Ziran: difference in a postcolonial world

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Abstract

In this paper we learn, unlearn and relearn a term that comes from Chinese medical (CM) practices. That term is *ziran* (zìrán, 自然). In a direct translation *ziran* is usually rendered as 'nature' in English. However, this paper does not seek to interpret or reinterpret *ziran* itself. Neither does it seek to determine 'the differences' between nature and *ziran*. Instead, as an exercise in imagining a possible post-colonial and more symmetrical STS, it explores the variable ways in which the term is used to imagine differences between CM and biomedicine in CM practices. The object, then, is to think about difference – differently. Tracing chosen CM practices we find that *ziran* is not fixed by its practitioners, but moves and shifts as they imagine how these relate. So *ziran* works in ways that allow biomedical objects to find a place in CM; objects give way to appearances; the complexities of biomedical classification give way to the simplicities of *ying* and *yang* and then to the resonances of correlativity; and differences are melted into propensities. These CM practices suggest that one way to rethink difference is to cultivate the idea when we are writing we are not describing objects-out-there, as it were in nature. Instead we are telling about appearances or *realities in-between* subject and object in a way that resists the tug towards referentiality implied in Western academic forms. Our readers are therefore invited to sense our descriptions as situated appearances that have arisen between the authors and themselves, between CM and STS, and between the concerns and to-and-fro tensions of a bi-lingual collaboration. Our suggestion is that these are the skills that we will need to collectively acquire if we want to learn from our CM practitioners about working in-between.

Keywords: *Ziran*, difference, in-between, Chinese Medicine, postcolonial STS

Introduction

In this paper we learn, unlearn and relearn a term that comes from Chinese medical (CM) practices. The term is *ziran* (zìrán, 自然). In a direct translation ziran is usually rendered as 'nature' in English. This is not always wrong. At the same time, *ziran* has a quite different Chinese history that reaches back thousands of years, and parts of that history are reflected in present-day CM practices where it sometimes means the balance between things, or the unfolding of the nature of things. However, this paper does not seek to interpret or reinterpret *ziran* itself. Neither does it seek to determine 'the differences' between nature and *ziran*. Instead, as an exercise in imagining a possible post-colonial and more symmetrical STS, it explores how the term is used in CM practices to imagine differences between CM and biomedicine. The object, then, is to think about difference – differently. And the reason for this is that while social science and STS are international: one, their centres are mostly in Europe and North America; two, they are largely practised in the English language. And three, they mostly use Western conceptual resources (Law and Mol 2020). This, then, are academic forms that squeeze marginal places and countries, alternative non-English tongues, and non-Western conceptual resources, *ziran* included.

Perhaps this does not matter. In this way of thinking: one, the centres of social science are Western, but as others get up to speed this is changing; two, the domination of the English-language is an historical contingency but any field of international endeavour needs a lingua franca; and three, the conceptual resources of Western social science are so powerful that it is no surprise that these are internationally adopted.[1] But the counter arguments are also obvious: one, international social science can be understood as a continued form of intellectual and linguistic colonialism (Chakrabarty 2000, De la Cadena 2015, Harding 1991, Abraham 2006, Anderson 2002, 2017, McNeil 2005, Prasad 2009, Seth 2009, Sylvester 1999, Verran 2002); and two, since Western intellectual ways of thinking are specific, it is a mistake to exclude quite different non-Western conceptual and linguistic resources from social science (Mol and Law 2020, Law and Lin 2017). Such is the asymmetrical backdrop to our paper.

[1] The first and third of these claims is implicit in international academic structures in which non-Western students acquire PhDs from Western universities, and in the creation of global rankings for scholars, institutions and journals; the second is reflected in the way in which high-ranking journals are generally Anglophone. For a recent survey see Law and Mol (2020).

In this paper we therefore chip away at this asymmetry within STS using resources drawn from CM to think about difference. Historically this term was often a way of talking about Euro-American exceptionalism. Were Europeans racially, or merely culturally, superior? Were they more rational than others, or simply lucky enough to have inherited a scientific or critical method not (yet) available to others?[2] The pushback against such assumptions of superiority goes back at least a century. Within (but also because of) its colonial context, anthropology made serious efforts to understand the logic of non-Western beliefs, while after the horrors of Nazism 'race' became the unscientific product of political and colonial agendas.[3] More recently, difference has been reinterpreted within postcolonialism as a dominatory orientalist projection, while STS has reinterpreted natural science as just another form of pragmatically workable material culture.[4] But, as many have noted, practices of social difference such as these are entangled with the divisions between nature and culture that also run through Western culture. The social science argument about how these two repertoires intersect is usually that nature and culture are generated in contingent forms of social practice, but nature is quickly transformed into something given by natural reality that is essentially different from culture and cannot be changed(Evans-Pritchard 1937, Gellner 1970, Lévy-Bruhl 1966). In this purified role nature then becomes available to justify what might otherwise be the defeasible contingency of social arrangements such as gender or ethnicity.[5] The quick lessons from this swathe of Western social science work are, one, that it is practices that make difference, two, that despite appearances those differences are not foundational, but, three, that they are none the less powerfully and asymmetrically performative.

