

Tidescapes: notes on a *Shi* (勢)- inflected social science¹

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Abstract

In this paper we ask what would happen if the Chinese term *shi* (shì, 勢, roughly translatable as *propensity*) were treated as a concept in EuroAmerican social science. We argue that this would recast the relations between social science theory and the empirical in novel and interesting ways, and reflect on how such a 'postcolonial' move would trouble present intellectual asymmetries between 'Chinese' and English-language social science. Since *shi* translates only with difficulty into the major Western languages, we also touch on the social and intellectual character of translation. The paper develops its argument by using versions of *shi* drawn from Lao Tzu and Sun Tzu to reinterpret an empirical episode in the UK, an outbreak of foot and mouth disease in 2001. It therefore reverses the more usual direction of flow in social science in which theory originating in EuroAmerica is used to interpret non-Western empirical materials.

Keywords

Shi, postcolonial social science, translation, Lao Tzu, Sun Tzu, theory-empirical relations

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 how a social science interested in *shi* will explore questions not normally of concern to the EuroAmerican academy. Second, it suggests that to introduce *shi* will recast the relations between social science theory and the empirical in novel and counterintuitive ways. And then third, it shows how this shift troubles the intellectual asymmetry between ‘Chinese’ and English-language social science.² Thus, and despite many counter-efforts, theory in social science is habitually created in EuroAmerica. This is not surprising. Social science was created in EuroAmerica. 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 endeavour is the issue of translation, for *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.⁴ In anthropology Eduardo Viveiros de Castro has drawn on Amerindian cosmology to argue that in translation the same word (homonym) refers to different objects subsisting in different worlds, and that the differences between those realities tend to disappear.⁵ More generally, the idea that the categories of other cultures might be used to inflect anthropological reasoning also has a long history.⁶ Famously, Marilyn Strathern used the non-binary relationality of Hagen comparative reasoning to rework English understandings of kinship.⁷ In this paper we adopt a version of Strathern’s approach to explore a UK case using the notion of *shi*. 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 are necessarily impure, and reflect irreducibly difficult judgements about what to betray, and how. Thus, in the present paper we have overturned the context from which *shi* is drawn in several ways. We have, for instance, removed it from its original institutional location, where it was linked to apprenticeship and a classical literary canon, and inserted it into a (Western-style) international academic context. And as a part of 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’.

² There are major problems in using such homogenising terms as ‘Chinese’ and ‘EuroAmerican’. See 葛兆光 (2011) for the making of ‘Chinese’ identity. The term ‘Chinese’ here points to a Han Chinese intellectual legacy. See Law and Lin (2017) for more discussion of these aggregating terms. On symmetry, see Callon (1986).

³ See Chakrabarty (2000), Verran (2001; 2002), Jullien (1995; 2004), Escobar (2008), Smith (2012), 孫歌 (2011) and 楊儒賓 (2012).

⁴ Callon (1986).

⁵ Viveiros de Castro (1998).

⁶ Think of the term *hau* in Mauss (1990). For recent discussion see Salmond (2014).

⁷ See, for instance, Strathern (1991; 1992, 2-11).

These three asymmetries reflect the fact that we are deeply embedded in academic disciplinary structures. However, by mixing contexts in this way we hope in some small measure to shift the way in which social science is done. Our argument is that current academic work in Chinese speaking countries, innovative and critical though it is, often tends to reproduce intellectual asymmetries in need of scrutiny.⁸ Our hope is that in due course alternative Chinese (or other non EuroAmerican) forms of social science might be more easily imagined.⁹

There are different ways in which this might be done. Elsewhere we have used Chinese criteria to reinterpret Taiwanese medical practices, suggesting that the apparent subjugation of Chinese medicine by biomedicine is much less obvious if 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 STS¹⁰. In what follows we take a different route. Shifting the focus from Taiwan to the UK we use *shi* together with resources from classical Chinese philosophy to elaborate alternative ways of understanding selected strategies and ways of being in the 2001 UK foot and mouth disease epidemic. This move to Sun Tzu's *Art of Warfare* (孫子兵法) and Lao-tzu's *Dao de jing* (道德經) needs to be accompanied by a health warning. This recourse to the classics is a tactic for exploring the potential of *shi* as a term of art for social science, rather than an attempt to essentialise the notion: recourse to these classics is not obligatory. Other sources, for instance the legalists, also work with *shi*, and would have been equally appropriate for our purposes. By contrast our use of European material is necessary. Our object is to show, as we have indicated above, that it is possible to *reverse the direction of intellectual trade* by translating Chinese 'theory' terms to understand European materials.

