The Clinical Utility of the Concept of *Jing* in Chinese Reproductive Medicine

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Abstract

The concept of *jing* is fundamental in Chinese medicine (CM). However, English-language discourse reveals the term to be polysemous, confusing, and contradictory. In the currently flourishing field of Chinese reproductive medicine in the West, clinicians claim to be able to provide treatment for age-related pathologies of the human gametes—asccribed by modern CM to be manifestations of *jing*—that seem dubious from the perspective of modern biomedicine. Such practitioners reveal scripts that diverge significantly from their biomedical peers. In the context of the unclear modes in which the concept of *jing* functions, and the emotive sphere of reproductive medicine in which it operates, this paper uses a grounded theory approach to make a thematic analysis of the relevant English-language discourse relating to *jing*. Interpretive analysis of the resulting themes shows the term being used differently by clinicians and scholars of CM, and that such modes are predicated according to the specific requirements and agendas of the author. Finally, recommendations for clinicians, scholars, and researchers are made along with concluding remarks.

Keywords

Jing, essence, Chinese medicine, eggs, sperm, ovarian reserve, low sperm count, azoospermia

Introduction

The concept of *jing* (精, usually translated as ‘essence’, but left in the Chinese here to allow the term semiotic freedom), is fundamental in CM. Standard core texts used in modern CM education in the West¹ tend to present *jing* as part of an established, ahistorical, and internally congruent theoretical framework, in which it constitutes the material foundation of a hierarchy of increasingly subtle and immaterial ‘vital substances’ that form the building blocks of CM physiology. However, such systematisation flies in the face of scholarship

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¹ For example, see Maciocia 2005.

showing CM to be heterogenous and in constant transformation.² The apparently well-ordered system into which the concept of *jing* is inserted is far from universal, and authors who look more deeply into the concept find paradox and multiplicity of meaning;³ Zhang and Rose, for example, list 22 meanings inherent in the term.⁴ The concept of *jing* is theoretically problematic: for example, *jing* is commonly said to be irreplaceable,⁵ and yet many CM texts list ‘*jing* deficiency’ as a pattern differentiation for specific diseases⁶—especially reproductive dysfunction⁷—and provide acupuncture points⁸ and herbs⁹ that can treat such a disharmony.

When looked at through the prism of reproductive medicine, further questions arise. In the flourishing field of CM fertility treatment in the West,¹⁰ clinicians posit that CM treatment can enhance fertility by improving ‘egg quality’,¹¹ sperm count and quality,¹² and even turn back the ‘reproductive clock’ of women whose egg supply is—based on laboratory tests—exhausted.¹³ Such clinical results seem unlikely from the perspective of modern biomedicine, which asserts that women are born with all the eggs they will ever have, that gradually decline in quality with age, and that once used up are gone forever.¹⁴ One might question exactly what CM clinicians mean by improving ‘egg quality’—whether enhancing the general cellular vitality of the gametes or even changing their genetic make-up—and how such claims relate to traditional CM theory. Perhaps there are indeed subtle physiological variables—as yet undiscovered by Western medicine—that can be influenced by CM to enhance fertility? Or perhaps the expediency of market forces is leading practitioners to trade on the Oriental mystery that surrounds CM in the West to make unrealistic claims of its clinical potential? Or perhaps naïve Western clinicians are simply reading superlative—but ultimately unrealistic—possibilities into CM theory that were not intended by its authors.

Given that modern biomedical treatment is able to control virtually all aspects of fertility other than the overall quantity and quality of the gametes

² Andrews 1996; Scheid 2002a; Karchmer 2004.

³ Hammer 1999.

⁴ Zhang and Rose 1999.

⁵ See Flaws 1989 and Ross 1984.

⁶ For example, see Maciocia 2005.

⁷ Lyttleton 2004; Jin 1999.

⁸ Deadman *et al.* 1998.

⁹ Bensky *et al.* 2004.

¹⁰ Lyttleton 2004.

¹¹ Heese 2006; Horne 2011.

¹² Crimmel *et al.* 2001; Deadman 2008.

¹³ Lewis 2004; Horne 2011.

¹⁴ Jones and Lopez 2006.

themselves, practitioners of complementary medicine who claim to be able to influence these factors will be highly sought after by potentially vulnerable—and frequently desperate—patients.¹⁵ The public discourse of such practitioners tends to reject standard biomedical scripts regarding the arbitrary limitations signified by laboratory tests, and instead presents a message of hope backed by a mixture of Chinese and biomedical theory together with unsubstantiated case studies of ageing patients who were able to conceive against the odds with the help of CM.¹⁶ Given that practitioners of complementary medicine are frequently accused of providing false hope to patients,¹⁷ it would seem apposite to examine this area of CM to find out how the concept of *jing* is operating.

After presenting the methodology and literature search for this research, a basic orientation is provided that documents a standard modern reading of *jing*. Then the main themes are described, followed by detailed discussion before concluding comments are made. It should be pointed out that this paper has significant limitations. The author is a Western practitioner of CM who does not read Chinese and this paper is a study of modern English-language texts written primarily by Western authors. As such any conclusions pertain only to such modern Western discourse, and does not purport to offer a valid assessment of historical Chinese sources.

Methodology

This paper uses a grounded theory approach¹⁸ to conduct a thematic analysis of the relevant English-language sources. Thematic analysis is a highly inductive method that facilitates identification, analysis, and interpretation of patterns within data¹⁹ in order to allow new theories and interpretations to emerge.²⁰ It is an inherently flexible method and can be applied across a range of theoretical and epistemological frameworks, and as such is ideally suited for the novice researcher.²¹ In the case of this paper, the relevant data was first identified through a systematic literature search, after which sensitive reading and re-reading of the texts was conducted whilst applying coding to the

¹⁵ Daniluk 2001; Peterson *et al.* 2007.

¹⁶ Lewis 2011a; Horne 2011.

¹⁷ Zollman and Vickers 1999; Ernst 1995.

¹⁸ Strauss and Corbin 1990.

¹⁹ Aronson 1994.

²⁰ Ezzy 2002.

²¹ Braun and Clarke 2006.

relevant sections.²² The resulting codes were then inductively developed into themes using a reflexive process that involved repeated revisiting of the data and comparison between the different codes and themes.²³ During this process the following hypothesis emerged from the data: The concept of *jing* in English-language texts is polysemous, contradictory, and confusing, and there is a lack of congruence between its presentation in the extant historical literature and how it is used in the modern clinical practice of CM.

The identified themes were analysed using an interpretive approach, before being summarised into concluding theories. The epistemological perspective employed is essentially that of social constructivism, which presupposes that CM was—and continues to be—collectively invented and reinvented by various groups at different times.²⁴

Literature search

An online search was made of the following electronic databases:

- PubMed
- AMED
- MEDLINE
- AltHealthWatch

In order to avoid using an unwieldy search algorithm, two separate search algorithms were used as follows:

- 1) ‘(*jing* OR essence) AND (Chinese medicine)’: to elicit articles that discuss the concept of *jing* directly.
- 2) ‘(Chinese medicine OR TCM) AND (fertility OR infertility OR reproduct*) AND (sperm OR egg OR oocyte OR ovarian reserve OR premature ovarian failure OR oligospermia OR aspermia OR azoospermia)’: to identify papers that discuss the treatment of reproductive disorders associated with the concept of *jing*.

