Knowing Between:
patterning, *ziran* (自然) and nature[1]

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Abstract

How to think with binaries without essentialising these or allowing them to be fixed into particular shapes? In this paper we interfere with the nature-culture dualism by exploring practices in Chinese medicine (CM). The focus is on *ziran*, the term used in Chinese to translate biomedical 'nature'. We show how practitioners understand nature-*ziran* continuities and differences as they use CM pattern differentiation to tackle the complexities of disease. Following Judith Farquhar and Mei Zhan we describe the logic of in-betweeness implied in this pattern differentiation, showing how practitioners reason in-between subject and object by working with context-specific appearances. We also show how CM practices of patterning work with analogical binaries that move from place to place without being essentialised or fixed into particular shapes. This is a logic that resonates with the STS commitment to the situated character of knowing, and offers the possibility of moving from a binarism-troubled analytical focus on 'things' and their relations, to an STS that productively makes use of pattern-inflected 'objects of practice'.

Keywords: Nature, Ziran, binary, Chinese Medicine, patterning

Introduction

It is STS orthodoxy that binary divides are troubled. Subject and object, theoretical and empirical, structure and culture, modern and non-modern, sex and gender, fact and value, each of these is the subject of large and critical literatures. In this paper we interfere with a further troubled dualism: the divide between nature and culture. Most social scientists would agree that this is a separation that is analytically or politically unsustainable, and many have worked to denaturalise nature or to explore how this is enacted within and beyond EuroAmerica in multiple and different ways.[2] New terms have been created to blur the division including gerunds ('naturing'), conjoined words ('nature/culture' or 'natures-cultures') and compound nouns ('natureculture'),[3] and it also is a commonplace that many cultures operate perfectly well in the absence of such a divide. So why add to this overcrowded literature?

The answer takes us to a further division – the gap between biomedicine and Chinese medicine (CM). It is easy to treat this as a further binary. Thus, and in opposition to biomedicine, CM has been variously understood as non-scientific, pre-modern, holistic, experiential, spiritually inspired, low-tech, proletarian, a realm for bare foot doctors, and/or simply different or complementary.[4] None of these diagnoses is entirely without foundation, but in the present context such mobilisations are problematic because they invoke and reproduce further binary versions of the world. So how to avoid this?[5] One possibility is to look for alternative strategies for handling binaries, and our argument – it is not original – is that the practices of CM offer a source of such strategies. In this paper we thus explore how

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[2] The literatures are huge. But briefly, many historians and cultural critics have explored the construction of the idea of nature (Cronon 1995), its authority (Daston & Vidal 2004), and the social and political implications of divisions such as those between city/country (Williams 1985) in a range of EuroAmerican contexts. Anthropologists have also considered its structuring implications for EuroAmerican societies (Strathern 1992), examined the importance of nature for gendering (MacCormack & Strathern 1980), and noted that the nature-culture binary is absent in many non-Western societies (Descola 2006, Viveiros de Castro 2004). Ggeographers (Hinchliffe 2007; Lorimer 2015) and sociologists (MacCormack & Strathern 1980) have similarly explored the ways in which the division is constructed or enacted in particular practices that have political implications. And the contributions of STS authors have likewise been prominent. Indeed Latour (2004) proposes the nature-culture divide as the signature of modernity, while authors such as Haraway (1989) have explored how nature is enacted in technoscience practices that refract and reproduce gender and class agendas, while Mol (2002) has shown how natural realities are done in different practices in different ways, and many have insisted on the performative liveliness of nature (Szerszynski, Heim & Waterton 2004). Finally, post-colonial scholars have explored many instances of the power-saturated character of 'nature' in north-south encounters. For a recent example see Green (2013).
[3] See, respectively, Swanson et. al. (2017, forthcoming), Haraway (1989), Yates-Doerr (2012), and http://natureculture.sakura.ne.jp/ for the journal *NatureCulture*.
4 See Barnes (2003), Farquhar (1987; 1994), Hsu (1999), Lei (2002; 2014a), Ots (1990), Pokam (2011), Pritzker (2014), Scheid (2007), Taylor (2001; 2005), Zhan(2009), Unschuld (1985; 1986; 1987), Sivin (1987) and Hanson(2015).
5 To invoke CM as a solution to binarism will simply reproduce binarism (Farquhar 2012; 2015; Lei 2014a; Zhan 2011; 2014; 雷祥麟 2010).

chosen CM practices work with (aspects of) nature in biomedicine as they tackle the complexities of disease. Western forms of 'nature', we will see, sometimes appear within CM. But CM works with the circumstantial complexities of disease in a way that is *correlative* rather than analytical. It sometimes makes binary divides, but this is only one of its many strategies.