To explore this, we use excerpts from the two classics above to show how *shi* shifts between strategy, knowing and living, as these authors teach us to respond to the specificities of particular situations. In order to do this we tell three stories about foot and mouth disease. The first is a brief and academically standard empirical summary that acts as context for what follows.¹¹ The second is a non-standard attempt to write a 'light' and non-explanatory *shi*-inflected account of a foot and mouth episode in a manner that reflects 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 normativity.

Stories about foot and mouth (1): a brief standard 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 they hadn't, and it had been going on for weeks.

⁸ See Law and Lin (2017).

⁹ Chakrabarty (2000). But we are not recommending national (or nationalist) forms of social science.

¹⁰ Lin and Law (2014), Lin (2016) and Lin and Law (to be added).

¹¹ This draws on previous social science literature. See, for instance, Law (2006).

Further investigations found almost sub-clinical signs of infection on neighbouring farms. One of the neighbouring farmers, suspecting nothing, had sold a few of his sheep. These had been mixed with nearly 25,000 other animals, 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 disease had cost around £6bn.

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 pressure since this was major 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 neighbouring farms were watched. From 15th March, as the epidemic grew, sheep on neighbouring farms in the major epicentre 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 other major model) said that the epidemic was still growing, and that if it was to be stopped then all the animals on neighbouring farms needed to be slaughtered. The need, then, was for a major escalation. The latter argument prevailed, and on 27th March 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.¹²

2. *Shi* (勢) as Strategy: thinking from Sun Tzu

Flexibility

This brief account of foot and mouth tells us that the disease flooded the UK. But what happens if we think about this by drawing on Sun Tzu's *Art of Warfare*? One answer is that it resonates with the fluid metaphors that run through his writing:¹³

¹² This argument is explored in Law (2008).

¹³ 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 (1993).

[w]ater configures its flow in accord with the terrain.’¹⁴

Writing for King *Ho-lu* of *Wu* (吳王闔廬) in the unstable warring states period about 500 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]’¹⁵

So here is a first Sun Tzu-inspired question. *Was the 2001 foot and mouth strategy sufficiently flexible?* Though this evolved as the epidemic progressed, and there were some variations between locations, policy-making was also centralised. People in the regions were given little room for manoeuvre 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.) 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 any of this sound like Sun Tzu? To be sure, we can only guess, but a thought experiment suggests that his enthusiasm for the flexibility of propensity or *shi* means that this is unlikely.

Fluidity

But what of fluidity itself? At the beginning of *The Art of War* 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.’¹⁶

Read in terms of EuroAmerican common sense, this says that an accurate understanding of context is needed, that some things are fixed, and others are manipulable. Again, in this reading, things are heterogeneous: cultural, natural, and various mixes of the two. The ‘heterogeneities’ of the models included climate, terrain and different animal species, while the policies for control reflected these together with command and regulation. But this is a translation that betrays *shi* by resting on two binaries: *homogeneity* versus *heterogeneity* on the one hand; and *fixed* as against *malleable* on the other. Neither is appropriate. We will return to the second of these below, and simply note here that the homogeneity/heterogeneity divide did not exist in Sun Tzu’s world. Things were neither pure nor impure.¹⁷ This means that to suggest that strategy is ‘heterogeneous’ is also misleading. The propensities of different things take their shape in continuous and varying intersections and

¹⁴ Sun Tzu (1994, Chapter 6, 193ff).

¹⁵ Sun Tzu (1994, Chapter 6, 193ff).