The searches returned a total of 825 articles. These were initially filtered by title and abstract to exclude irrelevant articles, duplicates, and incorrectly indexed articles. Articles were included where they:

²² Strauss and Corbin 1990.

²³ Ibid.

²⁴ Kukla 1999.

- Directly discussed the CM concept of *jing*.
- Studied reproductive medicine with reference to the CM concept of *jing* or other related CM concepts (such as the Kidney) or biomedical subjects (such as gametes or genetic factors).
- Contributed to the discourse on *jing* in other ways by exploring issues of Chinese reproductive medicine, translation, or history.

The sifting process resulted in a total of 18 articles. Additional relevant studies were sought in the reference lists of identified papers, and by searching the online Chinese medicine journals and databases. In order to identify relevant books, an online search was made of the catalogue of the British Library's catalogue; further texts were identified in the bibliographies of these texts, and by manually searching the library of the University of Westminster (London, UK). In addition, in order to examine the discourse around *jing* in the public domain, an internet search was made using various combinations of the terms '*jing*', 'essence', 'gametes', 'ovarian reserve', 'sperm', and 'Chinese medicine'.

The resulting data were found to fit into the following categories:

- Clinical research into the CM treatment of reproductive disease, for example, premature ovarian failure, azoospermia, etc.
- Cultural/sociological/historical discussions of Chinese reproductive medicine.
- Core texts on Chinese medical theory or Chinese reproductive medicine.
- Public-facing websites providing information for potential patients of Chinese reproductive medicine.

A full description of the above search methodology can be found in Appendix 1.

Basic orientation

The Chinese character for *jing*, 精, is made up of the significant component *mi*, meaning rice or kernel of grain, and the phonetic component *qing*, which signifies the colour of lush and vibrant growth and which is thought to contribute to the character's meaning.²⁵ Given the supreme importance of rice throughout Chinese history, the image of a lush green rice sprout issuing forth from seed is a culturally compelling symbol of the generative power of life. A

²⁵ Wiseman and Zhang 2003.

typical CM taxonomy involves *jing* being divided into three types: pre-heaven (or ‘innate’—said to be formed at conception from the coalescing of the essences of the parents), post-heaven (or ‘acquired’—the product of metabolism from eating and breathing), and Kidney *jing* (which governs growth, development, sexual maturation, reproduction, and pregnancy).²⁶ As well as its more abstract meanings, *jing* also has the narrow meaning of semen.²⁷ It should be noted here that, given the focus of this paper on reproductive medicine, the emphasis will be on what is referred to above as ‘Kidney *jing*’. Unfortunately it is beyond the scope of this paper to explore the extensive historical discourse discussing the closely-related doctrines of *Mingmen* (‘life gate’), the Kidneys, and the *chong* and *ren* vessels.²⁸

Beyond standardised modern readings of *jing*, close reading of the literature reveals a tangled web of terms with overlapping meanings and shifting signification. The sample of texts surveyed here reveals a variety of terms, all of which express some aspect of the concept of *jing*: ‘*yin* essence’, ‘*yang* essence’, and ‘Kidney-*qi* essence’;²⁹ ‘*yin jing*’;³⁰ ‘*jing qi*’;³¹ *yuan* (primal) *qi*;³² and ‘kidney *qi*’.³³ For Ross, *jing* is a ‘group of overlapping concepts’,³⁴ and the term is also frequently used in the plural ‘essences’;³⁵ indeed, Dharmananda documents its use to describe any dense physiological fluids (for example, saliva, breast milk, vaginal fluids, etc.).³⁶ Even where standardisation and semantic clarity is the primary focus of a text, *jing* seems to elude simple definition.³⁷

Themes

The following ten themes were identified:

²⁶ Liang 2003; Maciocia 2005.

²⁷ Zhejiang College of Traditional Chinese Medicine 1995.

²⁸ See Unschuld 1986; Wu 2010; Hammer 1999.

²⁹ Hammer 1999.

³⁰ Lin and Flaws 1991.

³¹ Zhang and Rose 1999.

³² Furth and Ch'en 1992.

³³ Zhejiang College of Traditional Chinese Medicine 1995.

³⁴ Ross 1984.

³⁵ Larre and Rochat de la Vallée 1999.

³⁶ Dharmananda n.d.

³⁷ World Health Organisation 2007.

Fig. 1. Various CM terms overlapping with the concept of *jing*.

Gametes

A primary theme in the literature is that of *jing* being used as a direct analogue with the biomedical concept of the gametes. For example, Lyttleton—arguably the most influential Western authority on the CM treatment of infertility and a self-professed exponent of Chinese and Western medicine ‘fusion’—boldly states that ‘what the doctors in China 2000 years ago were referring to when they described the Kidney *Jing* is what modern Western medical science refers to as the gametes or eggs and sperm themselves.’³⁸ In such a reading of *jing*, a pattern of *jing* deficiency corresponds to a pathological lack of eggs or sperm—premature ovarian failure or azoospermia, for example—for which a viable clinical strategy is to ‘strongly reinforce the Kidney *Jing* to try and influence the nature of the eggs themselves’.³⁹ Whilst appealing in its simplicity and pragmatism, the idea of the narrow correspondence between *jing* and the gametes is not universal. For example, a modern paper discussing Chinese herbal medicine (CHM) and egg quality does not refer to *jing* at all.⁴⁰ Clearly, it is not a clinically indispensable concept, even when egg quality and quantity are the primary focus.

³⁸ Lyttleton 2004.

³⁹ Lyttleton 2004, p. 373.

⁴⁰ Heese 2006.

Menstrual blood

Prior to the twentieth century, practitioners of CM did not know about eggs or sperm, but rather the female analogue to male *jing* (semen) was menstrual blood. Traditional doctors were aware that when a woman became pregnant, menstruation ceased, and thus deduced—erroneously as we now know—that conception was the result of the coalescing of the male semen and female blood. Unschuld quotes the sixteenth-century author Zhang Huang, ‘Man has life because he...has received from his father and mother semen and blood. When [the latter two] contact each other, they unite and congeal to become a fetus in the womb.’⁴¹ The Qing-dynasty gynaecological expert Fu Qingzhu further explains that ‘Menstruation is not blood but heavenly water or the *tian gui*. Originating in the kidneys, it is the essence of consummate yin...it is red like blood, but it is, in fact, not blood...People nowadays regard the menstrual flow as blood, but this is an incorrect assumption’.⁴² Such a belief is frequently encapsulated in the pithy phrase ‘Menstruation comes from the Kidney’,⁴³ although modern readings take this to mean that the Kidney governs the hormonal functions of the hypothalamic-pituitary-ovarian axis.⁴⁴ Because *jing* was traditionally viewed as extremely precious, menstruation was viewed as severely depleting,⁴⁵ such that Daoist nuns would practise specific *qigong* exercises in order to stop menstruation and thus preserve their *jing*.⁴⁶ Regulation of the menstrual cycle was thus of primary importance in traditional women’s medicine and seen to have effects far beyond merely reproductive function.⁴⁷ Congruent with this, published cases of infertility tend to show pregnancy occurring as soon as the menstrual cycle has been sufficiently regulated.⁴⁸ However, the view of menstrual blood as a precious manifestation of *jing* conflicts with other widely-held Chinese folk beliefs that menstrual blood is a superfluous and unclean pollutant,⁴⁹ suggesting that competing scripts have been active through Chinese history.