So what does CM have to teach us about difference? We explore this question by mobilising a particular word, *ziran*, that appears in contemporary CM practices in Taiwan, a country in which most practitioners are trained in both biomedicine and CM. Indeed, Hsin-chu City, where Lin does his fieldwork, is full of high-tech companies and highly educated professional engineers. This means that CM

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[2] The literatures are large. For a classic example see Lévy-Bruhl (1966). For a more recent example see, eg Needham (1998) and Gellner (1970).

[3] See, for instance, the work of Evans Pritchard (1937).

[4] See Said (1991) and Latour (1993), and Horton and Finnegan (1973) for an anthropological context.

[5] See Bruno Latour (1993) and Donna Haraway (1991) for purification and hybridisation arguments and Annemarie Mol (Mol 2002) for how the multiple enactments of arteriosclerosis in different sites are made into the virtual identity of a disease in practices of making links and coordination.

practitioners need to take biomedicine and how it works into account both in their practice, and in how they talk to their patients (林文源 2018). For such practitioners *ziran* is a term they usually use to distinguish between CM and biomedicine, in which the former uses natural herbs, treats the person as a whole and restores the balance between the world and the body, while the latter uses artificial compounds to treat particular diseases and transform the world and the human body. So, to a first approximation, the way *ziran* is used by practitioners indeed leads to difference. But, here's the twist, despite the fact that we have just listed a series of contrasts, sometimes it does indeed make the divide in this Western manner. As we argue in what follows, it works instead as a way (or more correctly, as an endless suite of ways) of mapping the relational configurations that lie in-between differences[6] that does without any tug to essentialism or exclusion of the kind that is at work in many Western ways of making major divides.[7] Instead, *ziran* in CM practices, works in-between.

Such is our argument. But before moving on we need to clear just a little more ground. As is obvious, we are writing in a 'Western' rather than a 'Chinese' idiom. Though our hope is that we can interfere in this, this also means that we are in substantial measure also reproducing the conditions of international asymmetry mentioned above. In particular, we are writing (a) in English, (b) in part from the geographical centre, and (c) are also using the conceptual resources of Western STS. Obviously, if we are to do STS we have no choice: the conditions of interference are not symmetrical. That said, there is one STS resource that is particularly important for our argument: this is its commitment to an empirical focus on practitioners, their practices, and the words they use to describe those practices.

This is important because STS teaches us that to make arguments 'in general' is misleading. Instead, it is crucial to attend to specificities. But this immediately leads us to a paradox. On the one hand we need to lean on a 'general' framing about colonial-international social science if we are to explain to STS readers why it might be important to attend to Taiwanese CM practices. But on the other hand, that

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[6] 'In-betweenness' is awkward in English, but it is a possible literal translation of Mandarin's '之間', ('in' 之, and 'between' 間). For instance, in terms like '我們之間' (我們 means 'we') can be translated as 'between us,' while it literally means something or somewhere between us, in CM practices as we will elaborate later things are not immobilized first then the in-between is created, they are part of the relational configuration.

[7] This paragraph is no exception.

framing is indeed too general. This is partly because it conflates geography (centres of social science), language (English), and conceptual domination. And it is partly because it rests on a series of large-scale but hazardous contrasting terms that include 'East' and 'West', 'Taiwan' and 'EuroAmerica', 'Chinese' and 'English', and 'biomedicine' and 'Chinese medicine'. None of these contrasts is easy to avoid in practice, and indeed we use them here. At the same time they are misleading because they simultaneously: (a) conflate different kinds of differences; (b) binarise each individual difference; (c) talk down the interactions between the terms that they are separating and the realities they purport to describe; and (d) tend to homogenise internally heterogeneous realities. And if this sounds abstract, in practice it is not. So for instance: both biomedicine and Chinese medicine are very many different things; and the many Chinese medicines have been in dialogue with the equally plural biomedicines for centuries (Hsu 2011). This is why our insistence that this paper is both asymmetrical and a very specific interference in the conditions of intellectual asymmetry are so important. So, and at the risk of labouring the point, let us make it entirely explicit that what we are offering is not a general statement about 'biomedicine' and 'CM', 'the East' and 'the West,' or 'Chinese' and 'Western' reasoning. Instead we are working with particular differences.