¹⁶ Sun Tzu (1993, 103).

¹⁷ As an example, a thing does not exist in itself but in the propensities of ten thousand things. See, for instance, Lin (2016).

relations. The *shi*-relevant English-language metaphor we need for context will have much more to do with *fluidity* than heterogeneity.

Subtlety

And what of strategy?

‘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.’¹⁸

Strategy is about positional relations and these are always on the move, so strategy is situated too. It is also crucial to minimise the cost of warfare.¹⁹ This demands total foreknowledge of the ten thousand things (*wan wu, wàn wù*, 萬物).²⁰ 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 will secure major subsequent advantage.

‘... a victorious army is like weighing in a full hundred weight 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.’²¹

Flows are channelled 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.’²²

So how does 2001 policy making look in this respect? Again, various answers 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. Perhaps it is a little easier to imagine Sun Tzu recommending preventative vaccination round infected areas (as was practised in Scotland), and it is possible he would have resisted the EU ‘no vaccination’ policy for as he also said:

‘the best military policy is to attack strategies.’²³

Surely if slaughter is a way of attacking viral strategies, vaccination is a lot less costly. Then again, it is also possible to imagine him shaking his head at an agriculture dependent on the long-distance transport of animals or, and differently, on precarious foot and mouth disease-free regions in a

¹⁸ Sun Tzu (1993, 120).

¹⁹ Sun Tzu (1993, 107).

²⁰ Sun Tzu (1993, 169). See Farquhar and Zhang (2012) for contemporary hybridized manifestations in nurturing life in Beijing.

²¹ Sun Tzu (1993, 116).

²² Sun Tzu (1993, 111).

²³ Sun Tzu (1993, 111).

world in which other regions harbour the disease. At any rate, it is difficult to imagine that Sun Tzu would have been impressed by the instability and vulnerability of such an agriculture.

3. *Shi* in the *Dao de jing*

Flexibility, position and relation, and strategy as manipulative amplification, all this makes sense in present day English-language common sense, and this is why we start our discussion of *shi* with *The Art of Warfare*. But to translate *shi* in additional ways – and in particular to understand it as fluidity, we need to know more about the context of the term and borrow from Lao Tzu.

‘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]²⁴

‘See the Simple and embrace the Primal,
Diminish the self and curb the desires.’²⁵

These citations come from the *Dao de jing* which was compiled by the possibly apocryphal Lao Tzu.²⁶ This work offers a vision of the cosmos²⁷ and a way of living, the *Dao* (dào, 道), which renounces complexity in favour of ‘way-making’ simplicity. The world view that it articulates has much in common with *The Art of Warfare*. Both recommend simple action, Lao Tzu talking of *wu wei* (wú wéi, 無為), roughly translatable as ‘doing not doing’, and both imagine the world as *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.’²⁸

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.’²⁹

‘Return is Tao’s motion. Yielding is Tao’s practice.’³⁰

The *Dao de Jing* predates the formal elaboration of *yin* (陰) and *yang* (陽) but its sensibility is similarly cyclical. Importantly, the ebbs and flows are non-dualist because the opposites are rooted in one another:

²⁴ Lao Tzu (2007, Chapter 42, 62ff).

²⁵ Lao Tzu (1989, Chapter 19, 39ff).

²⁶ There is dispute over the chronological relationship between Sun Tzu and Lao Tzu. See (何炳棣 2013, 185-284).

²⁷ Hall and Ames (1995) resist the notion of a Chinese ‘cosmology’ with its Greek overtones of a complexity ruled by an underlying order.

²⁸ Lao Tzu (1989, Chapter 34, 69ff).

²⁹ Lao Tzu (1989, Chapter 8, 17ff).

³⁰ Lao Tzu (2007, Chapter 40, 59ff).