We develop this argument in three parts. First, we try to avoid essentialising CM or treating it holistically by attending to CM *practices*,[6] and exploring how particular CM practitioners work with the notion of *ziran* (自然), the Chinese term normally used to (mis)translate the English word 'nature'. CM practitioners sometimes use the term in a naturalising EuroAmerican manner, but, and crucially, they *also* use it to index quite different Chinese medical realities. Then second, we explore the significance of this by showing how CM works with *differentiating patterns*. This means that its practitioners are equally at home with both nature-*ziran* continuities *and* differences. To explore the character of patterning we show how CM works with *correlativity* and with *propensities* – terms and practices that also have their own specific CM logics which we briefly explore. Having thus described the character of patterning, we move to our main point. This is that patterning works with *a logic of in-betweeness*.[7] Our argument is not entirely new. Anthropologists Judith Farquhar and Mei Zhan have recently made similar suggestions. But our core concern is to foreground the some of the ways in which CM practitioners reason *in-between* the subject and the object by working with context-specific *appearances*. They do this because they recognise that a patient's disease is affected by endlessly many factors, and seek to apprehend the many different mechanisms that may be at work. In short, they work in specific contexts by *knowing between* the patient, her symptoms, her circumstances, and the physician and her knowledge tradition. They work, as we have just said, with *appearances* rather than with *things out there*.

What does this imply for STS? Our answer is that with this way of thinking it become possible to imagine moving from a binarism-troubled analytical focus on 'things' and their relations to an STS that productively makes use of pattern-inflected 'objects of practice'. Thus, the CM art of patterning suggests a range of experiential-conceptual possibilities for imagining nature and culture. In one interpretation, this has direct methodological implications for two more of the binaries mentioned above, the subject-object distinction, and the theory-empirical divide. But we do not want to propose the in-between logic of patterning as a general non-binary solution. This is because to essentialise nature, CM, *ziran*,

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[6] Despite that we use the singular, CM has been developed in the form of various schools and different practices (Farquhar 1994; 2017; Hsu 1999; Scheid 2002; 2007; Ward 2012; 山田慶兒 2003).

[7] In-betweenness is a bit awkward in English. But in Mandarin, In-betweenness is one of the possible of literal translation of '之間', 'in' for 之 and 'between' for 間. In Chinese context, the term is exactly used to denote the In-betweenness. For instance, '我們之間' (我們 means 'we') can be translated into 'between us,' while it exactly means something or somewhere between us.

or patterning in this way is also to miss the point. CM patterning practices teach us rather that a range of analogical resources can be made into conceptual and practical possibilities that can be moved from place to place without being fixed into particular shapes. And this, to be sure, is a logic that resonates with the STS commitment to the situated character of knowing. Indeed, it can be understood as a possible articulation of the latter. But it is time to move to the first case and the first form of patterning.

Patterning 1: Naturalising and Essentialising

Here is Dr Hsu:

> I have gradually come to realise that CM preserves most of traditional Chinese culture, and directly presents the essence of [that] culture. ... [T]he logic of the culture is the 'worship' [inspiration by and admiration] of *ziran* ... this comes from Daoism.

> Daoism is all about *ziran*, since .... Lao Tzu said that the Dao [the way] follows *ziran*. Then all of [CM's] development ... follows the idea of *ziran*. All the way from *ziran* to [its expression everywhere including] human society, [where] it develops [into CM's] *Yellow Emperor's Inner Canon,* the *Classic of Enquiries* ... [and many other texts] that are linked to *ziran*.

For some contemporary practitioners Daoist *ziran* lies at the centre of CM, and though the term has its own complex genealogy, CM is arguably one of the few places in contemporary Chinese society where a classical Lao Tzu-like version of the *ziran* has been kept alive.[8] Like Dr Hsu, most trace the concept to Lao Tzu's *Dao de jing*, and to the idea of the self-creation, co-creation, self-transformation or 'self-(the way it is)-going' of the 'ten thousand things' (萬物 meaning the 'universe'[9]). In Chinese, *ziran* has been a contested term. In a Lao-tzu tradition *zì* means 'self' and *rán* means 'the way it is', 'let things be themselves', or 'let their nature unfold' (Laozi, Ames & Hall 2003,68-70). Understood this way, in Daoism *ziran* is about return to the Dao (Laozi, Ames & Hall 2003, 69), that is to the spontaneous and therefore appropriate transformation of the ten thousand things (meaning all things including people.) Over two and a half millennia this understanding has been transformed in many additions and reworkings that have reflected social, religious and political changes (楊儒賓 2014). Ziran is thus an equivocal term generated in different circumstances and conjunctures (Jensen & Morita 2017). However, it was in the Qing dynasty (1644–1911 CE) that the term started to connote 'nature' in a more or less Western sense, and this meaning has substantially replaced the Daoist sense of 'self-so-going' in the contemporary Chinese world (林淑娟 2009).

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[8] In this short piece we cannot explore this genealogy. But see 蔡璧名(1997) and 楊儒賓(2014).

[9] Whether Daoism is committed to the idea of a universe is a matter for debate (Laozi, Ames & Hall 2003; 牟宗三 1983; 徐復觀 1999; 陳鼓應 2008).

