment in a *shi*-inflected social science has merits, if it is flawed this does not matter if others are encouraged to create alternative Chinese-inflected alternatives. This is because our larger concern is to challenge the prevailing terms of intellectual trade. We would like Chinese-inflected thinking to

bend and shift its EuroAmerican counterparts. We would like to rebalance the intellectual flows between EuroAmerica and other parts of the world which currently take so much effort to block in order to sustain the flow in one direction. We would like to see alternative intellectual legacies being used to enrich our understanding of European or North American cases. And we would like to imagine multiple versions of the disciplines of social science, overlapping, in dialogue, but different in different locations. If this were to happen then social science would be on its way to a new, multi-vocal, and less imperial form. We would be able to say that that it had been provincialized.

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¹ Though there are many complexities and counter-instances, in this paper we assume that global social science research is disproportionately shaped by (a) the English language, (b) institutional forms and incentive structures of EuroAmerican and especially US origin, and (c) institutional and individual metrics that reflect those forms. See Raewyn Connell, *Southern Theory: the Global Dynamics of Knowledge in Social Science* (Cambridge Malden, MA: Polity, 2007).

² There are major problems in using such homogenising terms as “Chinese” and “EuroAmerican.” See 葛兆光, *宅茲中國：重建有關「中國」的歷史論述* (台北市：聯經出版公司, 2011) for the making of “Chinese” identity. The term “Chinese” here points to an internally diverse intellectual and linguistic legacy, which can nevertheless for many purposes be distinguished from that of EuroAmerica. See John Law and Wen-yuan Lin, “Provincializing STS: Postcoloniality, Symmetry, and Method,” *East Asian Science, Technology and Society: An International Journal* 11, no. 2, (2017): 1-17 for more discussion. On symmetry, see Michel Callon, “Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay,” *Power, Action, and Belief: A New Sociology of Knowledge?*, ed. John Law (London: Routledge & Kegan Paul, 1986), 196-223.

³ See Dipesh Chakrabarty, *Provincializing Europe: Postcolonial Thought and Historical Difference* (Princeton and Oxford: Princeton University Press, 2000); Helen Verran, *Science and an African Logic* (Chicago: University of Chicago Press, 2001); Helen Verran, “A Postcolonial Moment in Science

