

# Chinese Medicine and the *Yi Jing*'s Epistemic Methodology

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## ABSTRACT

Traditional Chinese medicine and contemporary biomedicine have developed methodologies that observe and investigate the human body from different epistemological perspectives. Their conceptual differences have been a recurring topic in the West. The contribution of our article to this topic draws on the ontological and epistemological insights found in the *Yi Jing* (*Book of Changes*). Readers will already be familiar with the argument that Chinese medicine has been profoundly influenced by the *Yi Jing*'s use of yin-yang theory. This paper offers a fresh perspective by examining the *Great Commentary*'s *dao-xiang-qi* cosmology. '*Dao-xiang-qi*' stands for abstract principles, emergent manifestations, and concrete objects, respectively, and this triadic conception of reality leads to an analysis of the human body from a holistic, process-oriented epistemology. The interpretations of reality and being contained in the *Yi Jing* were developed by careful and detailed observation over time, and have deeply influenced China's philosophical and scientific traditions, including medicine. The effect of the *dao-xiang-qi* (way-image-vessel) triad on Chinese medicine has led to its characteristic *dao xiang* epistemic: investigations of human health and illness focus on the living body and result in a more functional or process-oriented epistemic. Relatively speaking, biomedical investigations are guided by a *qi*-vessel epistemic that places more importance on objective, physicalist information and on quantitative and concrete data. The purpose of this paper is to explore the *Yi Jing*'s influence on medical epistemics and the influence of *dao-xiang-qi* for Chinese medical investigations and methodologies. The paper does not attempt an analysis of biomedical epistemics but inevitably the discussion touches on issues pertaining to the integration of Chinese medicine and biomedicine occurring in recent times. Integration presupposes some degree of philosophical and methodological commonality and to that extent we draw attention to the ontological and epistemological assumptions of both medicines.

**KEYWORDS** biomedicine, Chinese medicine, epistemology, integration, materialism, methodology, ontology, *Yi Jing* (*Book of Changes*).

## Introduction

During the nineteenth and early twentieth centuries, the survival of China's traditional medical practices seemed doubtful as they struggled to compete with the evidence, advances and technologies of the emerging western medical sciences. But then, in the late 1950s, Mao Zedong declared Chinese medicine 'a great treasure house' and its continued existence was ensured. The integration of contemporary

scientific medicine and traditional medicines has become part of a global health strategy promoted by the World Health Organization as recently as 2002,<sup>1</sup> and in China the integration of Chinese medicine and biomedicine has already occurred to a large extent.<sup>2,3</sup> Since 1958 the highest levels of Chinese government have actively pursued unification, or more recently, integration, as 'national policy . . . backed by

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strong public support'.<sup>4,5</sup> Official government policy has also encouraged modernisation and scientisation, so that today Chinese medicine must highlight its status as an icon of Chinese culture and at the same time, measure up to scientific scrutiny.<sup>6</sup>

Western sciences pursue the investigation of material and objective phenomena and the label 'scientific materialism' defines this endeavour. Scientific enquiry uses empirical and analytic-deductive methods that rely on objective technologies and quantifiable data, and favour reductionism and linear causality. Scientific observations therefore tend to deal with phenomena that can be recorded and quantified in an objective way. Its methods of investigation attempt to reduce variables, utilise repeatable experiments, and apply measurement and analysis to isolated factors and individual components. Some recent scientific theories (systems, quantum, complexity, bio-coherence) may challenge these broad principles, but in the meantime, biomedicine also utilises scientific methods of investigation and analysis.

The qualitative nature of early Chinese sciences, including medicine, generally emphasised relational and functional patterns rather than quantitative or physicalist information. Being less concerned with the physical details of body organs and tissues, medical investigations instead produced a 'sophisticated analysis of how functions were related on many levels, from the vital processes of the body to the emotions to the natural and social environment of the patient, always with therapy in mind'.<sup>7</sup> Chinese medical theories codified these relational qualities. They assumed principles of holism embracing complexity, the connectedness and interaction of all things, and the non-separability of body and mind. As for contemporary biomedicine, Chinese medicine's methodologies were largely empirical. But the Chinese were concerned with whole systems, dynamic complexity over time, interactivity, and subjectivity. They were also concerned as to whether nature could be fully comprehended by rational, empirical investigation and this led to an abiding interest in the idea that the scale of nature and the cosmos is too large, its texture too subtle and fine, too closely intermeshed for phenomena to be fully predictable. 'This proposition denies that the physical world can be fully penetrated by study, or fully described in words or numbers'.<sup>8</sup>