But does this mean that *ziran* is necessarily to be contrasted with the Western notion of 'nature'? The answer is no: this is too simple, too binary. Even the briefest gesture at the complexities of its history reveals how important it is to avoid essentialising. So, as we noted in the introduction, we need instead to make a detour and ask how *ziran* is enacted in different CM practices.

A little more summary history. At the end of the nineteenth century, Western biomedicine began to challenge CM. As many have noted, the Western idea of an objective nature that goes with modern biomedicine was used to criticise CM, and the notion of nature began to replace many versions of *ziran* (Kim 2006; Lei 1999; Lei 2014b; Sivin 1987). For instance, in contemporary CM practices, there is a common way of re-framing *ziran*. In this scientists and doctors scientise and naturalise the world of CM in an attempt to prove that CM is theoretically sound, rather than merely being of practical use (Hsu 2011; Scheid 2014; Scheid & MacPherson 2012; Taylor 2001). One example. Professor Chang trained in aviation physics and communication and worked at Bell Labs before becoming a Professor in bioelectronic engineering. Trained when he was young by a famous acupuncturist in Taiwan, he did not become a formal apprentice because taking the required oath of secrecy would have restricted him from doing scientific research on CM.

Chang argues that critics reject CM for three reasons: first, because its theories cannot be verified with modern instruments; second, because it cannot be mathematised; and third, because it cannot by explored using the logic of analytical reasoning. Chang is also interested in Needham's great question: why East Asian technology was outstripped by European technology and science after the sixteenth century. Like Needham he is interested in the distinction between East and West world views. And again like Needham, he says that the Chinese world was committed to a wave world view, while it was the European commitment to a particle-based cosmos combined with mathematical tools, that made European advance possible. But after decades of experiments and development, he believes that it is also possible to mathematise the world of *qi* (氣, energy, movement, force, essence central to CM diagnoses and treatment) using what he calls a 'chaotic wave theory of fractal continua'. This is a mathematical model for explaining *yin* (陰) and *yang* (陽) and the five phases dynamic of the *qi* system of CM and Chinese natural philosophy.[10] Chang's model rests on the differing philosophical assumptions of biomedicine and CM. He says that in biomedicine nature is taken to be composed of lifeless atoms, elementary particles which collide and have effects on one another. This is a system which starts by trying to specify single cause-effect relations using analytical logic. Here humans can control nature because

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[10] These are wood (木), fire (火), earth (土), metal (金) and water (水). All the phenomena in *ziran* can be correlatively assimilated to these five elemental qualities. This means that lines of correspondence can be drawn between meridians, directions, colours, climates, musical notes, emotions, tastes, sense organs, and parts of the body.

the latter is passive whilst the former are active. By contrast, *ziran*, which includes everything, is understood as a continuum with a fractal structure. But since such wave or field interactions have effects in which multifold causes and effects are intertwined, analytical logics of division do not apply. And this has implications for how people should live. People are part of *ziran* and need to achieve harmony with and within *ziran*.

In this model *ziran* is treated as a continuum of multi-level functionality that is statistically self-similar at each level of scale. The meridian network of the body crucial to CM is understood in the same way, while biomedical nature becomes a particular version of the movement and interaction of particles, and ziran in CM is about the movement of and connections between waves and fields. Conceived in this way, Chang proposes three 'laws' to demonstrate that *ziran* is not mysterious but simply different. This is because (paradoxically) it can be modelled in ways derived from modern (Western) science.

Lao-tzu on the one hand and the chaotic wave theory of fractal continua on the other, here we have two versions of *ziran* in two versions of patterning practice and of articulating nature-ziran relations. And though they are very different, each leads to an either-or choice: *ziran* on the one hand and nature on the other. This is a common and useful binary way of patterning. However, as we have noted the world is crowded with binaries and by itself this does not help us much if we wish to circumvent these. This is because CM practitioners are indeed familiar with such binaries as *yin* and *yang*, *qi* and blood, heaven and earth, and many more. But CM does not end up with binaries. There is much more going on.

Patterning 2: Separating

To see this look again at the divides created in the first two strategies: by the commitment to Lao-tzu on the one hand and wave theory on the other. For, different though these are, they also reveal similarities. So, for instance, they both assume the world to be full of *qi*, and that all things in the cosmos[11] have their own *qi* that circulates through and resonates between them. The dynamics of *yin* and *yang* including their expansion and contraction, together with the five phases are used to conceptualise this circulation. To a first approximation, in most CM practices *ziran* is the smooth flow and balance of *qi*: it is how things are supposed to be and how they are supposed to unfold. And CM works by detecting and correcting *qi* imbalances – that is, it seeks to restore *ziran*. But *qi* and the meridians in which this circulates have no place in biomedicine. This is what bothers Professor Chang.