⁴¹ Unschuld 2005, p. 52.

⁴² Yang and Liu 1995, p. 52.

⁴³ Jin 1999, p. 186.

⁴⁴ For example, see Geng *et al.* 2010.

⁴⁵ Furth and Ch’en 1992.

⁴⁶ Noll and Wilms 2009, p. 108.

⁴⁷ Furth 1999.

⁴⁸ Farquhar 1991.

⁴⁹ Furth and Ch’en 1992.

DNA and heredity

Modern authors frequently make a direct correspondence between *jing* and DNA. For example, in cases of male infertility due to chromosomal abnormality, Lyttleton identifies the causative factor as ‘Kidney *Jing* weakness’.⁵⁰ Such a correspondence is perhaps unsurprising, given that the typical characteristics of *jing*—‘derived from the parents... provides for a person’s constitutional make-up... a fixed substance that cannot be added to or replenished.’⁵¹—could be just as accurately applied to DNA. Such correspondence is frequently made without acknowledging any semantic or cultural complications: thus for Magidoff ‘mutated DNA’ is ‘changes in the *jing*’.⁵² Damone, on the other hand, exhibits more paradigmatic sensitivity by describing reproductive essence as ‘genetic-like’.⁵³ Whilst a general thread runs through the literature acknowledging the difficulty of altering the genetic make-up of gametes with CM, a recent study suggests that this may in fact be possible with CHM.⁵⁴ Horne argues that the possible mechanism of this may involve influencing epigenetic components that dictate how genes are expressed throughout the reproductive system.⁵⁵

Developmental stages

The *locus classicus* of *jing* and reproductive theory is undoubtedly the first chapter of the *Huang Di Nei Jing Su Wen*, in which the seven- and eight-year cycles of females and males are described (see Appendix 2). The ‘*Tian gui*’ (also translated as ‘Kidney water’, or the more opaque ‘Heavenly Tenth’ by Wiseman and Feng⁵⁶) referred to in this chapter is widely understood to refer to *jing* ‘in its role in creating the menstruate’,⁵⁷ and is frequently glossed without the semantically difficult ‘*tian gui*’ (‘essence is responsible for the onset of puberty, fertility and the menopause’).⁵⁸ Thus *tian gui* describes an essentially temporal process that, where pathological, can be treated via the *jing*, ‘If periods never begin (primary amenorrhoea)... the TCM doctor will treat the

⁵⁰ Lyttleton 2004, p. 262.

⁵¹ Liang 2003.

⁵² Magidoff 2000.

⁵³ Damone 2008.

⁵⁴ Tempest *et al.* 2005.

⁵⁵ Horne 2011.

⁵⁶ Wiseman and Feng 1998.

⁵⁷ Liang 2003, p. 7.

⁵⁸ Betts 2006.

Kidney *Jing*.⁵⁹ It is noteworthy that in CM the arrival of *tian gui* is seen to be a virtually identical process in males and females (with minor differences in timing⁶⁰), whereas in biomedicine, puberty and the ending of reproductive capacity are governed by fundamentally different physiology. Thus oogenesis begins in females before they are born and continues until ‘the pool of remaining ovarian follicles becomes exhausted’ in their forties, whilst spermatogenesis starts in males at puberty and ‘healthy men...can retain reproductive capacity into their eighties or nineties’.⁶¹ Such differences call into question the direct commensurability of *jing* with such biomedical analogues.

Matter and spirit

Unlike most CM concepts that tend to be processual in focus,⁶² *jing* easily becomes glossed as a static material form. This probably originates from the the *Su Wen* statement, ‘Essence is the root of the human body.’⁶³ A modern Chinese textbook subtly distorts this into the more decisively earthbound, ‘essence is the material base of the human body’⁶⁴. For Sivin, *jing* is a ‘fundamental substance’, for Porkert, it is ‘the concrete basis of...individual existence’, Damone describes it as a ‘raw material’ and for Kaptchuk, it is a ‘texture’.⁶⁵ Thus *jing* is frequently portrayed as a kind of anabolically-potent source material from which semen, blood, bone marrow, brain, and spinal cord originate, and as such represents the earthly base of a continuum of increasingly subtle physiology that culminates in *shen*. Such a model matches agreeably for modern sensibilities with scientific distinctions of solid, liquid, and gas (represented by *jing*, *qi*, and *shen*).

However, the conceptual borders of *jing* are not always so distinct. Although associated with the physical body, Larre and Rochat de la Vallée suggest that ‘Essences have no form and no shape. They are the condition of any shape, they are able to make any and every form’.⁶⁶ Damone presents the beguiling theory in this regard that *jing* represents the stem cells from which all other physical substance and cells are derived.⁶⁷ There are clearly dynamic potentials within *jing*; as Larre and Rochat de la Vallée state, ‘Essences are...the ele-

⁵⁹ Lyttleton 2004.

⁶⁰ Furth 1999.

⁶¹ Tortorra and Derrickson 2005, p. 1094.

⁶² Farquhar 1987.

⁶³ In Deadman *et al.* 1998.

⁶⁴ Cheng 1987.

⁶⁵ Sivin 1987; Porkert 1974; Damone 2008; Kaptchuk 2000.

⁶⁶ Larre and Rochat de la Vallée 1999.

⁶⁷ Damone 2008, p. 68.

ments or components of life, and life is inside these components'.⁶⁸ Horne makes a cogent point of comparison in relation to gametes, which are not inert lumps of cytoplasm (i.e., *yin* without *yang*), but are filled with thousands of times more mitochondria than typical human cells⁶⁹—tiny energy factories which have been found to respond to CHM.⁷⁰ In CM it is of course impossible to have *yin* physical substance independent of *yang*: '*Qi* can generate essence, and essence can generate *Qi*'.⁷¹ Porkert's 'structive potential' is illuminating in this regard—where 'structive' is a complement to the 'active' principle represented by *qi* and *shen*, and implies the capacity 'to render concrete, to substantiate, a given effect without regard to its quality'.⁷² Such a reading harks back to chapter eight of the *Ling Shu* that states, 'The kidney stores essence; essence is the abode of spirit'. This relationship is repeated in chapter 36 of the *Nan Jing*, where *jing* is first introduced as the dyad 'spirit-essence' (see Appendix 2). To forget the 'vertical' interpenetration of *jing* with *shen*—which modern reductive readings of the term seem to—can have repercussions with regard to fertility treatment, 'A change on the *shen* level also involves a change on the *jing* level... in this sense *shen* facilitates fertility on the physical level'.⁷³ To this end, modern clinicians of CM frequently emphasise psychoemotional support in their treatment programmes for poor ovarian reserve.⁷⁴

Quantity and decline

The theme of *jing* being material in nature is closely associated with it being presented as being restricted in quantity and undergoing continuous decline—something like a candle burning inexorably down. Indeed, Dharmanda documents the traditional Chinese fears around declining *jing* recorded in a Ming Dynasty novel that tells the story of a man who dies from sexual indulgence, whose doctor's concluding comment is 'The candle flickers once the oil is used up'.⁷⁵ Thus Flaws states: 'We are each endowed with a certain quantity and quality of this... at the moment of conception and this cannot be augmented or modified'.⁷⁶ It is a 'finite bundle'⁷⁷ that is either plentiful or scant—such

⁶⁸ Larre and Rochat de la Vallée 1999.