Yin-yang theory is the core of early Chinese philosophy, and all China's ancient sciences were formed from and deeply influenced by it. The pragmatic application of relational, contingent concepts such as yin-yang is characteristic of the Chinese medical tradition, a tradition that is closely related to the onto-cosmological framework of the *Yi Jing* (易经, *Book of Changes*), the oldest and most famous of China's ancient classics. To further examine the *Yi Jing*'s influence, we discuss

its *dao xiang qi* (道象器, way-image-vessel) cosmology, and the consequent theories of being (ontology) and of knowing (epistemology) that connect all phenomena. *Dao-xiang-qi* has important epistemological and methodological consequences for investigating the world and human life. References to contemporary scientific medicine are given to highlight those consequences and some of the problems for integration.

The *Yi Jing* investigates material and immaterial reality using symbols and metaphors that afford insight into the principles governing life and the cosmos. The text's yin-yang method, with its analogic-inductive reasoning, is a more appropriate tool for this enterprise than the analytic-deductive logic of the Greek tradition and contemporary sciences. The *Yi Jing*'s symbols, metaphors and interpretations are based on *guan* (观, comprehensive observation). *Guan* requires the observation and contemplation of nature's 'organic relationships . . . [and] a long period of time to make correct adjustment and to achieve a neatness and simplicity that would cover the totality of nature and life'.<sup>9</sup>

The early forms of Daoism, Confucianism and medicine that arose in China before the Qin Dynasty (221–206 BCE) developed in distinct ways over the next two millennia, but all three drew from the *Yi Jing*'s onto-cosmological assumptions and methods. Historically, Chinese medical texts frequently acknowledge the importance of the *Yi Jing* for medicine. In the Tang Dynasty (618–906 CE), Sun Si-Miao said: 'If you don't understand the changes, you cannot practice medicine.' [不知易, 不足以言太医.]<sup>10</sup> In 1624 Zhang Jie-Bin said:

Medicine and the *Yi Jing* are the same. [This is because] Nature/heaven and the human body conform to the same laws, namely, the principles of yin-yang. And though medical practice is complicated, we can use yin-yang to summarise and analyse all its permutations. [医易相同。天人一理也，一此阴阳也。医道虽繁，而可一言以蔽之者，曰：阴阳而已。]<sup>11</sup>

The high regard traditionally accorded *Yi Jing* is more than convention. In the next section, we examine the influence of its *dao-xiang-qi* triad for the philosophical assumptions concerning the nature of reality and being, and the approach to 'knowing'. Following that, we explore how these assumptions and concepts have influenced the Chinese medical tradition.

### *Yi Jing* epistemics: *dao-xiang-qi*

The *Yi Jing*'s triadic analysis guides its investigation of all phenomena. The result is a sophisticated synthesis, or 'natural law', that applies to all of creation. The *Yi Jing* categorises the essences of the myriad beings, and a being's behaviour in the world is largely determined by the category (类, *lei*) to which it belongs. The concept of *lei* also plays a significant role in the *Nei*

*Jing Su Wen*, where phenomena are systematically associated with the five phases (五行, *wuxing*) by, for example, describing things as 'of the category of fire' (类火, *lei huo*).<sup>12</sup> In the *Yi Jing*, *lei* is linked to the notion of a common origin, meaning the *dao*. In both cases these are not logical statements of fact so much as probabilistic or analogic-inductive observations.

#### DAO 道: 'WHAT IS ABOVE THE FORM IS CALLED THE DAO.'

The *Yi Jing* achieves its 'penetrating syntheses'<sup>9</sup> of categories, changes and natural law by the application of its *dao-xiang-qi* onto-epistemic and yin-yang analytic method. Its analysis of categories, changes and transformations connects and integrates all of creation, and its methods and interpretations have served as primary resources for the investigation of all phenomena, material and immaterial. For the *Yi Jing* and early Chinese onto-cosmology, nothing is greater than heaven and earth, and in all areas of early Chinese theorising, nothing is bigger and nothing is smaller than yin-yang.