‘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.’³¹

Movements of *shi* are continuous but at the same time circumstances never repeat themselves. Self-organising, movements are not driven from outside. Immanent and underdetermined, they 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 this cosmology things shape and displace themselves, web-like, in relation to one another, a sensibility that has resonated in the Western academic imagination since the invention of systems ways of thinking. But what is *not* shared in that tradition is the additional sensibility to patterned change as ebb and flow. If we are to understand *shi*, propensity³², this is crucial. This becomes a matter of (local) disposition, direction of movement or change, predilection, inclination, all within non-dualist immanent and non-repeating ebb and flow changes that tend to fill and empty, grow and contract, or expand and withdraw. As a part of this it is also about the tendency of all things to seek shifting balance and subsequent rebalance. It is to appreciate the world as a constantly changing but non-dualist *tidescape* (xíng shì, 形勢): that is, as a patterned but never exactly repeating movement of flows and counterflows.³³

So what is it to *act* and act well in this world? The answer is that it is to follow the *Dao* by cultivating sensibility.³⁴ You sense how the different propensities in the ever-changing field of experience might be appropriately fitted together. Action is never heroic. 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.³⁵ What is required is *wu wei* again, the ‘doing of not doing’ by responding to propensity, *shi*, and assimilating, reflecting and incorporating this in a way that works productively across the pattern of changes and ‘follow[s]... their natural acuity’.³⁶ For Sun Tzu, more practical or perhaps more Machiavellian, it becomes the manipulation to secure multiplication discussed above. The good commander works quietly (*wu wei*) with propensities (*shi*) to secure advantage.

4. *Shi* as Knowing

So what does this larger *shi*-relevant context suggest for academic ways of knowing?

³¹ Lao Tzu (2007, Chapter 77, 113ff).

³² This is explored at length by François Jullien (1995).

³³ In Chinese ‘tidescape’, (形勢) combines *shi* (勢) and *hsing* (行/形) (form and condition) as applied to water in both *The Art of Warfare* (e.g., Chapters 4) and the *Dao de jing* (e.g., Chapters 8). The changing propensity of things is like the configuration of the water’s flow and tendency. We intend the metaphor without the additional Western assumption that tides are a function of external forces.

³⁴ Laozi et al. (2003, Chapter 21, 107-109).

³⁵ Laozi et al. (2003, Chapter 18, 103ff).

³⁶ Laozi et al. (2003, Chapter 27, 118ff).

In one way the question makes no sense: the *Dao de jing* famously rejects erudition³⁷ because the latter does not accord with the simplicity of the *Dao* but works by reification.³⁸ We touched on a further difficulty in the Introduction. As François Jullien observes, the notion of ‘truth’, the idea of reliable representation of something elsewhere, makes little sense.³⁹ Large scale causal or explanatory schemes, epics and grand narratives do not work either.⁴⁰ If things are situated and specific and there are no causes or teleologies, then the distinction between theory (the art of enunciating these as generalities) and practice melts away.⁴¹ So what replaces or displaces these? As we also noted above, the answer is: *shi*. Sensing *shi* (disposition or propensity) replaces erudition. The efficacy (功效) of *shi* displaces truth. *Shi* is traced locally by examining and sensing circumstances without being pinned to claims about larger causal schemes. Rather than asking about the quality of representation, the question rather becomes: was the diagnosis (tǐ chá, 體察)⁴² 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.

Stories about foot and mouth (2): lightness, efficacy, imbalance

Mr Waugh farms his pigs near Newcastle-upon Tyne. And his brother 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.

³⁷ Laozi et al. (2003, Chapter 81, 203ff).

³⁸ Laozi et al. (2003, Chapter 18, 103ff).

³⁹ Jullien (1995, 18, 75).

⁴⁰ Jullien (1995, 211).

⁴¹ Jullien (1995, 38).

⁴² 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 (Farquhar 1994, 134; 2012; Jullien 2004, 46-83).

Lightness

How to tell stories in a *shi*-related social science? The answer is that this has to be invented, so with this second interlude we start to experiment with mixing modes of description. 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 recognisable to both. Our first thought is that *crafting small but exemplary descriptive stories* might be one way of doing so. 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.’⁴³

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 in 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.⁴⁴ The academic project is to uncover deeper truths but, following Lao Tzu, this is a decomposition that we have here tried to refuse – or at least to water down. This 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. 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 recognise the propensities of things *within* it rather than looking behind or beyond it. It is to 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; to being a small farmer; or to being very, very tired and overworked.