⁶⁹ Horne 2011.

⁷⁰ Leung *et al.* 2005.

⁷¹ Liu and Liu 2009.

⁷² Porkert 1974.

⁷³ Noll and Wilms 2009, p. 311.

⁷⁴ Horne 2011; West 2011; Lewis 2004.

⁷⁵ Dharmanda n.d.

⁷⁶ Flaws 1989.

⁷⁷ Lyttleton 2004, p. 338.

that Lyttleton is able to divide its pathological lack into severe, moderate; and mild, each with specific symptoms.⁷⁸ The view that *jing* (as eggs) ‘gets used up with the hundreds of menstrual cycles a woman experiences’⁷⁹ is mirrored by biomedicine’s precise numerical formulations: ‘at birth, approximately 200,000 to 2,000,000 primary oocytes remain in each ovary...and around 400 will mature and ovulate during a women’s reproductive lifetime’.⁸⁰ Such temporal diminution of the gametes is also the case for men, ‘sperm production decreases 50–70% between ages 60 and 80’.⁸¹ The Chinese notion that men lose *jing* through ejaculation is associated with a long tradition extolling the benefits of sexual abstinence,⁸² so that Chinese doctors frequently advise sexual abstinence in cases of infertility.⁸³ Originally it was thought that just excessive sexual activity depleted the *jing*, but the Qing dynasty doctor Wu Tang (1758–1836) expanded this so that ‘all human activity can agitate and disturb the essence’.⁸⁴ However, although such linear temporal decline tallies nicely with the biomedical view of the gametes, it is at odds with the theory that *jing* is continually augmented by postnatal *jing* (and thus *jing* operates metaphorically more like a rechargeable battery than a candle).

Whilst primarily quantitative in nature, discourse on the decline of *jing* sometimes involves qualitative entropy that is often likened to the damage suffered by DNA in Western theories of reproductive ageing.⁸⁵ Thus Lyttleton reports that ‘less than ideal *Jing* may be inherited if the parents are older than 40’.⁸⁶ Lyttleton criticises Western artificial reproductive technology (ART) for pursuing quantity at the expense of quality, ‘Kidney *Jing*, that hard-to-measure *quality* of inheritance, is being ignored’. Indeed, ART seems to produce male offspring who themselves have compromised reproductive health.⁸⁷ Such understandings have a historical basis in traditional CM—as Wu documents, traditional doctors would blame anomalies, such as hermaphrodite offspring, on the *jing*.⁸⁸

⁷⁸ Lyttleton 2004, p. 13.

⁷⁹ Lyttleton 2004.

⁸⁰ Tortorra and Derrickson 2005, p. 1073.

⁸¹ Tortorra and Derrickson 2005, p. 1094.

⁸² See Noll and Wilms 2009.

⁸³ Damone 2008.

⁸⁴ Liu 2005, p. 23.

⁸⁵ Neal-Perry and Santoro 2006.

⁸⁶ Lyttleton 2004.

⁸⁷ Kai *et al.* 2007; Jensen *et al.* 2007.

⁸⁸ Wu 2010, p. 96.

The clinical utility of the concept of *jing* ultimately rests on whether clinicians are able to intervene if it is found to be deficient. One of the difficulties in assessing this is that authors tend to present only successful case studies. Liang, for example, documents a 48-year-old perimenopausal woman who, after CM treatment, managed to produce 18 eggs during an IVF cycle and successfully conceive.⁸⁹ Lewis⁹⁰ and Horne⁹¹ also describe cases where women in their late forties were able to conceive with help from CM. For many authors, *jing* deficiency is an entirely relevant clinical distinction and ‘tonify *jing*’ a viable treatment strategy.⁹² For example, Jin gives ‘Excessive consumption of Kidney Essence’ as a pattern differentiation for oligospermia, and provides his own formula—‘Jin’s decoction for replenishing essence and spermatoliquefaction to nourish the Kidney and replenish Kidney essence’.⁹³ Lyttleton acknowledges that treatment of *jing* deficiency requires long-term treatment (over months and years), and asserts her experience of doctors in China providing successful treatment in cases of *jing* deficiency.⁹⁴ Indeed, numerous clinicians explicitly assert that CM is able to improve egg quality in cases where biomedicine is unable to help.⁹⁵

Lewis, a high-profile CM reproductive specialist, is at pains to reject typical Western ideas of reproductive ageing and presents her perspective on ‘the truth about our eggs’, in which ‘the ocean of our fertility doesn’t dry up; it just becomes still. And with help it can flow once more.’⁹⁶ She tends to side step the idea that the body ‘runs out’ of something (*jing*/eggs), and instead posits the decline in fertility due to age as being due to ‘hormonal balance and blood flow’.⁹⁷ It may be that such a view has a historical basis in traditional CM—as Farquhar suggests, ‘the discrete transplantable objects of Western medicine... are seen as mere products of powerful processes that govern the life of the body.’⁹⁸ Lewis also disputes the effects of ageing on egg quality: ‘contrary to what Western medicine would lead us to believe, a woman’s eggs do not have an “expiration date”’.⁹⁹ Anecdotal evidence seems to confirm that CHM may indeed be able to restore reproductive capacity, even in relatively severe

⁸⁹ Liang 2003, p. 79.

⁹⁰ Lewis 2011a.

⁹¹ Horne 2011.

⁹² Lyttleton 2004; Clavey 2003; Zelicha and Nuria 2010; Zhang 2007.

⁹³ Jin 1999.

⁹⁴ Lyttleton 2004, p. 119.

⁹⁵ Heese 2006; Ke 2008; Brown 2009.

⁹⁶ Lewis 2004, p. 174.

⁹⁷ Lewis 2004, p. 178.

⁹⁸ Farquhar 1991.