According to the *Nei Jing*, yin and yang are the 'way' (*dao*, or 'natural law') of heaven and earth. In *Su Wen* (chapter 5: *Yin Yang Ying Xiang Da Lun* – 'Great Treatise on the Interactions and Manifestations of Yin and Yang'), the comprehensiveness of yin-yang theory for cosmology, the environment, human physiology, diet, emotions, illness, ageing, and so on, is explained. This is yin-yang natural law as it applies to human life, including the relationships, manifestations and interactions within and between macrocosmic (nature) and microcosmic (human life) phenomena. Because human life is one kind of natural phenomena it must also follow the way of yin-yang. So yin-yang has provided an effective guiding principle for Chinese medicine since earliest times. In the *Nei Jing* it is used extensively to discuss the connections between nature and human life and health (also see, for example, *Su Wen*, chapter 3: *Sheng Qi Tong Tian Lun* – 'On Human Life's Union with Heaven/Nature').

When arranged in the earlier heaven (先天, *xian tian*) sequence, the *Yi Jing*'s eight trigrams (八卦, *ba gua*) represent the universal potential before space, time, and movement – the *dao*. The *xian tian* arrangement is the cosmogenic principle and the source of the later heaven sequence. Similarly, the relation of the *dao*-way to *qi*-vessels is that of universal principles to local particulars, abstract to concrete.<sup>2,13</sup>

According to the *Yi Jing* and its *Great Commentary* (大传, *Da Zhuan*), the *dao* (道, the way) is not visible – it is before time and without substance; the *qi* (器, vessel, tool or container) is visible – it is subsequent in time, it has substance and a determined shape. The *xiang* (象, image) can be observed but does not have a determined shape; it is the emergent manifestation of the *dao*. Wang Bing (8th c. CE) said: '*Xiang* means something

becomes apparent and can be seen,<sup>14</sup> meaning: the observable indications of yin-yang law are called *xiang*.

*Xiang* reveals the existence of the *dao*'s governing potentials and activities, including yin-yang law; it is the bridge linking invisible (道, *dao*) and visible (器, *qi*). So when the changes and transformations of yin and yang become apparent, this produces *xiang*. *Xiang* (象) means manifestation, image and symbol, and since the Song Dynasty (960–1279 CE), the term has been used in its modern sense of 'phenomenon'.<sup>13</sup>

All macrocosmic and microcosmic phenomena are modelled on the *xiang*-manifestations. Heaven and earth are associated with two kinds of *xiang*: 'images' and 'symbols' (象, *xiang*) belong to heaven, and 'forms' (形, *xing*) belong to earth. The *Great Commentary* says:

In heaven perfecting symbols 象; on earth perfecting forms 形: change and transformation become apparent. . . . What is above form is called the 'Way'; what is below form is called the 'vessel'.<sup>13,15</sup>

#### QI 器: 'WHAT IS BELOW THE FORM IS CALLED THE QI-VESSEL'

According to the *Great Commentary*: 'What may be seen is spoken of as [象, *xiang*]. What has physical form is spoken of as [器, *qi*].'<sup>16</sup>

Whilst the *dao* (道) is without substance and before time, *qi* (器) is substantial and subsequent in time, and the binome, *daoqi* (the way and vessel), expresses the relationship of that between the abstract and concrete. In the *Yi Jing*, *qi*-vessel refers to 'everything that does not depend on human consciousness but is the objective object of all sensation and awareness. . . . [The] Chinese notion of *qi*-vessel is very close to . . . the Western notion of matter [except that it] lacks the traditional Western mechanistic interpretation of matter'.<sup>13</sup> While *xiang*-manifestation and *qi*-vessel are both perceptible things in the world, the *qi*-vessel has a determined shape and can be seen and felt. The *xiang*, as emergent manifestation or process-event, does not have a determined shape.

Early Chinese philosophy tends to assume that the *dao* (abstract principles) exists before and produces the material world, and all phenomena come from the *dao*.<sup>17</sup> So in the *Yi Jing*, the *dao* is the governor, *qi* is the result, and *xiang* is the interface between *dao* and *qi* – if there is no *dao* there can be no *xiang* and no *qi*. Conversely, it is difficult to maintain that the *dao* exists independently of phenomena. In other words, if there can be no abstract principle apart from concrete phenomena, then from *qi*-vessel the *xiang* must appear, and the *xiang* must have the *dao* working behind it. Whilst Chinese philosophy emphasises the first direction, our understanding in fact comes

from the second because it is based on the observation of natural phenomena. As the PRC Marxist historian Fan Wenlan (1893–1969) explained: ‘The *dao* is the rule of nature extracted from all physical things.’<sup>18</sup>

In any case, *dao-xiang-qi* cannot be separated: they are not independent, they are not divisible entities or parts of existence, and the *Yi Jing*'s epistemic tradition recognises all three aspects (*dao*, *xiang* and *qi*), and both levels (above and below the ‘form’). To that extent, the clear differentiation between the physical and the metaphysical made by Aristotle is much less distinct in the Chinese tradition.