In what follows we first describe the Taiwanese context. Here CM has been under pressure for over a century to render itself scientific or be excluded, and while many CM practitioners have turned to biomedicine in order to survive, some have resisted. Drawing on accounts from the latter, we then explore how those who practice one form or another of CM talk and write about the differences between Western medicine and their own practices. As they talk about their experiments, diagnoses and forms of treatment we explore how they elaborate and articulate *ziran* in order to differentiate between these. Next we explore the implications of this, suggesting that CM's *ziran* uses a logic of in-betweenness that divides without epistemological or ontological essentialism or exclusion. Finally, we suggest that if this is to work as an explanatory strategy in STS, the latter will also need to change its practices for reading and writing.

Ziran in different practices

CM has coexisted with Western biomedicine in Taiwan for several centuries. However, after the Japanese colonisation of Taiwan in 1895, many felt the need to modernize or eliminate CM. Refused accreditation under Japanese rule, by 1945 CM was in a precarious position. Under the KMT regime after 1949 this asymmetry

continued as it became state policy to scientise CM and integrate this with Western medicine. Then, after a struggle that lasted several decades, CM was included in the 1995 National Health Insurance scheme, an important step for CM, even though 96% of the budget still goes to biomedicine (林昭庚 2004).

If CM in Taiwan has been under institutional attack for over a century, it has also been under intellectual attack. As Sivin (1987, 198) notes, across East Asia biomedicine has created new facts and destroyed the facticity of CM, while the Western idea of nature has gradually replaced CM's earlier understandings of *ziran* (Lei 2014, Sivin 1987, Kim 2006, Lei 1999, 林淑娟 2009). This biomedical scepticism of CM continues to the present day, even amongst those who support CM. For instance, scientists and doctors from both CM and biomedicine have sought to show that CM is not only therapeutically but also both theoretically sound (Taylor 2001, Hsu 2011, Scheid and MacPherson 2012, Scheid 2014), and forms a part of (Western) nature.

> Professor Chang works in one of the best engineering departments in the National Tsing-hua University, but he also studies CM. Qualified in aviation physics and communications, he worked at Bell Labs before becoming a Professor in bioelectronic engineering Taiwan. When he was young, he was trained by a famous acupuncturist, but he did not take the oath of secrecy and become a formal apprentice because he wanted to be able to do scientific research on CM.
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> In interview Chang told Lin that critics reject CM for three reasons: first, because its theories cannot be verified by modern instruments; second, because it cannot be mathematised; and third, because it cannot by explored using the logic of analytical reasoning. Like Joseph Needham, Chang is interested in the distinction between Eastern and Western world views: 'the Chinese world view is about *qi* (氣, energy, movement, force, essence central to CM diagnoses and treatment)… [it] is committed to a wave world view…, [while] the European commitment to a particle-based cosmos combined with mathematical tools, … made European advance possible....'

Chang argues that what is needed is a way of mathematising *qi*, and this is what he has been working on for decades. After many experiments on the effects of acupuncture on urodynamics, blood pressure and the nervous system, he has created what he calls a 'chaotic wave theory of fractal continua'. This is the argument which appears in one of his English language papers:

> ‘To put the concepts of *qi, yin-yang*…in terms of the language of modern dynamic systems, …. *qi* stands for the fractal continua of vapor and water, and the complex dynamics of phase change in the water cycle. Without loss of generality, we can define *qi* as a mathematical dynamic system…. The ancient meaning of *yin-yang* was actually referring to two fundamental operations in the universe or a dynamic system, with one dominating for a time, and then the other, in a wavelike succession. Hence, they could be modelled by a pair of sinusoidal functions with a relative phase difference. If the relative phase difference is 90 degrees and these two functions are perpendicular, then they will form a periodic orbit in a two-dimensional state space.’ (Chang 2012 508-9)

This is only one of the experiments Chang has done, and his life-long work has been an attempt to differentiate nature in modern science and *ziran* in CM within a single theoretical framework. Thus, in another paper, he argues that in the natural sciences nature is composed of lifeless atoms, elementary particles which collide and have effects on one another. This is a system which uses analytical logic to specify single relations of cause and effect. The implication is that active humans can control nature which is passive. By contrast, he suggests, in the world of CM *ziran* is a continuum in which everything is fractally related with everything else, wave or field interactions have endlessly many effects, and the analytical logic of division does not apply. His argument, then, is that *ziran* is not mysterious but simply different, and that it is important to achieve harmony with and within *ziran* (Chang 2015 9).