⁹⁹ Lewis 2004.

cases of premature ovarian failure.¹⁰⁰ Horne boldly supports such a notion ('We can reverse signs of aging until a woman enters the menopause'), and provides treatment protocols that involve 'slowing or reversing oocyte aging'.¹⁰¹ Such protocols might be seen to be supported by China's long historical tradition of practices designed to prevent or replace the loss of *jing*, especially from within the Daoist tradition.¹⁰²

Other authors are more careful to avoid the emotionally charged issue of 'turning back the clock' with regard to reproductive capacity. Elliott, for instance, disputes that CM treatment can prevent the affects of ageing on egg quality.¹⁰³ West, a high-profile infertility specialist in the UK, asserts her awareness 'that a woman is born with all the eggs she is ever going to have' but maintains that 'you can improve the environment that the existing eggs are growing in' by using acupuncture to 'help improve blood flow to the ovaries, as this reduces significantly with age'.¹⁰⁴ Heese initially asserts that CM cannot turn back time and affect egg quality, but is later apparently unable to resist an about-face: 'Whilst it cannot turn back time and improve egg quality in an older woman, it may... indirectly influence its maturity and quality.'¹⁰⁵ Most authors seem to side-step the contradiction inherent in CM theory—that the gradual depletion of *jing* is a natural part of ageing but as soon as it becomes a barrier to conceiving it is made pathological. Liang, however, acknowledges this, stating that 'Although this [decline] is a natural stage of a woman's development, for the purposes of achieving pregnancy, it is considered a pathology here'.¹⁰⁶

Yin and fluids

Jing is widely associated with *yin* and fluids: '*Qi* belongs to *Yang* whereas blood and essence belong to *Yin*'.¹⁰⁷ Hammer clinically tangible evidence supporting this theory: 'Kidney essence is often associated more with Kidney *yin* than with Kidney *yang*; partially because on the pulse, deficiency of Kidney *yin* and Kidney essence have similar qualities (tight and wiry).'¹⁰⁸ Lin and Flaws suggest a broader classification, in which '*yin jing*' includes *jing*, blood,

¹⁰⁰ Chao *et al.* 2003.

¹⁰¹ Horne 2011.

¹⁰² Xingzhe 2004a.

¹⁰³ Elliott 2009.

¹⁰⁴ West 2011.

¹⁰⁵ Heese 2006.

¹⁰⁶ Liang 2003.

¹⁰⁷ Liu and Liu 2009.

¹⁰⁸ Hammer 1999.

and *jin ye*—all of the fluid aspects of the body.¹⁰⁹ Elsewhere, however, Flaws equates *jing* directly with Kidney yin: ‘Kidney yin is the *jing* essence and the substantial aspect of the kidney.’¹¹⁰ Other authors, however, point out that *jing* can be seen to be ‘before’ *yin* and *yang*—and thus the origin of both.¹¹¹ For some authors, female sexual secretions are manifestations of *jing*,¹¹² whilst Lyttleton disputes this based on the narrow equation of *jing* with gametes: ‘Since these secretions do not contain gametes, they do not have such a direct connection to the *Jing*. Rather, they reflect Kidney Yin reserves.’¹¹³ Historically, some doctors have taken the idea of *jing* being a fluid-like material substance to its logical conclusion, leading to various historical arguments regarding the topography of literal ‘pathways of essence’ connecting the brain, Kidneys, and reproductive organs.¹¹⁴ As a sidenote, the herbs that tonify *jing* in the material medica tend to be warm, sweet, and salty *yang* tonics, rather than the moist, cool, and sweet medicinals that one might expect to support yin and fluids.¹¹⁵

Reproductive strength and constitution

In CM terms strong *jing* implies a dyad of robust constitution combined with a high reproductive capacity at both macro and micro levels, so that Lyttleton states that ‘Plentiful *Jing* increases fertility...women who are successful in having babies in their 40s...often live longer than average’¹¹⁶ and ‘sperm that lack the wherewithal to carry out penetration and fertilisation of egg cells [reflect] quite serious Kidney *Jing* deficiency.’ Wu details that such reproductive strength was traditionally viewed as being intrinsic in the *jing* itself, such that where male *jing* dominated it would produce a boy and vice versa.¹¹⁷ However, the linear equation ‘more *jing*=greater reproductive potential’ might be seen to be challenged by modern studies in which increased frequency of ejaculation actually improves sperm quality and quantity.¹¹⁸

¹⁰⁹ Lin and Flaws 1991.

¹¹⁰ Flaws 1989.

¹¹¹ Kaptchuk 2000; Hammer 1999; Scheid 2007.

¹¹² Noll and Wilms 2009, p. 29; Guo and Powell 2001, p. 139.

¹¹³ Lyttleton 2004, p. 339.

¹¹⁴ Wu 2010.

¹¹⁵ Bensky *et al.* 2004.

¹¹⁶ Lyttleton 2004, p. 262.

¹¹⁷ Wu 2010, p. 94.

¹¹⁸ Greening 2007; Damone 2008.

Sex and morality

Because *jing* is inseparable from reproduction—and therefore sex—traditional Chinese discourse around it unsurprisingly reveals moral scripts. The origins of such sensitivities might be traced back to the *Su Wen*, where Qi Bo explains that, ‘The people of today...through their lust they exhaust their essence, through their wastefulness they dissipate their true [*qi*].’¹¹⁹ In a commentary by Wang Bing, he elucidates: ‘To make frivolous use [of one’s essence] is called “wastefulness.”...it is because the sages cherished [their] essence and carefully considered its use that their bones were full of marrow and strong.’¹²⁰ Thus *jing* is used as moral currency to make a point about physically weakening effects of licentiousness sex. Such scripts continue to the present day—for Xingzhe ‘Sex is worse than tigers or wolves’ and ‘anything that excites desire, especially sexual desire, disturbs *jing*...unbridled craving for things is ultimately weakening for the whole society; less essence, less spirit, less will.’¹²¹ Both quotations reveal a discourse in which *jing* is the link between frivolous sex and a weakening of the very foundations of the individual body and society. In the case of women, Furth has clearly documented how the depleting effects of female gestational functions were associated with a discourse that emphasised women’s fundamental weakness in comparison to men.¹²² Further gendered questions might be asked about how the label for the male seed became synonymous with the generative aspect of life in a patriarchal society.¹²³

Depth and density

Discourse around *jing* frequently emphasises qualities of depth and density: ‘there is a kind of earthly aspect, a density.... Essences are very dense because they are full of life;’¹²⁴ ‘it is the life spring sourced in our deepest origins... [if] the deficiency is deep, treatment needs to be strong, persistent, and lengthy’.¹²⁵ This is epitomised in the nature of semen, ‘sperm.... In the form of a liquid it is nothing other than a very rich and dense possibility of making life’.¹²⁶ Treatment of *jing* is usually through herbs (rather than acupuncture), in particular

¹¹⁹ Unschuld 2003, p. 53.

¹²⁰ Ibid.

¹²¹ Xingzhe 2004a.

¹²² Furth 1987.

¹²³ Furth 1999.

¹²⁴ Larre and Rochat de la Vallée 1999.

¹²⁵ Lyttleton 2004.