That said, in practice the two systems coexisted for several centuries after biomedicine came to Asia. They were simply held apart. But, as noted earlier, since the early twentieth

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[11] As we noted earlier, whether CM is committed to the idea of a cosmos is a matter for debate (Kuriyama 2002; Nappi 2009; 李建民 2000).

century, in contexts of national crisis in China and Japanese colonialism in Taiwan, many felt the need to modernise and scientise CM. An example: a widely used Chinese textbook starts by noting that CM works by following *qi*-transforming *ziran*, and then immediately moves to say that *yin* and *yang* reveal a 'confusion of concepts' and 'lack of conceptual precision' (Wiseman & Ellis 1995,12). This, then, is another and different way of dividing. But there are also other and less radical ways of distinguishing between nature and *ziran*. Dr Jen:

> While CM follows yin-yang and five phases, biomedicine follows positivist science. Biomedicine is about [things] fighting [one another] … It kills and cuts whatever is regarded as bad. It might be good at uncovering problems, but this is not the way to solve a problem. Take antibiotics. These were said to be able to kill germs and cure disease. …But [when] *ziran* changes … antibiotics do not work as well as they did before, because biomedicine cannot predict how germs will change in the future.

> CM does not work in this way... If you have a burglar breaking into your house… to scare him away all you need to do is to make a noise... [In other words] you only need to change the environment in the body so that it becomes inhospitable for germs… or to use medication to make a way out [of the body for those germs][12]. [If you do this then] germs will not change and they will not be changed [either]. This doesn't mean that CM has no medication that can kill germs. The difference is that none of ... [its medications] is specific…there is no specificity in *ziran* so germs will not change.

> … They are completely different. … biomedicine prescribes antibiotics to fight germs directly. And if your body aches and [you have a] fever, then it will use painkillers and antipyretics. But these are just for the tips [ie superficial symptoms] (治標). …. What does CM do? When [fever and aches are] ... wind-cold (風寒) we [use medication to] 'dispel [ie disperse] the wind by resolving the exterior' (祛風解表), and if … [they are] wind-heat (風熱) … we 'clear heat by resolving the exterior' (清熱解表). [Using medication we] find a way out for cold and heat… [This is] … all very simple. You don't need to fight them.

This is another *strategy of separation* and it works in two ways. First Dr Jen is distinguishing a biomedical version of 'nature' from CM and its *ziran*. He is telling us that CM is not specific to germs. It does not challenge or fight them, so its treatments do not overwhelm *ziran*. Instead it uses CM medication to change the condition of the body. This means that the focus of CM is neither on the body nor on germs, but on *what is happening in between*. And this is why CM uses terms such as *yin* and *yang*, terms *that cannot be directly defined*. There are various ways of (not quite) saying this. One is to note that they only make sense in the dynamics that unfold *between* them across the patient, the body of the patient and the

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[12] Dr Jen's use of language has shown one way to instantiate the patterning of ziran in CM. Here, cold and heat are treated as if they were inside the body. But we will see this is not exactly what CM patterning is about.

environment – an environment that includes the physician and his/her interventions. To put it differently, CM is situation-specific, working with and within the relational unfoldings of *ziran*. Unlike the descriptive terms used in biomedicine, *yin* and *yang*, or cold and heat, lack specific referents that correspond to specific objects in the world (Farquhar 2012). Indeed, such descriptions are neither helpful nor appropriate. Instead it uses a situationally specific working language that is adapted to situation-specific problems.

Patterning 3: Simplifying

So there are patterning practices separating nature and *ziran* that work by essentialising and naturalizing *ziran*, and situating it in relation to nature. But there are other patterns for relating the two, and one of these is *simplification*.

> Both CM and biomedicine treat disease. But in biomedicine… when they discover a disease they give it a name. [And there are more and more…] …. So you have *lupus erythematosus*, the class of rheumatoid arthritis, hepatitis, and so on. Then they explore the immune system, antibodies, DNA and RNA, and so on, and so on …. [So] Western medicine goes deeply into details, but in CM we see the body as a whole. Then, sorry, all your details are just a single term for me: the deregulation of the relations between *yin* and *yang* (陰陽失調). If you stay up late and don't go to bed at the right time, then your immune system becomes disordered. When you don't follow *yin* and *yang*, *ziran* fights back, and cells accordingly ('naturally' self-so-going, *ziran*) die and all that…. This is the general picture, and I don't need to know what your [biomedicine] is messing up. It is easy for me. I need only to rebalance your *yin* and *yang*…. We refer patients to a medical centre [for biomedical examination] but they refer complicated cases back to us.