We cannot explore his wave theory here, but what is significant for our argument is his overall approach: he is saying, first, that *qi* and western atomism can both be assimilated to (Western) mathematical methods; and second, that biomedical laboratory methods can be used to study *qi*. Again we do not need to understand the specificities, but as the following except from another of his (co-authored) English language publications reveals, the idiom is that of Western science:

> Eighteen experiments were performed on six intact adult female Wistar rats and then the electromyogram of EUS (external urethral sphincter) and cystometrogram of bladder were analyzed. Results indicated that the EUS did not contain any significant spectral frequencies in the storage phase. Furthermore, its FDs (fractal dimension, 1.5918 ± 0.0157) indicated that no appreciable amount of signal intensities was observed in the EUS. (Chang et al. 2009 14)

So there is *ziran* with *yin* and *yang* on the one hand and there are sinusoidal functions on the other. And there are also laboratory rats, electromyogram equipment, signal intensities, and scientific reports with data charts of fractal dimensions. Chang's strategy is clear: he is trying to strengthen CM's scientific standing within laboratory practices.

Others work quite differently. Another interviewee, Dr Hsu forcefully asserts a Daoist understanding of *ziran*:

> 'Unlike the mechanical civilization of modern medicine [i.e. biomedicine], CM has its own way…. 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*, …. Lao Tzu said that the Dao [the way] follows *ziran*. So [CM's] whole development … [since the classical times of] *The Yellow Emperor's Inner Canon,* … grows out of the idea of *ziran*.

As Hsu talks, he fetches books and points to pages of text and his own marginal notes. No longer in the world of natural science, we are now led into the realm of reading and interpreting classics. Hsu is assimilating CM into a Daoist *ziran* in which the 'ten thousand things,' (萬物, meaning all things in the 'universe') transform endlessly through the workings of *qi* or the *Dao* (蔡璧名 1997). When we follow his suggestion by tracing the changes in *ziran* and its interpretations in the classics, we find that Hsu is right: Daoism is crucial to the genealogy of *ziran* where *zì* means 'self' and *rán* means 'the way it is', 'let things be themselves', or 'let their nature unfold' (Laozi, Ames, and Hall 2003,68-70). Understood this way, *ziran* is about return to the *Dao* (Laozi, Ames, and Hall 2003, 69) – that is to the spontaneous and appropriate transformation of the ten thousand things. That said, over two and a half millennia the term has been endlessly contested, layered, and transformed (楊儒賓 2014a). We cannot trace the genealogy here, but as we noted above, it was in the nineteenth century that *ziran* also began to connote 'nature' in a more or less Western materialist sense, and by the beginning of the twentieth century the term had become popular in this sense in, for instance natural history and botany.[8] And,

[8] For instance, in one of the earliest English-Chinese dictionaries (1815-1823), *A Dictionary of the Chinese Language in Three Parts*, *ziran* connoted nature. This was also the translation in the 1908 *An English and Chinese Standard Dictionary.*

to bring the story up to date, in the contemporary Chinese world this 'nature-ziran' sense of the term has substantially replaced any of the alternatives (林淑娟 2009).[9]

Here, the word ziran is being brought into being in different worlds of practices. In their focus on *ziran* Hsu and Chang have much in common. Both seem to assume: the world to be full of *qi*, and that all things in the world have their own *qi* that circulates and resonates in the dynamics of *yin* and *yang;* that *ziran* is about the smooth flowing and balancing of *qi*; that it is how things are meant to be and are supposed to unfold; that CM works by detecting and correcting imbalances in *qi* – that is, it seeks to restore *ziran*; and that the logic of biomedicine is different because its object is to control nature rather than to rebalance flows. However, at the same time, how they make *ziran* and its specificities in their practices are very different, for as we have seen, Hsu draws on the classical texts from his bookshelves and assigns classics for Lin to read, whereas Chang is sacrificing mice, conducting experiments, and reporting on scientific models that have been verified in his laboratory. There are different *zirans*. The conclusion, perhaps unsurprising but also crucial to our argument, is: that what counts as *ziran* is made differently in different practices; that it cannot be pinned down in a definition; and that is not fixed.

Ziran between vitamins and herbs

But when he writes for CM journals Hsu does not draw only from the classics:

> *Tianran* (天然, the way of heaven, meaning *ziran* in this context) food is important for supporting the *qi* of the spleen and stomach… Nowadays food has lost most of its natural nutrients …, so we need to take vitamin compounds….
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> According to research by nutrition experts … vitamin A can protect the tracheal and gastric mucosa…, vitamin B can help to relieve pressure…, and vitamin C can … strengthen cell membranes and resist viral attack…. When working with [vitamins] A and B, [vitamin C] can effectively resist the invasion of 'external evil [*qi*]' (外邪)…. Herbs such as *fuling* … for fortifying the spleen and enhancing qi (健脾益氣) [in Chinese medication] are different [from food and vitamins] but just as effective…. (許金龍 2000)

[9] Related classical terms such as *wuli* (*wù lǐ,* 物理; Principles of things)(楊儒賓 2014b) and tian (tiān, 天; Heaven) also mistranslate nature in modern Chinese.