¹²⁶ Larre and Rochat de la Vallée 1999.

herbs that—according to the *Nei Jing*—have ‘affinity for flesh and blood’—e.g., animal products. Given that in western countries, such as the UK, animal products are banned, one might question whether it is possible to tonify *jing* effectively with the remaining available CHMs. Damone quotes Ye Tianshi (1667–1746) in this regard: ‘Essence and blood have form. [Therefore do not] use grasses and wood—substances, which lack feeling. . . . Their *qi* does not correspond to [essence and blood]’.¹²⁷ Unsurprisingly, given its multiple identities, a variety of words express the effects of herbs on *jing*. Thus Shan Yao and Tu Si Zi ‘secure’ *jing*, Don Chong Xia Cao and Ba Ji Tian ‘augment’ *jing*, Shu Di Huang and Lu Rong ‘generate’ *jing*, Zhi He Shou Wu ‘preserves’ *jing*, E Jiao ‘replenishes Kidney’ *jing*, Rou Cong Rong ‘enriches’ *jing* and Bu Gu Zhi ‘stabilises’ *jing*.¹²⁸ Because Kidney *jing* is nourished by post-heaven *jing*, clinicians working in the area of low egg reserve tend to make diet and nutrition a high priority,¹²⁹ frequently employing substances from modern naturopathic nutrition such as wheatgrass, royal jelly, Co-Enzyme Q-10,¹³⁰ algae, and seaweed.¹³¹ Arguably the quintessential substance to tonify *jing* is *Zi He Che* (Hominis Placenta), which according to the *Commentary on the Divine Husbandman’s Classic of Materia Medica*, ‘tonifies dual deficiency of yin and yang, with the ability to restore the root and return the primal [*qi*]’.¹³² Assessing the constituents of this substance from a biomedical perspective is revealing, and reads like a primitive combination ART medicine—complete with gonadotropins, estradiol, progesterone, and prolactin—to powerfully activate the endocrine glands.

Discussion

Historicising jing

Modern Western clinical texts frequently present CM as an ahistorical system that was defined millennia ago and has endured without change.¹³³ Recent scholarship, however, suggests that CM is ‘deeply historical’,¹³⁴ and documents

¹²⁷ Damone 2008.

¹²⁸ All from Bensky *et al.* 2004.

¹²⁹ Horne 2011; Lewis 2004.

¹³⁰ Lewis 2011b.

¹³¹ Noll and Wilms 2009.

¹³² Bensky *et al.* 2004.

¹³³ Scheid 2002a.

¹³⁴ Farquhar 1987.

the complexities of its relationship with modern biomedicine.¹³⁵ Modern Chinese reproductive specialists are—by definition—practitioners of ‘integrated Chinese-Western medicine’,¹³⁶ and as such represent the fruit of the Communist agenda of integration and ‘scientisation’.¹³⁷ Liang, for example, epitomises the typical mindset of the modern CM gynaecologist when she states that, ‘The Chinese medical concept of the kidneys correspond directly to the endocrine and reproductive systems’¹³⁸ (and congruent with such a view Liang supplements the Kidneys in virtually all of her case studies of ageing women). Li similarly elevates the Kidney to a physiological position in andrology: ‘Only the kidney is the crucial organ for male infertility... insufficient essence is the fundamental causative factor of male infertility’.¹³⁹ Modern Western ‘specialists’ in the field of Chinese reproductive medicine, of course, learnt their trade since biomedicine arrived so forcefully in China, and unsurprisingly therefore tend to stick close to the modern ‘party line’ of integration, such that CM concepts and theory remain congruent with biomedicine.¹⁴⁰

At some point during the twentieth century, CM had to grapple with the reality of eggs and sperm (first discovered by the seventeenth-century European biologist Leeuwenhoek)¹⁴¹—and the derision from some quarters that it did not know about them.¹⁴² Farquhar has documented the pressure exerted on CM during the late twentieth century to come up with similar tangible entities to those recently discovered by biomedicine (e.g., bacteria, viruses, gametes, etc.).¹⁴³ Fortunately, representatives of CM were able to save face by pointing out the correspondence of the gametes with *jing*, simultaneously proving that CM was way ahead of its time. As a happy coincidence, polarising the focus of conception around *jing* (and thus the Kidneys) meant that the potentially humiliating theory that semen unites with female blood at conception could be allowed to fade into obscurity.

It is of course not an entirely modern occurrence to gloss *jing* as a physical object (whether ‘the body’ or ‘gametes’)—this has a historical basis in its alternative identity as semen. Whilst it is impossible to verify how the pre-Han originators of CM conceived of *jing*, one might imagine that despite their

¹³⁵ Andrews 1996; Karchmer 2004.

¹³⁶ Karchmer 2004.

¹³⁷ Andrews 1996; Karchmer 2004.

¹³⁸ Liang 2003.

¹³⁹ Li 2005.

¹⁴⁰ For example, see Lyttleton 2004; Marchment 2007.

¹⁴¹ Magner 2005.

¹⁴² Andrews 1996.

¹⁴³ Farquhar 1987.

primary focus on process, resonance, and relationship,¹⁴⁴ they still had to somehow classify the physical ‘stuff’ of the human body—physicality that visibly suffered inexorable temporal decline, with an associated deterioration in reproductive capacity. It may be that *jing* fitted as a descriptor of the ‘body’ in this regard.

For modern clinicians, who tend to tread a path somewhere between CM and biomedicine, considering *jing* as ‘the refined part of all the *qi* in the universe [and] all the useful entities within the human body’ eludes clinical utility.¹⁴⁵ Practitioners are required to make clinical decisions, and *jing* is therefore required to take on the identity of a physical substance that can be present or deficient in discrete amounts and thereby influenced through treatment. Such narrow readings, however, exhibit the common tendency to edit out the contradictions and anomalies that do not fit one’s own agenda when assembling a coherent version of another culture’s medicine.¹⁴⁶ Thus for modern clinicians the scope of *jing* identified in the themes above—that includes aspects of form, function, and process—becomes restricted in the interests of clinical expediency.

Historians and philosophers, on the other hand, tend to allow *jing* a broader scope of meaning, asserting that to conceive of it as a fixed physical entity is anathema to CM, as *jing* is by definition in a process of continuous movement and transformation.¹⁴⁷ For a medicine that assumes ‘transformation as the inalterable condition of being...’ Farquhar argues, ‘...essences that are permanent...are not issues for discourse’.¹⁴⁸ Just as clinicians require *jing* to assume an identity with which they can work, it is the job of the scholars to allow the manifold meanings of *jing* to shine. Historians and philosophers, of course, invariably read classical Chinese, and thus may be able to embrace multiple semantic subtleties, whilst modern clinicians may have to settle for the meaning appropriate to the matter at hand—in the case of reproductive medicine, the gametes (although it should be noted that modern Chinese practitioners seem to share equally narrow readings of the term). However, Wu argues against the tendency of scholars to disproportionably privilege CM medical scripts of function (‘vital flows and transformation’) over form (‘the physical bodily space’), identifying both as forming a vital tension in the discourse of traditional doctors of CM.¹⁴⁹

¹⁴⁴ Ibid.

¹⁴⁵ Zhang and Rose 1999.

¹⁴⁶ Farquhar 1987.

¹⁴⁷ Larre and Rochat de la Vallée 1999.

¹⁴⁸ Farquhar 1987.

¹⁴⁹ Wu 2010.