- Studies: Alternative Firing Regimes of Environmental Scientists and Aboriginal Landowners,” *Social Studies of Science* 32, no. 5-6, (2002): 729-62; François Jullien, *The Propensity of Things: Toward a History of Efficacy in China* (Cambridge, Mass.: Zone Books, 1995); François Jullien, *A Treatise on Efficacy: Between Western and Chinese Thinking* (Honolulu: University of Hawaii Press, 2004); Arturo Escobar, *Territories of Difference: Place, Movements, Life, Redes* (Durham and London: Duke University Press, 2008); Linda T. Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd edition (London and New York: Zed Books, 2012); 孫歌, 我們為什麼要談東亞: 狀況中的政治與歷史 (北京市: 三聯書店, 2011); and 楊儒賓 ed., 百年人文是怎樣練成的 (新竹市: 國立清華大學出版社, 2012).
- 4 Eduardo V. de Castro, “Cosmological Deixis and Amerindian Perspectivism,” *Journal of the Royal Anthropological Institute* 4, no. 3, (1998): 469-88.
- 5 Think of the term *hau* in Marcel Mauss, *The Gift: Forms and Functions of Exchange in Archaic Societies* (London: Routledge, 1990). For recent discussion see Anne Salmond, “Tears of Rangi: Water, Power, and People in New Zealand,” *Hau: Journal of Ethnographic Theory* 4, no. 3, (2014): 285-309.
- 6 Marilyn Strathern, *Partial Connections* (New York: Rowman and Littlefield, 1991), and Marilyn Strathern, *After Nature: English Kinship in the Late Twentieth Century* (Cambridge: Cambridge University Press, 1992).
- 7 See Wen-yuan Lin, “Shi (勢), STS and Theory: Or What Can We Learn From Chinese Medicine?” *Science, Technology & Human Values* 42, no. 3, (2017): 405-28, and Wen-yuan Lin, and John Law, “A Correlative STS? Lessons from a Chinese Medical Practice,” *Social Studies of Science* 44, no. 6, (2014): 801-24.
- 8 For recent references see 王淮, 老子探義 (臺北市: 臺灣商務印書館, 1998), 牟宗三, 中國哲學十九講 (上海市: 上海古籍, 1983), 袁保新, 老子哲學之詮釋與重建 (台北市: 文津出版社, 1991), 陳鼓應, 老子注譯及評介(修訂增補本) (北京市: 中華書局, 2008), 楊儒賓, 先秦道家「道」的觀念的發展 (台北市: 國立台灣大學出版委員會, 1987), 劉笑敢, “關於老子之道的重新解釋與新詮釋,” *中國文哲研究通訊* 7, no.2, (1997): 1-40, and Charles Wei-Hsun Fu, “Lao Tzu's conception of Tao,” *Inquiry: An Interdisciplinary Journal of Philosophy* 16, no.1-4, (2008): 367-94.
- 9 Judith Farquhar, “STS, TCM, and Other Shi 勢 (Situated Dispositions of Power/Knowledge),” *East Asian Science, Technology and Society* 11, no. 2, (2017): 235-38.
- 10 The term can be understood in many ways, and we might also have drawn on other sources. For instance, the legalist Han Fei Tzu (韓非子) argues that law, strategy and propensity are the necessary trio for being a powerful ruler. See *Han Fei Tzu*, trans. Burton Watson (New York: Columbia University Press, 1964).
- 11 See, for instance, Iain Anderson, *Foot and Mouth Disease 2001: Lessons to be Learned Inquiry Report* (London: House of Commons, 2002); David Campbell and Robert Lee, *The Foot and Mouth Outbreak 2001: Lessons Not Yet Learned* (Cardiff University: The ESRC Centre for Business Relationships, Accountability, Sustainability and Society, 2002); Rowland R. Kao, “The Role of Mathematical Modelling in the Control of the 2001 FMD Epidemic in the UK,” *Trends in Microbiology* 10, no. 6, (2002): 279-86; Allan McConnell, and Alastair Stark, “Bureaucratic Failure and the UK's Lack of Preparedness for Foot and Mouth Disease,” *Public Policy and Administration* 17, no. 4, (2002): 39-54; National Audit Office, “The 2001 Outbreak of Foot and Mouth Disease,” Paper presented at London, National Audit Office, HC 939, Last Modified 21 June 2002 (retrieved from: <https://www.nao.org.uk/wp-content/uploads/2002/06/0102939.pdf>, last accessed on 15 November 2017); Royal Society of Edinburgh, *Inquiry into Foot and Mouth Disease in Scotland* (Edinburgh: Royal Society of Edinburgh, 2002); David Campbell and Robert Lee, “‘Carnage By Computer’: the Blackboard Economics of the 2001 Foot and Mouth Epidemic,” *Social & Legal Studies* 12, no. 4, (2003): 425-59; Brigitte Nerlich, “War on Foot and Mouth Disease in the UK, 2001: Towards a Cultural Understanding of Agriculture,” *Agriculture and Human Values* 21, (2004): 15-25; Neil Ward, Andrew Donaldson, and Philip Lowe, “Policy Framing and Learning the Lessons from the UK's Foot and Mouth Disease Crisis,” *Environment and Planning C: Government and Policy* 22, no. 2, (2004): 291-306; Abigail Woods, *A Manufactured Plague: the History of*