Guided by the *Yi Jing*'s onto-epistemic, Chinese medical traditions explore human life phenomena, including visceral (脏, *zang*) functions and manifestations (脏象, *zang xiang*). The *zang* are deep inside the body and the *xiang* are their observable manifestations. Over time, comprehensive observation and the understanding of reality, including *xiang*-manifestation, meant that Chinese medical methodologies are characterised by *zang xiang xue* (脏象学) – medical investigation with a functional perspective based on observable phenomena – rather than by a *zang qi xue* (脏器学) – the reductive physicalist perspective of anatomical and micro-anatomical investigations.

## *Dao-xiang-qi* and Chinese medicine's epistemic methods

### DAO: YIN-YANG METHOD

From the discussion so far, we see China's early theories of being and knowing propose the *dao* as the undifferentiated potential behind all of creation, and yin and yang as the expression of the *dao* in nature. On the human scale, yin and yang are unified to form a new individual at conception; disease arises when yin and yang are disordered, and death occurs when essence *qi* (精气, *jing qi*) is exhausted and yin and yang separate. Today, Chinese medicine's basic theories, diagnostic frameworks and therapeutic methods still embrace the yin-yang epistemic method. But its encounters with external knowledge systems and advances have forced Chinese medicine to undertake extensive revisions to scientise and systematise its methods and practices. Additionally, there are the political pressures to unify, merge, or integrate with its biomedical counterpart.<sup>5</sup>

Traditional Chinese medicine and contemporary biomedicine both observe and investigate human physiology and pathology, but their philosophical assumptions and methodologies are fundamentally different. Here we will distinguish the two by the epistemic methods identified above: the *zang xiang xue* and *zang qi xue*.

### XIANG: ZANG XIANG XUE

The differences between *zang qi* (脏器) and *zang xiang* (脏象) research objects and methodologies are fundamental. Reductive physicalism and *zang qi* investigations have little to do with the *xiang*, and of course no need for the *dao*. As an example of *zang qi* methodology, the biomedical anatomy tradition reflects the onto-epistemic of scientific materialism – anatomical research methods provide knowledge of objective physical structures.

Historically, however, the object of enquiry is the corpse without life phenomena. Lu Mao-xiu's (1818–1886) famous rebuttal of Wang Qing-ren's (1768–1831) *Correcting the Errors in the Forest of Medicine* decried the ‘moral turpitude and medical irrelevance of direct anatomical investigations’.<sup>19</sup> Although Wang's criticisms of the medical classics in favour of anatomical investigations could be viewed as the beginning of ‘modern’ Chinese medicine, his revisions in fact seem ill-informed and redundant today.<sup>20</sup> Lu gave voice to the prevailing (traditional) attitude towards the *zang qi* level of inquiry, noting the obvious problems of examining lifeless body structures.

Although the methods and technologies of today's medical sciences are so much more advanced and successful, the *zang-qi* onto-epistemic still operates to guide research issues, interpretations and outcomes. From the point of view of the *dao-xiang-qi* onto-epistemic, it is not possible to acquire knowledge of human life by relying on *qi*-vessel data alone because the investigation of isolated body structures and substances remains at the level of *zang-qi* physicalism, where the essence (精, *jing*) is exhausted, *qi* movement (气机, *qi ji*) has ceased, and both the body form and consciousness (形神, *xing-shen*), and yin and yang have separated.