This is Dr Zhou's work with mysterious, difficult, and complicated diseases is well known. And as we can see, like Dr Jen he works by simplifying diseases that have been complicated in biomedical nature. Again like Dr Jen he works with *ziran*, with 'self-so-going' or the 'balancing' of *qi*. And this is why he reduces biomedical specificities to *yin* and *yang* both literally and metaphorically. *Yin* and *yang* are situated binaries for the endlessly contexted places between passive and active, low and high, or female and male. However, and more literally, Dr Zhou is also talking about the movements of the *qi* of *yin* and *yang*, for it is their balance and imbalance that is the basis of health and illness. Here then, and like Dr Jen, Dr Zhou is telling us that biomedicine pushes in the direction of ever increasing analytical detail. By contrast, in his own CM he is working *correlatively*. That is, he is seeking to recognise the dynamics of *qi* that run through and make the world. This is the first of the key steps that will lead us to the CM art of patterning. But what is correlativity?

As we noted earlier, in the world of *ziran*, *qi* circulates between, resonates with, and transforms things.

One of Dr Zhou's specialities is spinocerebellar ataxia, a disease whose genetic origins have been described but which remains biomedically incurable. But for Dr Zhou it is curable. An example. For one patient he diagnosed 'kidney yin vacuity and damp-heat in the liver meridian' (肝經濕熱、腎陰虛損) and treated this using the principles of clearing (清) and supplementing (補) including 'clearing liver heat' (清肝熱) and 'enriching (kidney) *yin* and bearing down on fire'(滋陰降火). Here, somatic and genetic complexities are not the point. Dr Zhou tackles neither the cerebellum nor genes, but works with the liver and kidney meridians. He attends to the circulation of *qi* between the visceral systems of the five *zang* (五臟) and the six *fu* (六腑)[13] in the twelve meridians correlated with the dynamics of five phases. When this circulation is severely depleted kidney (water) is no longer able to nourish the liver (wood) and serious problems result. The bottom line is this: to specify patterns of imbalance between and within the visceral systems is to reduce the analytical complexities of nature to the relative simplicity of *qi* and its circulation.

But this is simplicity of a particular kind. Biomedicine simplifies complexity by looking for underlying causes and mechanisms. By contrast, CM works by metaphorical or analogical simplification. *The Inner Canon* tells us:

> *Yin* and *yang* have names but they have no shape. [But when the principles of *yin* and *yang* are specified] they can be counted into ten, divided into hundreds, scattered into thousands, and inferred into tens of thousands. (Translation by authors)[14]

And this catches the simplicity but also the potential complexity of CM, because naming is simultaneously necessary and it misses the point. Thus, in practice CM works by drawing on a huge range of possible resources. These include *yin* and *yang*, cold and heat, the five phases, and the twelve meridians. A well-trained CM practitioner such as Dr Zhou has all of these analogical resources and more available. The simplicity of his practice thus depends on *correlativity*. This term describes *a process of analogical mobilisation*: of determining what it is that goes with or metaphorically resonates with what in a particular context. But this is a simplicity that depends on knowledge, skill and practice:

> Chinese medicine … is accumulated from experience, implicitly building on and systematising the fundamental principle that "the full will empty and the depleted will grow" (盈虛消長) … . (馬光亞 2006,4)

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[13] The five *zang* are heart, liver, spleen, lung, and kidney and the six *fu* are the gallbladder, stomach, large intestine, small intestine, bladder and three burners (三焦)

[14] This quote comes from chapter 41 of Ling-su (靈樞) of *The Inner Canon*.

Full and empty, or depleted and growth, it seems that we have more and more binaries. We cannot explore the different analogical clusters that populate Chinese medical practice here. However, what is important in this context is that correlative simplicity is essential to the art of patterning, and that this quite often works with the dynamics of situated binaries. In this pattern *ziran* simplifies nature. It is being practised as contextual, situated, mobile, and somewhere in-between what is or has been known and what is yet to be known and worked with. Whatever the complexities and details, situated empirical observations are flexibly absorbed and simplified into the equally situated categories offered by the relevant conceptual tools. This means that despite the energetic development of a range of different CM schools, these share a relatively limited range of conceptual resources and theories, and those resources can be multiplied and applied to make sense of the endless flow of novel facts and artefacts – up to and including gene inversion. The implications of this are profound. First, the categories being mobilised (examples we have seen above include liver and kidney meridians, and heat and vacuity) are *simultaneously empirical and conceptual*. And second, this means that the art of patterning is able to detour around another of the EuroAmerican binaries that we noted in the introduction: the gap between theory and practice.[15]

Patterning 4: Mixing

However, CM and its practitioners also need to work with and alongside biomedicine. Many patients with chronic illness in Taiwan seek treatment from both biomedical and CM practitioners, so the latter commonly work with *ziran* in a context of biomedical interference. Here is Dr Song:

> Being ill is being unbalanced. It is all about *yin* and *yang*. Take high blood pressure and diabetes for example. These are usually [caused by] imbalance between *yin* and *yang*. Most [such cases] are *yin* deficient….