Efficacy

This way of thinking opens possibilities not necessarily relevant to causality, teleology, or network. But we need to look for Lao Tzu-like *simplicity* too. The Waughs are exhausted, sick, selling at a loss, and faced with hungry pigs. How do they act? The answer is that *they tend to 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 behaviour of the Waughs is simultaneously lazy *and* 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. It is a form of *advice*, an *exemplary* advisory story.⁴⁵

⁴³ We have substituted ‘energy’ for ‘*qi*’ in this translation which comes from Laozi et al. (2003, Chapter 21, 107ff).

⁴⁴ Though actor-network theory and its successive projects propose an infra-physics rather than a meta-physics (Latour 1988; Mol 2002)

⁴⁵ For a related argument about interference see Haraway (1991).

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* implied in the tidescape. 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 (like the brutal policy 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.⁴⁶ 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.⁴⁷ The implication is that a *shi*-inflected social science will be one that judges 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. Simple and lazy 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, whereas efficacious intervention would not have done so. Like stupid generals they tried to stem an overwhelming flow rather than seeking to use that flow. 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? The answer takes us to imbalance.

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 patterns of local propensities, and the tidescapes being expressed in those propensities. How to do this? Again we need to experiment, but one way is to ask what is flowing. Answers will 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? Since accumulation forms no part of Lao Tzu's world view, and economic metaphors are closely linked to cause or telos this is translation that is only partially controlled. 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

⁴⁶ Jullien (2004). This attention – and inattention – to propensity is also visible in, for instance, the difference between biomedical chemotherapy and the approach to cancer in Chinese medicine. See Lin (2016).

⁴⁷ 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). See Laozi et al. (2003, Chap 25, 115ff and Chap 51, 156ff).

money which had flowed into the wallet of the farmer and then ebbed back into feed. In this way of thinking the farm would have been a *tidescape* with returns, and moving balances and things with propensities, *shi*, here and now, because this was in their situated nature, *ziran*.⁴⁸ 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 individuals in the patchwork such as pigs or farmers do not themselves *have* propensities. This would imply the operation of somewhat stable background causes. Instead propensities are embedded in the local situation. We need to look for *shi* in (this)pig-and-(this)feed-and-(this)farmer-and-(this)market-and-(this)size. We are close to actor-network theory here, but also not, both because the latter decomposes, but also because it does not share the concern of a *shi*-inflected social science with balance or tidescape, or attend to contextually unfolding patterns of immanent necessity. There is no *shi* in ANT.

With this thought, we move to our third experimental story.

Stories about foot and mouth (3): normativity and blocking

Dao gives things life. Virtue nurses them. Matter shapes them. *Shi* perfects them. The Waughs' farm formed the propensity for foot and mouth 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 find sick animals, the media hunts for striking images, the village finds itself confined and helpless, while epidemiologists and policy makers are called upon to control it.

Everything has its propensities. But viruses, fears, information, knowledges, animals, people, everything is now flowing at different paces and in different directions.

How to stop this and move back to ebbs and flows? No transportation, no contact, no regular flows any more. Is this heaven's way of benefiting without harming? (天之道利而不害) The answer is that we don't know. Slaughter is the last measure. Massive and radical, it is. Everything is halted. Life, love, fortune, peace and harmony. A brutal victory is a funeral (戰勝以喪禮處之). Indeed.

Waxing and waning. Flowing and ebbing. Halting the movement of the tides. Living with the ever-stronger changing tidescapes (形勢) of technology, markets and food production of the 21st century. The UK is not a simple country with a small population (小國寡民). The piled-up carcasses and the flames strike at us as well as the enemy. How many more drastic measures are we prepared for in the future? How might we live a life with or without the farms that have such propensities? Is it possible not to fight the disease but to live with its changing propensities? Has the epidemic also arrested the tidescapes of our previous knowledge and strategies, the conventions we have drawn on before? Are we efficacious?