The term ‘*zang-qi*’ is not much used in Chinese medicine and mention of it in the *Nei Jing* is very rare, but Chinese medicine does recognise all three aspects of the *dao-xiang-qi* model. Its investigations, however, are focused primarily on the *zang xiang* aspect – the emergent manifestations of the integrated systems and processes of human life. Specifically, traditional Chinese medicine's human systems and processes include the five viscera (五脏, *wu zang*) and their associated hollow organs (腑, *fu*), the five offices or sense organs (五官, *wu guan*), five body tissues (五体, *wu ti*), five spirits (五神, *wu shen*), and five minds (五志, *wu zhi*). In health, all the body's systems and processes are well-integrated, and all aspects of *qi* movement, including the five phase relationships of engendering (生, *sheng*) and restraining (克, *ke*), are appropriate and orderly. Orderly *qi* movement produces the harmonious function of yin and yang and unifies the body form (形, *xing*) and mind (神, *shen*). *Zang xiang* theory therefore applies not only to internal organs, but also to their systemic influences, structures, and substances, external

senses and tissues, consciousness, perceptions, movements and transformations. In other words, *zang xiang* leads to a holistic analysis of the living body and whole person.

#### QI: ANCIENT ANATOMY

We know the Chinese performed detailed anatomical dissections because even in the *Nei Jing* the body's internal structures are described along with their positions, size, length, capacity, and so on. Many of the organs and measurements given in the *Nei Jing Ling Shu* (chapters 31 and 32) are the same or very close to those we observe today. Why Chinese medicine did not pursue a materialist-physicalist (*zang-qi*) approach to its investigations is a question that Joseph Needham and Nathan Sivin have frequently approached and refined. Readers will be familiar with the arguments that China's socio-political structures stymied technological and scientific innovation to some extent, and that traditions respecting one's ancestors and parents meant that one's body should not be dismembered or dissected. Sivin has challenged the relevance of the question itself for an unbiased enquiry into Chinese 'sciences'.

In our opinion, the *Yi Jing's* onto-hermeneutic perspective served as a guiding principle in the *Nei Jing* and has been a critical influence for the epistemic methodologies informing Chinese medicine's theoretical developments. Today, Chinese medicine still observes the living body as integrated process-systems that depend on orderly *qi* movement, the harmonious interaction of *qi* and blood, and the dynamic balance of yin and yang. Its interventions attempt to restore and maintain those movements and interactions. Therapeutic adjustments at that level are believed to create optimum circumstances whereby *xing* (形) and *shen* (神) are unified, the *jing-qi-shen* (精气神) are strong and well integrated, the *wu xing* (五行) relationships are orderly, and human life unfolds.

## Conclusion

The scale and complexity of nature, its fine textures and subtleties, were the subject of investigation in China before recorded history. In addressing these issues, the *Yi Jing's* sophisticated analyses and syntheses provide an onto-hermeneutic framework that has profoundly influenced Chinese thinking. Furthermore, the *Yi Jing* is the philosophical root of Chinese medicine, and historically its *dao-xiang-qi* onto-epistemic is embedded in the development of Chinese medicine's theoretical and clinical methodologies. Chinese medicine recognises all three aspects of the *dao-xiang-qi* triad, not only *zang-qi* physicalism, and even today, the *Yi Jing's* yin-yang methodology deeply penetrates its theoretical concepts and clinical practices.

The *Yi Jing's* yin-yang epistemic method encompasses and connects all phenomena because it contains the *dao* and expresses 'natural law'. In light of the *Yi Jing's* onto-hermeneutics, the nature and activities of life may be observed at the point of emergence (*xiang*) between the *dao* and *qi* aspects of reality, and medicine must account for basic and essential life categories and activities (the yin-yang balance, unified *xing-shen*, the *jingluo*, *qi* movement, *mingmen*, and so on). In this paper we have argued that, comparatively speaking, a biomedical focus is primarily within the parameters of *zang-qi* physicalism, and its epistemic methods therefore emphasise information on material structures and components. Inevitably, *zang xiang* (脏象) functional and *zang qi* (脏器) physicalist perspectives have developed different theories about health and disease, and herein lies the difficulty in comparing and integrating the two medical traditions.

Guided by their onto-hermeneutic traditions, Chinese medical and biomedical researchers and practitioners employ different

## Clinical Commentary

This paper does not discuss particular disease states, treatment strategies or prescriptions. Instead it raises some of the epistemological and methodological issues faced by Chinese medicine as it appraises its place in the contemporary healthcare industry, absorbs the impact of biomedical advances and technologies, and realigns its traditional assumptions to conform to a more scientised investigation of human health and disease. The paper notes that the 'integration' of Chinese medicine into contemporary healthcare delivery systems consists of the 'biomedicalisation' of its interventions and conceptual frameworks.