That the term *jing* defies straightforward linguistic capture in English should come as no surprise. Translation of CM is highly problematic¹⁵⁰ as there is invariably no one-to-one correspondence between English and Chinese words¹⁵¹ and Chinese meaning tends to operate contextually.¹⁵² Add to this the semi-otic consideration that the concept of *jing* is suspended in dense cultural ‘webs of significance’,¹⁵³ one is left with the essential ‘untranslatability’ of *jing*.¹⁵⁴

Meaning in CM tends to be inherently flexible. Hsu has pointed out that classical CM education teaches ‘different meanings in particular contexts’ and points out ‘the basic rule for reading classical Chinese texts—that what was valid in one context was not in another’.¹⁵⁵ Unlike biomedicine, such polysemy is not viewed as problematic in CM: ‘The senior doctor Zhang made no attempt whatsoever to try to reconcile these different meanings’.¹⁵⁶ The Western translators of CM seem to continue such a tradition. Lyttleton, for instance, initially glosses *jing* as gametes, but without any overt acknowledgement or signposting *jing* comes to represent ‘the *potential* for gamete development’ (rather than the gamete itself), ‘the function of the ovaries and some aspects of pituitary function’, and one of ‘the “nutrients” required for an egg to develop’.¹⁵⁷ The term thus moves from form to function and object to process, demonstrating significant semantic fluidity.

For some, such flexibility captures the overlapping holistic nature of reality and exposes the falsehood in the tendency of science to present reality in terms of immutable objects and fixed meanings. For others, however, it exposes CM as an example of what Karl Popper defined as pseudo-science.¹⁵⁸ In this view, the principles of CM, like Marxism or Freudian psychoanalytic theory, can be made to explain any clinical data whatsoever and are thus unfalsifiable—and therefore unscientific. Such semantic fluidity in the hands of CM authors is frequently extrapolated cross-paradigm, allowing them to be inappropriately (from the scientific perspective) creative with biomedical ‘facts’ (see below).

The concept of *jing* thus eludes straightforward definition in English, and its scope goes beyond a label for any particular physical structure—as Bromley *et al.*, point out, ‘*Jing* is both adjective and noun, vital and vitality, essence and

¹⁵⁰ AAOM 2006.

¹⁵¹ Buck *et al.* 2000.

¹⁵² Bensky *et al.* 2006.

¹⁵³ Geertz 1973.

¹⁵⁴ Kovacs 1989.

¹⁵⁵ Hsu 1999.

¹⁵⁶ Ibid.

¹⁵⁷ Lyttleton 2004.

¹⁵⁸ Okasha 2002.

essential'.¹⁵⁹ Hsu creatively bridges such linguistic shortcomings by coining the composite term 'substance-force' to describe *jing*.¹⁶⁰ The concept of *jing* thus includes aspects of form/substance and function/process. Just like the seed of a plant, *jing* is at once a spatial object as well as being the potential of other future forms. Whilst not 'alive' in the same way as the grown plant, a seed remains dormant, awaiting activation by the right conditions. Similarly, *jing* is rooted in the physical, but its primary *raison d'être* is of future generation and enfoldment.

Jing and clinical practice

What are clinicians to do with such confusion? One might follow the example of Professor Li Yueqing, a modern CM andrologist, who so fully embraces the clinical relevance of semen analysis that for him 'neither the patient's self-sensation...nor his tongue show us any reliable signs...the microscopic examinations are the only way to make differentiation'.¹⁶¹ Or one may agree with Farquhar and resist such modern distortion of CM theory: 'Chinese medical thinking is not naturally murky, it just gets that way when one attempts to fill its intellectual objects (patterns of pathological function) with anatomical content'.¹⁶² Professor Li's bold statement points to a very modern problem—that ever since Chinese doctors were able to look through a lens at sperm (or indeed at eggs or ovaries), it became clear that not all patients with infertility show explicit signs of the 'Kidney deficiency with insufficient essence' that for Professor Li constitute the 'fundamental causative factor of male infertility'.¹⁶³ However they think about them, modern CM practitioners working in reproductive medicine face a barrage of biomedical test results proffered by increasingly well-informed patients who expect their practitioner not only to understand them, but also to intervene successfully in order to influence them. Such tests have become the standard method to assess the effects of CM treatment modern reproductive research.¹⁶⁴ As a practitioner, one might welcome the advantages provided by such clinical information, and respond by improvising an 'integrated' diagnosis and treatment.¹⁶⁵ Indeed, one perspective on what has happened to CM since the arrival of biomedicine

¹⁵⁹ Bromley *et al.* 2010.

¹⁶⁰ Hsu 1999.

¹⁶¹ Li 2005.

¹⁶² Farquhar 1991.

¹⁶³ Li 2005.

¹⁶⁴ For example, see Geng *et al.* 2010.

¹⁶⁵ For example, see Elliott 2009; Zelicha and Nuria 2010.

in China is that, rather than distortion, such integrative improvisation represents innovation.¹⁶⁶ Now that CM finds itself in the post-genomic era, practitioners of CM are frequently required to respond to new discoveries. Horne, for example, presents innovative theories regarding epigenetics, even suggesting—contentiously—that a woman's body may even be able to produce fresh eggs.¹⁶⁷

There are, however, dangers associated with attaching CM so closely to biomedicine, as recently persuasively documented by Scheid in the case of menopause.¹⁶⁸ To downgrade empirical clinical knowledge built over centuries in favour of the tangible presence of '*jing*' as seen through a microscope risks losing potentially effective—albeit at times theoretically precarious—clinical strategies that had developed prior to the paradigm shift. For instance, the shift in women's reproductive medicine from focusing primarily on the blood (as *jing*) to focusing more on the eggs (as *jing*) entails changing the primary clinical strategy from nourishing blood to nourishing *jing*. Such theoretical complications are not unique in CM; in some ways this mirrors the long-running debate in Chinese medicine about the respective roles of the Heart and brain in terms of housing the *shen* (spirit), where new theories simply began to coexist with—rather than replace—the old theories.¹⁶⁹ Such 'grafting' of the new on to the old is typical of the development of CM.¹⁷⁰

Double standards

The discourse of modern practitioners of CM is apparently very different to their biomedical peers, who at times brutally pronounce¹⁷¹ on a woman's reproductive capacity based on clinical tests, despite these tests having a modest-to-poor predictive capacity.¹⁷² Lewis states that biomedicine 'can do little to help' in cases of premature ovarian failure, whilst for the CM practitioner the condition is 'rewarding', backing up this assertion with the polemic force of a patient diagnosed as 'irreversibly infertile' by her Western medicine doctor who was helped to conceive with CM.¹⁷³ Lewis markets her services to a client group that biomedical consultants would view as irremediably infertile and beyond even the help of ART, so that women 'whose FSH values are well

¹⁶⁶ Karchmer 2004.

¹⁶⁷ Horne 2011.

¹⁶⁸ Scheid 2007; Scheid 2009.

¹⁶⁹ See Deadman *et al.* 1998, p. 533.

¹⁷⁰ Andrews 1996.

¹⁷¹ Lewis 2004; Atwood and Dobkin 1992.

¹⁷² Broekmans *et al.* 2006.