There are still lessons to be learned.

⁴⁸ This is surely a key component in a *shi*-inflected social science (楊儒賓 2014). We hope to explore this in a future article.

5. Shi as Living: Diagnosis

This third story is an attempt to combine referential social science with *shi*-like normative epigram. Another situated moral tale, it seeks to resist the decomposition that precedes the discovery of principle assumed in Western social science story-making, following the *Dao de jing* with its questions and paradoxes. 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 characterise particular and situated to-and-fro flows, specific tidescapes.⁴⁹ 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 is clear that the farmers carelessly and inefficaciously changed the balance of propensities on the farm, 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 violated the propensities of things. The epidemiological models were as effortful and idle as the farmers, because they exerted themselves to make general predictions whilst erasing most of the specificities of farms and regions.⁵⁰ And the policy outcome, large scale slaughter, followed the same pattern too, dealing indifferently and at vast cost with completely different ways of living and farming across the nation. It was effective, yes, because the disease was eradicated, but it was utterly inefficacious.⁵¹

So this is normative: an account of *shi* and tidescape is also a form of advice. 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 attempts to resist tidescape, or of heroic action to resist the movement of things and sustain a state of imbalance. Then the consequences are quite different. In sum, our referential tale is *diagnostic* (體察). Things (wù lǐ, 物理, Western physics) and principles (lún lǐ, 倫理, Western ethics) are being held together. The story is *value-laden*, and it tells us that the movement of the disease was arrested internationally, kept out of the UK, so there was *no ebb and flow of disease*.⁵² And the consequence? A precipice, such that when the flow started it carried 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. The United Kingdom in the 21st century cannot return to the oneness of the *Dao* of Lao Tzu's time. There are artifices and propensities in the form of technologies, knowledges, and complex ways of farming. We will find flows that are imbalanced. But what thinking through *shi* suggests is the importance of: imagining new ways of making room to live with the ten thousand

⁴⁹ Hsu (1999), Farquhar (1994) and Scheid (2014). Note that in Chinese medicine the flows are specific to context which includes the physician.

⁵⁰ Law (2009).

⁵¹ Jullien (2004, 120-136).

⁵² The policy reason for this exclusion is that diseased animals are less productive.

things; understanding that things are not simply heterogeneous – not simply ‘social’ and ‘material’ – but *ziran*-like such that there is no possibility of such separation in the first place; detecting and manipulating imbalanced propensities in the ten thousand things rather than fighting them; thinking less about finding definite causes, tracing networks, or finding theoretical and predictive models; and instead feeling, detecting and following the local and immanent tendencies of things as these pulse and flow.

6. A *shi*-inflected social science

We started by saying that for Sun Tzu strategy becomes *manipulation*, *wu wei* (無為). Following this we have explored description, theory, knowing and normativity in a possible Chinese-inflected social science by translating between Lao Tzu’s *Dao de jing* and some standard Western academic conventions. This attempt to control equivocation suggests the following for a *shi*-inflected social science:

1. Rather than describing things it will tell of *things-on-the-move*. It will deal in relationally and *immanently generated but shifting vectors*, with *shi*, rather than with objects.
2. Knowing that movements take the form of non-binary counter-flows, it will seek *tidescapes* and their flows and counter-flows whilst avoiding dualisms.
3. Being sensitive to movements of increase and decrease and to their *balance* (中), it will ask if they are balanced or whether they have been blocked. Its descriptions will be *normative*.
4. It will 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 generalised.
5. It will therefore be *diagnostic* (體察), searching for flows and inappropriate blockages, distinguishing between effectiveness and efficacy, and suggesting contexted interventions.
6. Pure description and theory will evaporate, for there is nothing behind what there is. Instead, *paradoxical* (正言若反) *fable* may become important, creating space for sensing changing propensities, ebbs and flows. Though in such fables the morals will lie not behind the story but rather within it, its flows and its counterflows. For the paradoxical fable will not be about principles. It will be about what it is about, including us.