In this Chinese text Hsu uses the language of nutrition, but when he adds that vitamins 'can effectively resist the invasion of external evil [*qi*],' this is hardly a phrase comes straight from biomedicine. So why does he write this way? One answer is that he sees many patients who are engineers. Here, then, it makes more sense to explain CM by relating it to biomedicine rather than Chinese philosophy. This suggests that he is stretching parts of biomedicine to accommodate CM. But, (for the movement is reciprocal) that he is also stretching parts of CM to accommodate biomedicine for instance in the form of vitamins which may resist evil *qi*. In short, what he is doing is making a space between vitamins and herbs which includes (parts of?) both. This is a space in which *fuling* and vitamins are different but relate to one another. To understand this, we need to say a little more about *ziran* in his practice.

Tianren food, he says, helps to support the *qi* of the spleen and stomach. This is a Daoist-inflected world in which all things are endowed with their own circulating and resonating *qi*. And, as we have just said, *ziran* is the smooth flow and balance of that *qi*: *tianran* food is *ziran* food. On the one hand, then, *ziran* is an attribute of things in balance. On the other (though the two are part of the same movement) it moves between things, again if they are in balance. So *ziran* is about how things are supposed to flow and unfold, and (as we have seen) CM works by detecting and correcting *qi* imbalances and restoring *ziran*. But he is saying that *tianran* food has lost its natural nutrients and vitamins. If we attend to his words, we can see that three things are happening here. First, he is working with two vocabularies of practice, those of CM and biomedicine, in ways that do not displace or exclude each another. Second, neither are these two systems being entirely assimilated to one another. So, for instance, nutritional research certainly does not extend to describing how vitamins resist the invasion of evil *qi*,[10] and vitamins do not normally have a role in traditional CM practices. And then, third and crucially, despite this, the realities belonging to these two systems are being productively related together (*tianren* and vitamin A).

The conclusion, then, is that while CM and biomedicine are different, they are also being mixed together in a very specific way. Parts of CM are being inserted into biomedicine. And parts of biomedicine are being inserted into CM. What to make of

[10] For CM, the wellbeing of a human body depends on supporting right *qi* and expelling evil *qi*, and the method of supplementing is fundamental to supporting right *qi* (Wiseman and Ellis 1995, 251-252).

this is for discussion. However, two things are clear. First, this simultaneously respects difference and generates practices within which those differences make space for and accommodate one another. And second, the result is not some kind of chaotic heterogeneity in which different things are simply being piled on top of one another. Instead, Dr Hsu has worked with *ziran* in a way that makes both systems of medicine more accommodating. But there are also other possibilities.

Ziran as unfolding appearances

Dr Jen works in a famous clinic. In interview he tells Lin that:

> 'While CM follows yin-yang and the 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 them. 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, because biomedicine cannot predict how germs will change in the future.
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> CM does not work 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 to germs… or to use medication to make a way out [of the body for those germs]. … The difference [with biomedicine] is that none of ... [its medications] is specific…there is no specificity in *ziran*, so germs will not change.
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> 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.'

Here Jen is not worrying whether CM practices can be scientifically justified. Instead, his argument is that the inclination of biomedicine to objectify disease distinguishes it from CM's *ziran*, and that it is unproductive to direct treatment at particular disease objects. His CM does not focus on objects-out-there such as bodies or germs, but instead attends to what is happening between these as *ziran* changes. It works with what we might think of as a way of losing things into appearances. And this attention to appearances is not simply about particular things (such as this *fuling* or

that *qi*) but also about extended webs of elements, including symptoms such as 'cold' or 'heat'. Germs are just a part of this web. So his focus is on the dynamic web that unfolds in-between patient, body, physician and environment. Here then, objects and what happens in-between such as symptoms are all being irredeemably dissolved into appearances.

Jen is also saying that the art is to try to do more by doing less. As a part of this he is using this version of *ziran* to catch clinical complexities flexibly among many things, so treatment strategies can be malleable. This means that he has no interest in particular biomedical objects or treatment targets. These miss the point because they are too specific, too fixed. For him, what we might think of as referential essentialism is absent (Latour 1993) there are no 'out-there' objects to refer to; no realities endowed with independent properties. Instead, to talk, as he does, of 'dispelling the wind by resolving the exterior' is, as we have just suggested, to replace 'out-there' objects with the unfolding appearances of cold or heat within the dynamics of *ziran*. It is to loosen any attachment to context-independent objects or to realities endowed with essential properties. And, crucially for our argument, it is also to extend this way of reasoning to divisions and divides; for instance, to CM's *ziran* on the one hand, and the objects of biomedicine on the other. In this practice these are no longer separate 'out-there' realities that been divided from one another. Instead they are shifting and contextual appearances that arise between patient, body, environment and physician.