- Foot and Mouth Disease in Britain* (London: Earthscan, 2004) and John Law, “Disaster in Agriculture, or Foot and Mouth Mobilities,” *Environment and Planning A* 38, no. 2, (2006): 227-39.
- 12 We use several translations in what follows, as well as the original (itself variable) Chinese text. Most often, however, we depend on Roger T. Ames’ 1993 translation. See Sun Tzu, *Sun-tzu: The Art of Warfare*, trans. Roger Ames (New York: Ballantine Books, 1993).
- 13 Sun Tzu, *Sun Tzu: Art of War*, trans. Ralph D. Sawyer (Boulder: Westview Press, 1994), Chapter 6, 193ff.
- 14 Royal Society of Edinburgh, *Inquiry into Foot and Mouth Disease in Scotland* (Edinburgh: Royal Society of Edinburgh, 2002).
- 15 Sun Tzu (1993: 169). See Judith Farquhar, and Zhang Qicheng, *Ten Thousand Things: Nurturing Life in Contemporary Beijing* (New York: Zone Books, 2012) for contemporary hybridized manifestations for nurturing life in Beijing.
- 16 Sun Tzu (1993: 116). This chapter, on Hsing (行篇), argues that an army should secure the advantage of strategic position. The following chapter on *Shi* (勢篇) further explores how the inevitability of propensity is produced from strategic position. Here 行 is an equivalent to 形 that refers to the form and condition of *shi*, see also note 23 below.
- 17 Michel Foucault, “Governmentality,” *The Foucault Effect: Studies in Governmentality*, ed. Graham Burchell, Colin Gordon and Peter Miller (London: Harvester Wheatsheaf, 1991).
- 18 Lao Tzu, *Tao Teh Ching*, trans. John C. H. Wu (Boston and Shaftesbury: Shambhala, 1989), Chapter 51, 105ff.
- 19 Hall and Ames resist the notion of a Chinese “cosmology” with its Greek overtones of an order beneath complexity. See David L. Hall, and Roger T. Ames, *Anticipating China: Thinking Through the Narratives of Chinese and Western Culture* (Albany: State University of New York, 1995).
- 20 Sun Tzu also writes of *shi* in terms of water.
- 21 See Jullien (1995: 38) and Annemarie Mol, *The Logic of Care: Health and the Problem of Patient Choice* (London; New York: Routledge, 2008).
- 22 Sun Tzu also talks of water when he writes of *shi*.
- 23 Sensing propensity is not a matter of explicit knowing or control, but an implicit diagnosis of the timing and opportunity of the unfolding of tidescapes (形勢). It rests on cultivated experience, which makes it tempting to talk of “tacit knowledge.” However we avoid this term because sensing propensity has as much or more to do with affect or comportment as with knowledge in a European sense. Jullien (2004: 46-83), Judith Farquhar, *Knowing Practice: the Clinical Encounter of Chinese Medicine, Studies in the Ethnographic Imagination* (Boulder: Westview Press, 1994), 134.
- 24 We have substituted “energy” for “*qi*.” Roger T. Ames, David L. Hall and Lao zi, “*Dao De Jing: Making this Life Significant*”: *A Philosophical Translation* (New York: Ballantine Books, 2003), 107ff.
- 25 Though actor-network theory and its successive projects propose an infra-physics rather than a meta-physics. Bruno Latour, “The Politics of Explanation: An Alternative,” *Knowledge and Reflexivity: New Frontiers in the Sociology of Knowledge*, ed. Steve Woolgar (London: SAGE Publications, 1988) and Annemarie Mol, *The Body Multiple: Ontology in Medical Practice* (Durham and London: Duke University Press, 2002).
- 26 There are ambiguities and paradoxes in Lao Tzu’s teaching on knowing and explanation. For instance, the first line of the *Dao de jing* reads “Dao that can be put into words is not really dao.” We touch on this below.
- 27 John Law and Ingunn Moser, “Contexts and Culling,” *Science, Technology & Human Values: an International Journal* 37, no.4, (2012): 332-54.
- 28 For a related argument about interference see Donna J. Haraway, *Simians, Cyborg, and Women: The Reinvention of Nature* (New York: Routledge, 1991).
- 29 Jullien (2004). This attention and inattention to propensity is also visible in the difference between biomedical chemotherapy and the approach to cancer in Chinese medicine. See Lin (2017).