These suggestions point to the possible shape of a *shi*-inflected social science. But to what extent are they helpful? This is for discussion. At the same time, it is also important to remember that they also betray *The Art of War* and the *Dao de jing*. Discussion of *qi* (氣), energy? On grounds of simplicity we have excluded this crucially important notion. Aversion to technology?⁵³ The idea that people should be kept in ignorance because this makes for simplicity?⁵⁴ No thank you to both. The way the *Dao de jing* tends to imagine its world as a closed system?⁵⁵ No again. Avoiding ‘theory’ and ‘practice’ in favour of efficacy? We have only partially achieved this. A social science that imagines the world as immanent tidescape? This no doubt has drawbacks too. Would social science be better if it was less obviously empirically referential – or achieved this in novel ways? This is for discussion. And is there

⁵³ Laozi et al. (2003, Chapter 31, 68, 69, 80; 124-126ff, 184-187ff, 201-203ff).

⁵⁴ Laozi et al. (2003, Chapter 3, 19, 20, 65, 80; 81-82ff, 104-106ff, 179-181ff, 201-203ff).

⁵⁵ Jullien (1995, 260-262).

a danger of creating a conservative social science? Even if we bypass the grim asymmetries – gender and otherwise – of ancient China, to translate heaven’s way (天之道) as ‘harmony’ is to risk conservatism. And our text has certainly not embedded a theory of post-colonial resistance. At the same time, however, alternative political projections are also possible. For instance, it is possible to reimagine tidescape, *shi*, and imbalance as ways of thinking about *resistance* – good and bad. Again, there is an appealing pragmatist and social democratic reading of the *Dao de jing* that treats way-making as a matter of *inclusion*, a kind of respectful social ecology.⁵⁶ This is attractive though it will not do for a social science that also wants to attend to non-humans.⁵⁷ Indeed, there is a strong case for saying that *ziran*, the term usually used to translate English language ‘nature’ into Chinese, takes us from a binary anthropocentrism to something quite un-Western: to the evolving self- and co-creation of the ten thousand things. As with *qi*, however, and again for reasons of simplicity, we have not explored this here.

7. Conclusion: Provincialising social science

We hope that our paper has suggested ways of thinking new to EuroAmerican social science. *Shi* (勢), tidescape (形勢), balance (中), efficacy (功效), and locally embedded descriptive normativity, none of these appear to have exact analogues, at least in our own discipline of STS. 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 that might be used to change the scope of social science and ways other than mobilising classical philosophical resources to do this. Taken seriously (our second suggestion) terms such as these might also recast what it is to tell social science stories. They might, that is, reorganise 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 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 the Chinese world and EuroAmerica. We would like to see alternative ideas being used to think European or North American cases. And, in particular, 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 has been provincialised.

References

Callon, Michel (1986) 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of Saint Brieu Bay', in J. Law (ed), *Power, Action and Belief: a new Sociology of Knowledge? Sociological Review Monograph*. London: Routledge and Kegan Paul: 196-233.

⁵⁶ Laozi et al. (2003).

⁵⁷ As is the case in our own discipline, STS.