Ziran as following dynamic interplays

Working between things to achieve an accommodating overlap between CM and biomedicine, and loosening ways of treating patients by moving from objects 'out there' to appearances: these are two strategies for relating biomedicine and CM that do not imagine these to be essentially different. But there are further possibilities. So, for instance, Dr Zhou treats difficult and complex diseases. Indeed, as he tells Lin, at least one biomedical centre refers patients to him:

> '… 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). When you don't follow yin

> and yang, *ziran* fights back. 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*….'

Here the non-referential loosening of appearances is at work again: like Jen, Zhou is simplifying diseases that are complicated for biomedicine. He is saying that biomedicine tends to ever increasing analytical detail. Against this, he follows the general picture of the dynamics of *ziran* where it is balance and imbalance that make the body healthy or ill.

This is a form of simplification, but Zhou also indicates that he has worked hard to achieve this simplicity. To understand this, we need to touch on *yin* and *yang*. *The Inner Cannon*, probably compiled in the five centuries before the common era, is the foundational text of CM. This observes that doctors need to learn from the complexity of ten thousand things, understanding these as situated differences in the endlessly contexted contrasts between passive and active, night and day, or female and male, and these can be talked of in terms of *yin* and *yang*. Everything is subject to, and reflects, this dynamic. In the context of disease, they relate to the movements of *qi*, and it is their balance, imbalance and various dynamic configurations that form the basis of health and illness. This means that it is not necessarily important to name a disease, nor indeed, like Jen, to follow how it changes in appearance. What is needed instead, is to abstain from biomedical names and follow dynamic reasoning. But how does Zhou do this in practice?

> One of his specialities is spinocerebellar ataxia, a disease whose genetic origins have been described but which remains biomedically incurable. But for Zhou it can be cured. For instance, he says: 'one patient I diagnosed "kidney *yin* deficiency (腎陰虛損) and damp-heat in the liver meridian" (肝經濕熱) 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 he tells Lin that somatic and genetic complexities and the many biomedical technologies and examinations are not the point. The point is that the severely depleted kidney (water) is no longer able to nourish the liver (wood) and serious problems result. So he tackles neither the cerebellum nor genes, but works with the liver and kidney meridians using medication to follow the principle of re-balancing by clearing the damp-heat in the liver and supplementing the kidney vacuity.

So along with *yin* and *yang* Zhou is also attending to the imbalanced and blocked circulation of *qi* between the visceral systems of the five *zang* (五臟) and the six *fu* (六腑).[11] When this circulation is severely depleted, kidney (water) is no longer able to nourish the liver (wood) and serious problems result. Note that his attention to meridians does not lead back to disease objects, for it is the general picture of how *ziran*, *yin and yang,* and balance work that matters. *The Inner Canon* tells us that:

> '*Yin-yang* have names but 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.'[12]

And also that:

> '*Yin-yang* correlates to the *Dao* of heaven and earth, being the principle of the ten thousand things, the parent of all variations, fundamental to birth and death, and the mansion of the spirit [ie, the place where a person's spirit lives]. Thus, when treating disease, one must base this on *yin-yang*.'[13]

This catches the simplicity of what Zhou means by the dynamics of *ziran*, but also alerts us to its potential complexity. This naming is both necessary but misses the point, because he works by drawing on a huge range of possible shape-shifting names (including the meridians and visceral systems) while sticking to the fundamental principle – the balance and imbalance of *yin* and *yang*. Indeed, as *The Inner Cannon* suggests in its opening chapters,[14] it is not even the names of *yin* and *yang* but the ways in which they interplay that matter. So in practice a well-trained CM practitioner draws on a web of symptoms/appearances and their contextual dynamics. And s/he does this by 'correlating appearances and making analogies' (qǔxiàng bǐlèi, 取象比類)[15] – a phrase that is usually misleadingly translated into English as correlativity. This, however, has nothing to do with statistical correlation,

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[11] 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 burner (三焦). Adding the heart master makes the twelve meridians. Qi circulates and correlates them with the dynamics of five phases.

[12] Chapter 41 of Ling-su (靈樞) of *The Inner Canon*. Translation by Wen-yuan Lin.

[13] Chapter 5 of Ling-su of The Inner Canon. Translation by Wen-yuan Lin.

[14] Chapters 3, 5, 6 and 7.

[15] This is an art mentioned in *The Inner Cannon* on chapter 76, 77 and 78. See also 潘毅 (2020) for an interpretation.

but describes a process of associative mobilisation: of determining in specific circumstances what goes with or is resonating with what in this world of im/balance (Lin and Law 2014). To mislead just a little, we might say that it does this by drawing on a huge range of metaphorical associations or names. But the term 'metaphor' is not entirely appropriate, for CM works by using the empirical ('metaphor') as conceptual and there is little division between what is, and the words for knowing it (Zhan 2009). Since the list of such possible correlative associations is nearly limitless, therein lies the skill of the practitioner: to assess the complexities at hand and to mobilise the associations or names that s/he takes to be useful. The issue, then, is not what is *causing* imbalance, but what is *resonating* with it in the context.