> CM emphasises the oneness of heaven [all things] and of the human (天人合一) [as a part of this].[16] Chinese medication is part of what already exists between heaven and earth. Our body [which is part of *ziran*] has those diseases and it is *ziran* ['natural' in the sense of following the principle of rebalancing] to find medication for the diseases in *ziran* [meaning Western 'nature out there']. We use medication … to correct the biased propensities (偏性) of our body…. When the body is too hot, then we use cool

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[15] Here we follow Mei Zhan (2014). A patterning-inflected STS will be one that unsettles the relations between the empirical and the conceptual, the concrete and the abstract, and the contingent and the universal by treating 'the experiential as conceptual'

[16] See Yo (2003) and 余英時 (2014) for examples of the genealogy of the concept and Zhan(2011) for its complexity in contemporary practices.

or cold things from the great *ziran* ['nature our there'] (大自然) … . When the body tends towards cold then we use things that are warm or hot ….

Dr Song sees many patients with chronic illnesses who have been under long-term biomedical treatment. She argues that while it is unlike biomedicine, CM can rebalance the effects of the latter. So CM follows ziran to remedy the imbalances in the body that led to disease, but it also countermands the additional imbalances induced by the 'modern pattern' of biomedical intervention. It does this by drawing on and using the contexted and relational propensities (*shi*, 勢, momentum, inclination, position, disposition) of *qi*.[17] A diseased body is one that deviates from its ordinary and balanced course, and medical intervention is a matter of understanding the propensities (*shi*) at work (including those that are the effects of biomedicine) and manipulating their configuration in order to achieve rebalance. In this practice (biomedical) nature has propensities too.

Dr Song:

> Unlike Western medication … CM is a progressive [process of] rebalancing. Western medication represses. It does not deal with the root problems of the body. …. It is like using a rock to press down on a see-saw. After you take the rock away, the see-saw jumps up. [The working of] Western medication [on the patient's body] is like a rock. When patients [using biomedication] come to me I have to reduce their medication little by little. Then [the see-saw] doesn't bounce back straight away and my Chinese medication can tackle the symptoms as they slowly emerge.

In this pattern, Dr Song mixes biomedicine into her practices. Making use of its situated binaries, she is saying that biomedical drugs have the propensity to repress the symptoms of the imbalanced body. This means they are 'cold' in the correlative sense of CM. This means, she says, that these drugs add to imbalance because they work against *ziran* by failing to see the overall pattern of *shi* in disease and biomedicine when these are mixed together. For instance, she says that high blood pressure is usually caused by the imbalance of *yin* vacuity with *yang* hyperactivity (陰虛陽亢) and the body needs to increase blood pressure if it is to keep going. Biomedicine focuses directly on the problem of high blood pressure, but the drugs it uses are themselves 'cold' and further weaken *yin* and *yang*, and if *yang* is depleted then blood pressure declines.

By contrast, CM follows the shi of *ziran* and does not repress disease, but rather seeks, little by little, to modify the propensities at work in and through the body. It looks at the larger picture and works to enrich *yin* so that this calms hyperactive *yang*. The metaphor of the see-saw is thus also a way of talking about how CM follows workings of *ziran*, but this is a *ziran* with that includes biomedical propensities.

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[17] See Lin (2016) for how CM works with *shi*.

In-between: the arts of patterning

There are many differentiating possibilities. Sometimes the complicated details of nature are reduced in a correlative *ziran*, and sometimes the interferences of nature reshape propensities. As we have seen, there is also a range of ways in which *ziran* and nature can be separated. There are many more patterns of *ziran* and of *ziran*-nature relations, and even nature in its most solid forms sometimes gets melted into *shi*. So there are very many frameworks for mobilising binary resources in patterning. But what should we make of this? What does it tell us about the art of patterning and of pattern differentiation? Is this something that might be used in STS? And if so, then how might this be imagined?

First it is important to say that there is no right answer to these questions. Though there is a popular saying that CM practices use patterning in diagnosis and treatment, the role of patterning is also a perennial topic of debate.[18] Doctors from different schools might disagree about the causes of a disease in a person, differentiate between patterns in different ways, and devise different strategies (Farquhar 1994, 61-146; Scheid 2007), while doctors from the classic Cold Damage School deny that they do pattern differentiation at all. The popular strategy of 'pattern differentiation and therapy differentiation' and such associated terms as 'disease'[19] and 'syndrome/pattern'[20] also have contingent genealogies (Scheid 2014) which are sometimes traced to *The Inner Canon*.[21] Thus, although the idea of pattern differentiation was central to the communist political synthesis of TCM, and different schools have developed different modes of patterning, those techniques have never been unified (Scheid 2002).

Having entered this caution, we nonetheless want to argue that the art of patterning suggests a *practical strategy* for specifying similarities in realms far removed from CM. With the principles of correlativity and propensity, patterning offers situated and non-binary ways of working *in-between*. So what is patterning? And how to differentiate patterns?