- Chakrabarty, Dipesh (2000) *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton and Oxford: Princeton University Press.
- Escobar, Arturo (2008) *Territories of Difference: Place, Movements, Life, Redes*. Durham and London: Duke University Press.
- Farquhar, Judith (1994) *Knowing practice : the clinical encounter of Chinese medicine*. Boulder: Westview Press.
- Farquhar, Judith (2012) 'Pulse-touching: qualities and the best practitioner', in V. Scheid & H. MacPherson (eds), *Integrating East Asian medicine into contemporary healthcare*. Edinburgh ; New York: Churchill Livingstone Elsevier: 39-54.
- Farquhar, Judith & Qicheng Zhang (2012) *Ten Thousand Things: Nurturing Life in Contemporary Beijing* Zone Books.
- Hall, David L. & Roger T. Ames (1995) *Anticipating China: Thinking Through the Narratives of Chinese and Western Culture*. Albany: State University of New York.
- Haraway, Donna Jeanne (1991) *Simians, Cyborg, and Women: The Reinvention of Nature*. New York: Routledge.
- Hsu, Elisabeth (1999) *The transmission of Chinese medicine*. Cambridge, UK: Cambridge University Press.
- Jullien, François (1995) *The Propensity of Things : Toward a history of efficacy in China*. Cambridge, Mass.: Zone Books.
- Jullien, François (2004) *A Treatise on Efficacy : Between Western and Chinese thinking*. Honolulu: University of Hawaii Press.
- Lao Tzu (1989) *Tao Teh Ching*. Boston and Shaftesbury: Shamnhala.
- Lao Tzu (2007) *Tao Te Ching*. Boston and London: Shamnhala.
- Laozi, R.T. Ames & D.L. Hall (2003) *Daodejing: "making this Life Significant" : a Philosophical Translation*. Ballantine Books.
- Latour, Bruno (1988) 'The Politics of Explanation: An Alternative', in S. Woolgar (ed), *Knowledge and Reflexivity: New Frontiers in the Sociology of Knowledge*. London: SAGE Publications.
- Law, John (2006) 'Disaster in agriculture: or foot and mouth mobilities', *Environment and Planning A* 38(2):227-39.
- Law, John (2008) 'Culling, Catastrophe and Collectivity', *Distinktion* 16:61-77.

- Law, John (2009) 'Seeing Like a Survey', *Cultural Sociology* 3(2):239-56.
- Law, John & Lin Wen-yuan (2017) 'Provincialising STS: postcoloniality, symmetry and method ', *East Asian Science, Technology and Society: an International Journal*.
- Lin, Wen-yuan (2016) 'Shi (勢), STS and Theory: Or what can we learn from Chinese Medicine?', *Science, Technology & Human Values* Published online before print September 22, 2016, doi: 10.1177/0162243916671202.
- Lin, Wen-yuan & John Law (2014) 'A Correlative STS? Lessons from a Chinese Medical Practice', *Social Studies of Science* 44(6):801-24.
- Mauss, Marcel (1990) *The gift: Forms and functions of exchange in archaic societies*. London: Routledge.
- Mol, Annemarie (2002) *The Body Multiple: Ontology in Medical Practice*. Durham and London: Duke University Press.
- Salmond, Anne (2014) 'Tears of Rangī: Water, power, and people in New Zealand', *HAU: Journal of Ethnographic Theory* 4(3):285-309.
- Scheid, Volker (2014) 'Convergent Lines of Descent: Symptoms, Patterns, Constellations, and the Emergent Interface of Systems Biology and Chinese Medicine', *East Asian Science, Technology and Society* 8(1):107-39.
- Smith, Linda Tuhiwai (2012) *Decolonizing Methodologies: Research and Indigenous Peoples*. London and New York: Zed Books.
- Strathern, Marilyn (1991) *Partial Connection*. New York: Rowman and Littlefield.
- Strathern, Marilyn (1992) *After Nature: English Kinship in the Late Twentieth Century*. Cambridge: Cambridge University Press.
- Sun Tzu (1993) *Sun-tzu: The Art of Warfare*. Ballantine Books.
- Sun Tzu (1994) *Sun Tzu: Art of War*. Boulder: Westview Press.
- 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', *Social Studies of Science* 32:729-62.
- Viveiros de Castro, Eduardo (1998) 'Cosmological Deixis and Amerindian Perspectivism', *Journal of the Royal Anthropological Institute* 4:469-88.

何炳棣 (2013) *思想制度史論*. 臺北市: 中央研究院、聯經出版事業股份有限公司.

孫歌 (2011) *我們為什麼要談東亞: 狀況中的政治與歷史*. 北京: 三聯書店.

楊儒賓 (ed) (2012) *百年人文是怎樣練成的*. 新竹: 國立清華大學出版社.

楊儒賓 (ed) (2014) *自然概念史論*. 臺北市: 臺灣大學出版中心.

葛兆光 (2011) *宅茲中國: 重建有關「中國」的歷史論述*. 台北: 聯經出版公司.