So there are endlessly many possible correlative configurations. Some can be given names and shaped in ways that relate them to scientific analytical reasoning. This is how Chang's wave theory works. But as we have just been showing, correlative dynamics can also be mastered as their own form of simplicity. Dr Ma describes the correlative principle so:

> '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) … . Chinese medicine understands disease in [terms of] *ziran.* When a person is ill, there will be patterns (zhèng, 證) and appearances (xiàng, 象),… and these patterns and appearances are the basis of our diagnosis.
>
> Different configurations of appearances can be differentiated into [patterns of] deficiency or excess, cold or heat, and [we can] 'supplement the deficiency', 'purge the excess', 'warm the coldness', and 'clear the heat'.' (馬光亞 2006,4)

Judith Farquhar has explored part of this. Describing a prominent CM practitioner, Lu Guangxi, she writes that his term:

> '[*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 … . 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 processes (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 are our partners in perception, not the mere object of our perception.' (Farquhar 2015,231-232)

So Lu avoids the distinction between subject and object. But following Ma, Zhou may be even further removed from this divide, because he insists that appearances can be correlated and associated into patterns of interplay between *yin* and *yang* and named in in a whole range of ways. At any rate, in his practice a *duixiang* appearance is not necessarily a thing, but may also be a dynamic pattern in-between. So as we have seen, when treating spinocerebellar ataxia, he correlates the complexities between the liver and kidney meridians into the dynamics between wood and water. And in order to clear imbalanced heat (*yang*) in the liver which is bad for wood, he enriches the kidney water (*yin*) to bear down on liver fire. Here he is working with *ziran* by way of simplifying the endless different biomedical names and objects into the kinds of limited dynamics that we have just described.

Ziran as working with/in propensities

Ma and Lu are just examples: there are many CM schools that diagnose and treat patients by exploring and reinventing ways of relating appearances and patterns (Farquhar 1994). However, though they do this in different ways, all work with correlative resonances to simplify complexity: as *The Inner Canon* observes, '*yin-yang* can inferred into tens of thousands'. But this also means that *ziran* shifts its shape and the ways in which it explicates the differences between biomedicine and CM in different practices. And those interplays are endlessly negotiated, and all the more so since in Taiwan many patients with chronic conditions seek both biomedical and CM treatment. And this leads us to a fourth strategy for how *ziran* handles the differences between biomedicine and CM.

Dr Song works in a small clinic and sees many chronically ill patients who are also under long-term biomedical care:

> '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

[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.

> diseases and it is *ziran* ['natural' in the sense of following the principle of rebalancing] to find medication for the diseases in *ziran* [Western 'nature out there']. We use medication … to correct the biased propensities (偏性) of the body…. When the body is too hot we use cool or cold things from the great *ziran* ['nature out there'] (大自然) … . When the body tends towards cold we use things that are warm or hot ….

When a diseased body deviates from a properly balanced course, intervention becomes a matter of understanding the relational propensities (*shi*, 勢) of *qi* at work and manipulating their configuration to achieve rebalance,[17] including any additional imbalances induced by biomedicine. For biomedicine also has propensities:

> '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 with hypertension [on biomedication] come to me I have to reduce their medication little by little. Then [the see-saw] doesn't bounce up straight away and my Chinese medication can tackle the symptoms as these slowly emerge.'
>
> She adds that biomedical practice does not have any way of sensing the overall pattern of *shi* when disease and its pharmaceutical treatment are mixed together. But if CM follows the *shi* of *ziran* it will little by little modify the propensities at work in and through the body. It will look at the larger picture to enrich *yin* so that that latter can calm hyperactive *yang*.

With Song *ziran* moves again. But what is significant for our argument about difference is that she does not distinguish between biomedicine and CM by talking about what they <u>are</u> but in terms of what they <u>do</u>. That is, she is simultaneously countering and <u>including</u> biomedicine by dissolving the specificities of the latter into the ways in which these interfere in the world of *ziran*. She is using the situated character of CM and the dynamics between *yin* and *yang* to say that biomedical drugs also have propensities and may contribute to imbalance by working against *ziran*. In sum, this is a *ziran* that includes the propensities of biomedicine. We want,

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17 *Shi*, 勢, translates poorly into English, but can be rendered as propensity, momentum, inclination, position, or disposition. See Lin (2017) for how CM works with *shi*.

then, to say that this is a *ziran* that melts, even dissolves the boundaries between the realities of biomedicine and those of CM. In this tinkering with working-as-propensity everything is being melted into *ziran.*

Conclusion: working in between

Z*iran* moves and shifts. CM doctors do not fix it. Situated and contextual, in the CM practices that we have described it works in-between in different ways in different encounters. Biomedical objects find their place in CM, and CM realities find their way into biomedicine. Objects give way to appearances. The complexities of medical classification give way to the simplicities of *ying* and *yang* and then to the resonances of correlativity. And differences are melted into propensities. So, as *ziran* shifts, so too do the relations between biomedicine on the one hand, and CM on the other. But what does this tell us about difference? What does this suggest for a post-colonial STS? And what, in particular, does it suggest for how such an STS might think about nature and culture?