Let us return to Chinese medicine and to Dr Ma's (2006,3) advice that 'Chinese medicine … is all about pattern'. We have noted that patterning works analogically. This means that it is impossible to make it universal. Different medical schools and practitioners use a wide range of causes, locations, propensities, natures and disease problems to differentiate

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[18] The standard claim is actually more complex. It is that CM works by detecting 'patterns' (lǐ, 理), deliberating on the appropriate method of treatment (法), designing the prescription (方) and prescribing medication (藥) (Wiseman & Ellis 1995).

[19] Disease (bìng , 病; without the ontological implication).

[20] Syndrome (zhèng, 症)/pattern(zhèng, 證).

[21] Chapter 67 of Su-wen (素問) stresses the importance of comprehending the manifestations and images of *yin* and *yang*: 'The yin and yang of heaven and earth cannot be counted and further extended [through enumerations]; they are referred to by images…. Now, where the manifestations (候) being, the Way [of understanding, 道] emerges. That must be comprehended.' (Unschuld 2003, 191-193)

patterning (馬光亞 2002,66-76). But this is not because Chinese medicine is chaotic. Rather it is because knowing between is irreducibly *situated*. And because, as part of this, it *necessarily* respects differences. So, for instance, Dr Ma (2006,7) talks about *yin* and *yang*.

> *Yin* and *yang* in Chinese Medicine are not 'mysterious', they are used for reasoning, they are the halves of two sides of positive and negative. You compare them and you elaborate them, and then you know the pattern of *yin* and *yang*, and you understand depletion, excess, coldness and heat.

Remember this too: *yin* and *yang* are names *but they have no shape*. This means that in different contexts they come in very different forms. They may appear as depletion and excess, as coldness and heat, or as inside and outside, and these are just a few of the metaphors that come with the pairing. Except that to talk, as we have been, in terms of 'metaphors' or 'analogies' is also misleading. Dr Ma (2006, 7-8):

> What is 'depletion'? To be 'depleted' means that the body is deficient, and that is *yin*. What is 'excess'? 'Excess' means that pathogeny and evils predominate, and that is *yang*... Chinese medicine can improve any difficult disease with such methods of pattern differentiation.

Ma is telling us that (in this case) depletion and excess are not *like* – they do not *resemble* – *yin* and *yang*. They are not applications or uses of resources from a separable metaphorical or conceptual domain. Instead, he is insisting that depletion and excess *are* themselves nothing other than *yin-yang*. Or coldness and heat, or any of other many possible pairings. And the same applies for any of the other practical-conceptual resources for patterning. There are, for instance, different colds in different patternings. There is cold that restricts the exterior (寒邪束表), cold that depresses meridians (寒鬱經脈), cold that strikes inside (寒中於里), and there is cold in different viscera (馬建中 1980). These colds are names with different shapes in different and situated patternings. Rather than working down, analytically, to discover instances of a general category, they work, as it were, sideways (Gad & Jensen 2016). Anthropologist Mei Zhan (2014) talks of this as (a contextual) 'empirical as conceptual', and this is a phrase that well catches what is happening in correlativity – that is the expression of *shi* of the body. This is the logic of in-betweenness at work.

This means that diagnoses are contextual and specific, and different diseases might have the same diagnosis, while the same disease may have different diagnoses. Dr Ma (2006,4):

> CM understands disease in *ziran*'s [way]. When a patient is ill, there must be appearances of the disease. People's bodies are different, and the unfolding of a disease may happen in various ways. So, in clinical practices, [we] have to think on the one hand from the patients' constitution, and on the other hand from the disease she suffers. One's constitution can be depleted or excessive, the disease can

be serious or minor, exterior or interior, and there are all kind of varieties in the causes, [we] can only make reliable judgement by relying on pattern.

So, for Dr Zhou, spinocerebellar ataxia *for a particular patient* is 'kidney yin vacuity and damp-heat in the liver meridian', but this diagnosis is not generalizable to other patients with the disease, though it applies to insomnia for another patient. While for Dr Song *both* high blood pressure and diabetes are often diagnosed as '*yin* vacuity with *yang* hyperactivity with modern pattern'. At the same time, we see Dr Zhou differentiating patterns by both cause and location, while Dr Song patterns by cause alone. This is why Dr Ma (1980,2) concludes that unlike biomedicine which examines 'things'(物), CM *patterns 'appearances'* (象) [our italics].[22] That is, *the patterns appear between the practitioner and the disease of the patient*, and always in specific circumstances.

And this leads us back to patterns of *ziran* and its relations to nature. While biomedicine attends predominantly to 'thingness' or to what one might think of as doing 'things out there', CM practitioners attend to the appearances of diseased bodies. *Things* and their detection, versus *relational appearances*, that is the tension. Judith Farquhar describes the logic in this way:

> The analytical phase [in CM] …must be seen as opening a range of possibilities that are variously deployed according to the conditions of the moment. These conditions naturally include the habit and the training of the doctors as well as the manifestation of illness with which he is dealing*. (Farquhar 1994, 134).