The onto-cosmological frameworks of medicine have important methodological consequences for investigating the human form, the object of treatment. The changes and revisions Chinese medicine has undergone in recent decades have caused a shift away from the more process-oriented and contingent methods that developed early in its history and are closely related to its traditional view of being and reality.

TABLE 1 Glossary of terms

八卦	<i>ba gua</i>	eight trigrams
大传	<i>Da Zhuan</i>	the <i>Yi Jing's Great Commentary</i>
道	<i>dao</i>	the way, or law of nature
道器	<i>dao qi</i>	the way and vessel
道象器	<i>dao xiang qi</i>	way image vessel
腑	<i>fu</i>	yang (hollow) organs
观 (觀)	<i>guan</i>	comprehensive observation
精	<i>jing</i>	essence
经络	<i>jing luo</i>	channels and collaterals
精气	<i>jing qi</i>	essence Qi
精气神	<i>jing-qi-shen</i>	essence-Qi-spirit
克	<i>ke</i>	restrain, check
类 (類)	<i>lei</i>	kind, category
灵枢	<i>Ling Shu</i>	'Miraculous Pivot'
命门	<i>ming men</i>	life gate
内经	<i>Nei Jing</i>	(Huangdi's) <i>Internal Classics</i>
气 (氣)	<i>qi</i>	Qi
器	<i>qi</i>	vessel, container
气机	<i>qi ji</i>	Qi movement; Qi dynamic
认识方法	<i>renshi fangfa</i>	epistemic method
认识论	<i>renshilun</i>	epistemology
三宝	<i>san bao</i>	three gems/treasures; <i>jing-qi-shen</i>
生	<i>sheng</i>	life, movement, engendering
生气通天论	<i>Sheng Qi Tong Tian Lun</i>	'On Human Life's Union with Heaven/Nature'
素问	<i>Su Wen</i>	'Plain Questions'
五官	<i>wu guan</i>	five offices or sense organs
五神	<i>wu shen</i>	five spirits
五体	<i>wu ti</i>	five body tissues
五脏	<i>wu zang</i>	five viscera
五志	<i>wu zhi</i>	five minds
五行	<i>wu xing</i>	five phases
先天	<i>xian tian</i>	earlier heaven
象	<i>xiang</i>	image, manifestation, process-event
形	<i>xing</i>	form
形神	<i>xing-shen</i>	body form and spirit-mind

易经 (易經)	<i>Yi Jing</i> or <i>I Ching</i>	<i>Book of Changes, I Ching</i>
阴阳应象大论	<i>Yin Yang Ying Xiang Da Lun</i>	'Great Treatise on the Interactions and Manifestations of Yin and Yang'
脏	<i>zang</i>	internal yin viscera
脏器学	<i>zang qi xue</i>	medical investigation with a quantitative-materialist perspective
脏象学	<i>zang xiang xue</i>	medical investigation with a functional-processual perspective

methodologies appropriate to their favoured perspectives of reality. But today, the criteria and methodologies of biomedicine are applied to investigate, evaluate and validate Chinese medicine. Science is used to research Chinese medicine's therapeutic interventions and to correct and modernise its theoretical content. Thus, the integration of biomedicine and Chinese medicine in reality means that biomedicine is practised according to its own epistemic methods, whereas Chinese medicine is practised according to biomedical and Chinese epistemic methods – despite their fundamental differences.

If we employ the *Yi Jing's dao-xiang-qi* onto-epistemic to evaluate biomedicine, we find it is primarily concerned with developing our knowledge of human anatomy, physiology and pathology at the level of *qi*-vessel physicality. Even though biomedical research is advancing rapidly, it remains conceptually bound to materialist-physicalist ontologies and interpretations, and in our opinion, research that neglects the *xiang* (象) and *shen* (神) cannot reflect the complexity and subtlety of human life. This is why some areas of *zang-xiang xue* (such as 三宝, *san bao*; 命门, *mingmen*; and 经络, *jingluo*) are unlikely to be investigated, or have proved so difficult to investigate, using scientific methods.

The fundamental differences between Chinese medicine and biomedicine constitute the basis for on-going intellectual and political tensions between the two, and to some extent within our medical and healthcare industries.<sup>21</sup> We contend that the dissimilarity of their respective epistemic and ontological assumptions is significant, and that the 'modernisation' and 'integration' of Chinese medicine cannot be realised by simply discarding its philosophical underpinnings and adopting biomedical epistemics and technologies.

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