In the introduction we noted that contemporary Western social science treats difference between nature and culture as an expression of varying and contingent forms of social practice. And there are indeed different natures in different analytical and theoretical practices:

> Historians have explored the construction of the idea of nature (Cronon 1995), its authority (Daston and Vidal 2004), and its social and political implications (Williams 1985) in a range of Western contexts. Geographers (Hinchliffe 2007, Lorimer 2015) have similarly explored its political implications, while anthropologists have considered its simplifications for colonial domination (Green 2013), Western societies (Strathern 1992) and their gendering (MacCormack and Strathern 1980). It has been widely observed that the nature-culture binary is absent in many non-Western societies which may have multiple natures (Viveiros de Castro 2004), quite different ontologies (Descola 2006), or contingent *shizen* (Jensen and Morita 2017). At the same time, neologisms such as 'naturing' and 'natureculture' have been created to blur the division.[18]

[18] See, respectively, Swanson et. al.(2017), Haraway (1989), Yates-Doerr (2012), and http://natureculture.sakura.ne.jp/ for the journal *NatureCulture*.

So what does the present paper add to this overcrowded field and all its work on difference? Is it simply yet another form of difference to be reported from East Asia to the centre? And how, in any case, can we avoid writing in a way that simply reproduces the intellectual asymmetries of colonialism? Two options suggest themselves. In one way of thinking, *ziran* and the differences between biomedicine and CM may be understood as context-independent objects endowed with their own reality, in which case accounts become perspectives on those objects-out-there. Alternatively, and this is the argument that we have been rehearsing, those narratives may alternatively be read as accounts of situated objects-as-appearances working with/in-propensities.

The first of these readings returns us to another version of Western essentialism and foundationalism. That is, it offers an additional tool for understanding the differences that are taken to exist in the world between the realities of biomedicine on the one hand, and those of CM on the other. As we have noted above, this is a world of reference which works on the assumption that there are realities out there awaiting discovery: that, for instance, nature is like this, and that *ziran* is like that. The second reading moves us in a quite different direction. Telling or diagnosing without fixing realities, it works in-between words and objects, with loosened objects-as-appearances, with biomedicine and CM as contextual practices, and with propensities being performatively made in interferences. This is the alternative that emerges from the CM practitioners' accounts of their practices. Note that this implies neither a commitment to Daoism nor to any particular CM approach. However, it does offer a potential resource for understanding the world and its divisions and divides without essentialising these. But, here is the corollary, this will only become possible if we are also able to cultivate the kind of sensibility to reading and writing we have been telling about above.

The skill that we will need to cultivate is the continuing recognition that when we are writing we are not describing objects-out-there. We are not trying to describe objects endowed, as it were in nature, with more or less stable and continuing attributes. Instead, we will need to appreciate not only that the practitioners' accounts are situated and that what we write is similarly situated – though this is always so – but also that the *[dui]xiang* we are writing about are not only, as Farquhar puts it, 'irreducibly relational,' but can also be correlated and melted into propensities. Note that in a Western sensibility – even one tempered by the relationality of STS – this is surprisingly difficult (Lin 2017). Indeed, we have wrestled with this issue many times in writing this paper, as our objects-as-appearances have

slipped towards the referentiality implied in Western academic form. And, as a part of this, we have also often lost track of working with/in propensity.

But if there is a task for authors then there is a matching and equally challenging task for readers. For what you have been reading – our account of elusive *ziran* in practices – is not to be interpreted as a description of a set of objects-out-there. The biomedical and CM differences entailed in these do not exist as a set of stable forms, a collection of realities of their own. What you have been reading is rather a set of objects-as-appearances, objects that are (Farquhar) 'perceptible elements[s] of the manifest world.' Even more, they are also working with/in propensities. But if this is possible in biomedical intervention, so might it be in STS. That is, they are real, but they are relationally real. And if you are willing to read what we have written in this way, you will also be able to sense these as situated appearances and propensities that have arisen between the reader and the authors, between CM and STS, and between a particular set of concerns and the to-and-fro tensions that make a bi-lingual collaboration. So here is the argument. STS knows that differences are generated in practices but nevertheless finds itself tugged towards essentialising referentiality. Those differences end up out there, in the world. In CM the pull towards objects and names is much weaker. And it is the latter skill that we will need to collectively acquire if we want to learn from our CM practitioners about working in-between.

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