The pattern is neither a subjective interpretation by the doctor herself, nor an objective representation of a disease out there. It lies *between*. Farquhar, talking of one particular CM practitioner, writes as follows:

> [Dr Lu Guangxi's idea of *duixiang*(對象)] is literally translatable as the *image we face*. It is a perceptible element of the manifest world, but not necessarily a massy object, and it is irreducibly relational. A *duixiang* exists only in relation to a perceiver or an actor – some common translations for the word are 'target' or 'partner'; translation as 'interlocutor' or 'objective' also works in some contexts. A *duixiang* is a complex entity that emerges from practice, but it does not do so merely as a product of the investigator's imagination – if this thing is solely imagined, how could anyone learn from it…? The *thing* is thus a site at which specific process (always more than one process, and never fully under the control of one actor) converge. Such a thing is by definition spatio-temporally unique and requires a situated perceiver. *Duixiang* things

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[22] Working with this pragmatic strategies, he introduces a range of ways of patterning in the six warps (六經), the visceral systems (臟腑), the eight rubrics (八綱), and the four sectors (衛氣營血) (馬光亞 2006).

are our partners in perception, not the mere object of our perception. (Farquhar 2015,231-232)

This is 'bedside metaphysics' (Farquhar's term). Dr Ma and Dr Lu are telling us that while there might be different schools of patterning they nevertheless work in the same way. And this is what *patterning* is about. It grasps the existence of *duixiang* objects of practice, by engaging in *duixiang* generating practices (Farquhar 2012,166). And this is what we mean by *in-betweeness*. Patterning does not deal with 'thingness' or 'objects out there.' Instead it knowingly detects and generates *realities-as-appearances*, realities that lie between how analysis is done, the tools for analysis, and 'the object' being analysed. Between, that is, the theoretical and the empirical, the subject and the object, and modern biomedicine and non-modern CM. And, to be sure, nature and *ziran.* But, remember, *pattern is situated.* It *always* lies in interactional specificities.

Conclusion

In this paper we have attended to some of the practices in the world of CM. Our focus has been on how these work with continuity and difference, and how practitioners use *ziran* and *ziran*-nature relations in their encounters with biomedicine. Practitioners, we noted, work by patterning their patients and the diseases of their patients. They are necessarily situated and contextually dependent. They do not necessarily work within an overall framework. There may be no overview. That said, it is possible to juxtapose different frameworks. Indeed, this juxtaposition is crucial to the method. It allows for correlative relations between particular diagnoses and makes it possible to mobilise a more or less indefinite range of empirical conceptualisations.

All this tells us that the logic of CM patterning departs from those typically found in the practices of biomedicine. But the lesson can also be extended to STS. This is because the *logic of in-betweeness* suggests a way of thinking about and perhaps circumventing the binary troubles of STS. Were our CM accounts above descriptions of things 'out there'? No doubt they can be read that way for, despite the well-rehearsed difficulties, the tug to representation in academic STS remains strong. But there is an alternative. Those accounts can, instead, be understood as attempts at *patterning ziran*-nature relations in the location in which we find ourselves, a set of practices that *generates appearances* by bridging particular ethnographic and historical materials, political and analytical concerns, STS traditions and institutional conventions. But since practices are sensitive to context the frameworks may shift too: this is what the focus on patterning tells us. And as they shift so, too, do appearances. Such is the character of *duixiang* or in-betweeness. And such is the message of this paper.

At the same time we also need to move with care. For reasons that will be obvious, the logic of in-betweeness is cautious about generalisation. How far do particular patternings extend?

This is uncertain. And this is why we write about 'frameworks' in the plural. And it is also why we cannot conclude with a straightforward recommendation that STS should move from theoretically informed referential description to the patterning methodologies of in-betweeness. For in STS, practitioners know about contexts and situated knowledges and stress the performative contingencies of knowing. At least in principle they also know that those contingencies apply equally to their own practices. But the logics of patterning pitilessly press this lesson home. They insist that appearances are complex, perhaps 'syncretic', irreducibly context-bound, and essentially specific. They are also cautious about generalisation. But this is precisely why thinking in-between might suit STS.

Our concluding suggestion is thus that it might often be wise to move from a binarism-troubled and analytical 'STS of things' to one that works knowingly, with pattern-inflected 'objects of practice'. The issue is neither to do away with binarisms, nor to create new non-binary terminologies. We are not suggesting that 'CM' is the solution. Nor are we proposing *ziran* as a holistic alternative to the binary separation of nature and culture. As we earlier noted, to essentialise nature, CM or *ziran* is to miss the point. CM practices teach us instead that while analogical binaries might have names, they can also be made into possibilities that will move from place to place without being fixed into particular shapes. This is how CM practitioners practise the art of patterning. They work with situated and multiple frameworks, and they do so in endlessly many ways. If there are binaries these do not need to be essentialised: instead they can be mobilised, as appropriate, in ways that are situated. Such is the art of patterning.

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