- 30 To return (fǎn, 反) or to “do not doing,” *wu wei* is to return to “heaven’s way” by letting things spontaneously create and transform themselves and one another (*ziran*, 自然) (Laozi, Hall and Ames 2003: Chap 25, 115ff and Chap 51, 156ff). Many terms in the *Dao de jing*, including 和 (harmony, Chapters 2, 4, 18, 42, 55, 56, 79), 一 (yī, one/oneness, Chapters 10, 14, 22, 25, 39, 42) and 中 (balance, Chapter 5), imply the harmony of the original Oneness (一) of *Dao*, virtue, or balanced status. Our tidescape neologism fits the flow metaphor and with some reservations we also talk of “balance.”
- 31 This is key to a *shi*-inflected social science, see 楊儒賓 ed., *自然概念史論* (臺北市: 臺灣大學出版中心, 2014a).
- 32 Mei Zhan, “The Empirical as Conceptual: Transdisciplinary Engagements with an ‘Experiential Medicine’,” *Science, Technology & Human Values* 39, no.2, (2014): 236-63; Judith Farquhar, “Metaphysics at the Bedside,” *Historical Epistemology and Making of Chinese Medicine*, ed. Howard Chiang, (Manchester: Manchester University Press, 2015).
- 33 This is explored at length by François Jullien (1995).
- 34 In Chinese, “tidescape,” (形勢) combines *shi* (勢) and *hsing* (形) (form and condition) as applied to water in both *The Art of Warfare* (e.g., Chapters 4 and 5) and the *Dao de jing* (e.g., Chapter 8). The changing propensity of things is like the tendency of water to flow and shape itself. We intend the metaphor without the additional Western assumption that tides are a function of external forces.
- 35 An earlier version of this story was published in John Law and Wen-yuan Lin, “The Stickiness of Knowing: Translation, Postcoloniality, and STS,” *East Asian Science, Technology and Society* 11, no. 2 (2017): 257-69.
- 36 Elisabeth Hsu, *The Transmission of Chinese Medicine, Cambridge Studies in Medical Anthropology* (Cambridge, UK: Cambridge University Press, 1999); Farquhar (1994); and Volker Scheid, “Convergent Lines of Descent: Symptoms, Patterns, Constellations, and the Emergent Interface of Systems Biology and Chinese Medicine,” *East Asian Science, Technology and Society: an International Journal* 8, no.1, (2014): 107-39. Note that in Chinese medicine flows are specific to context which includes the physician.
- 37 For a more standard account see Jim Dring, “My Involvement with the Waughes,” Paper presented at DEFRA, last modified 16 March, 2001 (retrieved from: <http://www.warmwell.com/dringstatement.pdf>, last accessed on 15 November 2017).
- 38 John Law, “Seeing Like a Survey,” *Cultural Sociology* 3, no. 2, (2009): 239-56.
- 39 See 楊儒賓, “原物理.” *東亞觀念史集刊* 7, (2014b): 255-97.
- 40 These include its understandings of gender, Lao Tzu’s aversion to technology (Laozi, Hall and Ames 2003: Chapter 31, 68, 69, 80; 124-126ff, 184-187ff, 201-203ff), the idea that people should be kept in ignorance (Laozi, Hall and Ames 2003: Chapter 3, 19, 20, 65, 80; 81-82ff, 104-06ff, 179-181ff, 201-03ff), and the way the *Dao de jing* tends to imagine its world as a closed system (Jullien 1995: 260-62). Obviously there are other questions too. Is it wise to avoid “theory” and “practice” in favour of efficacy? Or to create a social science that imagines the world as immanent tidescape? Would social science be better if it was less empirically referential—or achieved this in novel ways? All of this is for discussion. Another set of reservations: if we talk of heaven’s way (天之道) as “harmony,” do we want to create a conservative social science? But alternative political projections are also possible. For instance, it is possible to reimagine tidescape, *shi*, and imbalance as ways of thinking about *resistance*. Again, there is a pragmatist social democratic reading of the *Dao de jing* (Laozi, Ames, and Hall 2003) that treats way-making as a matter of *inclusion*, a kind of respectful social ecology (though this will not do for a social science that also wants to attend to non-humans.).