¹⁷³ Lewis 2004, p. 239.

over 100...[and]...whose AMH values were zero conceive naturally'.¹⁷⁴ To such patients a diagnosis of *jing* deficiency is potentially less terrifying than 'ovarian failure' for both patient and practitioner, especially given the existence of herbs and acupuncture points that—theoretically at least—increase *jing*. Lewis rejects the biomedical view of the reproductive system as an 'ever-deteriorating disease process waiting for intervention' and instead views it through the 'different lens' of Chinese medicine, in which the body-mind-spirit is imbued with 'miraculous' abilities and the overall context is given as, 'There's no such thing as infertility'.¹⁷⁵ Despite reframing pathology through a 'different lens', however, Lewis' descriptions of the reproductive system remain cast in biomedical terms: 'FSH is the flame. The uterus is the oven. LH is the opening of the flue. The ovaries are the wood'.¹⁷⁶ This displays the tendency of practitioners of CM to cherry-pick from biomedical theory when it suits their purposes—thus the title of Lewis' book, *The Infertility Cure*,¹⁷⁷ is couched in biomedical terms, and her discourse about infertility is replete with biomedical explanations of the pathomechanisms involved, thus conferring biomedical authority on her work. Despite her frequent rejections of biomedical discourse, however, her CM is informed by the same questionable biomedical scripts identified in recent scholarship by Scheid:¹⁷⁸ 'menopausal symptoms can be alleviated when the Kidney system is tonified or stimulated, thus augmenting the Essence'.¹⁷⁹

Conclusions

This paper demonstrates that the term *jing* is used in a variety of ways across modern English-language sources according to the specific context and particular agenda of the author. This supports Hsu's contention that 'Different contexts of social practice have been shown to modify the connotation, pragmatic use, and performative significance of Chinese medical terms'.¹⁸⁰ Not only is the term polysemous in itself, it is associated with a tangle of overlapping terms that are used interchangeably and inconsistently. In light of these issues, this paper puts forward the following conclusions and recommendations:

¹⁷⁴ Lewis 2011b.

¹⁷⁵ Lewis 2011a.

¹⁷⁶ Ibid.

¹⁷⁷ Lewis 2004.

¹⁷⁸ Scheid 2007; Scheid 2009.

¹⁷⁹ Lewis 2004, p. 30.

¹⁸⁰ Hsu 1999.

- Clinicians should be aware that glossing *jing* as the human gametes, whilst clinically pragmatic, narrows the concept to become congruent with modern biomedical scripts. In particular, such a reading loses the functional/processual aspects of the term, as well as the vital ‘vertical’ relationship of *jing* with *shen* that is potentially significant in terms of treatment. This paper therefore concurs with Farquhar, that ‘To give both Chinese and Western medicine their due requires finer discriminations of the specific relations between objects and processes, products and relations of production, spatial and temporal materialities.’¹⁸¹
- Although the comparison of CM with biomedicine should be approached cautiously, due to unequal underlying power relations, the correspondence of *jing* with gametes, DNA, and stem cells is alluring.¹⁸² Investigating the effects of traditional CM *jing*-strengthening strategies on such possible biomedical correlates of *jing* constitutes a potentially fertile field of research. In terms of reproductive medicine this may involve investigating the effects of acupuncture and CHM strategies to augment *jing* and strengthen the Kidneys for conditions of low egg reserve, premature ovarian failure, azoospermia, and high DNA fragmentation, amongst others. Given the lack of biomedical options available for poor egg/embryo quality and high sperm DNA fragmentation rates,¹⁸³ CM strategies to tonify *jing* may be able to assist childless couples affected by such conditions, and therefore warrants further research.
- The conceptual boundaries between *jing* and other technical terms within CM—such as the Kidney—are indistinct. Scholarship to investigate how such distinctions operate, particularly within pre-Han and Han primary medical texts, would be valuable in this regard.
- Authors of CM texts should be vigilant of the limitations of the English language and the western dualistic mindset when dealing with the concept of *jing*, and take responsibility for clarifying their particular reading of the term. It is recommended that the term be left in its original Chinese to allow for semiotic freedom.

This paper concludes by reiterating the metaphor conveyed to Farquhar by her Chinese teacher, in which classic texts of CM are likened to the bamboo that is flexible enough to be made into both a toothpick and a house.¹⁸⁴ The

¹⁸¹ Farquhar 1991.

¹⁸² Karchmer 2004.

¹⁸³ Carrell and Peterson 2010.

¹⁸⁴ Farquhar 1987.

concept of *jing* shares such conceptual flexibility, and clinicians, scholars, and researchers should remain mindful of this.

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Appendices

Appendix 1: Detailed search strategy

Database	Search terms	Date of search	Total results (articles included)
PUBMED 1	(Chinese medicine OR TCM) AND (fertility OR infertility OR reproduct*) AND (sperm OR egg OR oocyte OR ovarian reserve OR premature ovarian failure OR oligospermia OR aspermia OR azoospermia) (<i>jing</i> or essence)	25/04/11	210 (Li 2005; Chao <i>et al.</i> 2003)
PUBMED 2	AND Chinese medicine		184 (Tempest <i>et al.</i> 2005; Farquhar 1987; Geng <i>et al.</i> 2010; Xutian <i>et al.</i> 2009)
AMED, MEDLINE & Alt Health Watch (searched together through EBSCO) 1	(Chinese medicine OR TCM) AND (fertility OR infertility OR reproduct*) AND (sperm OR egg OR oocyte OR ovarian reserve OR premature ovarian failure OR oligospermia OR aspermia OR azoospermia)	25/04/11	10 (Heese 2006; Deadman 2008; Clavey 2003; Qian 1997)

Appendix 1 (cont.)

Database	Search terms	Date of search	Total results (articles included)
AMED, MEDLINE & Alt Health Watch (searched together through EBSCO) 2	(<i>jing</i> or essence) AND Chinese medicine		46 (Hammer 1999; Magidoff 2000; Magidoff 1999; Farquhar 1987; Larre and Rochat de la Vallee 2002; Xutian <i>et al.</i> 2009; Scheid 2005; Zheng 1997)
<i>Journal of Chinese Medicine</i>	Manual Search 'Jing essence sperm egg'	27/04/11	6 (Buck <i>et al.</i> 2000; Clavey 2003; Heese 2006; Deadman 2008; Qian <i>et al.</i> 2010 [JTCM]; Zhang 2007 [JTCM])
<i>The Lantern</i>	Manual Search 'Jing, essence, sperm, egg' (various combinations)	27/04/11	3 (Xingzhe 2004; XIngzhe 2004a; Zelicha and Nuria 2010)
<i>European Journal of Oriental Medicine</i>	Manual Search 'Jing, essence, sperm, egg' (various combinations)	27/04/11	1 (Larre and Rochat de la Vallee 2002)
<i>www.itmonline.com</i>	Manual Search 'Jing, essence, sperm, egg' (various combinations)	27/04/11	1 (Dharmananda n.d.)
British Library [www.bl.uk]	Chinese medicine AND infertility OR fertility OR <i>jing</i> OR essence, OR ovarian reserve	27/07/11	31 (Lyttleton 2004; Lewis 2004; Larre and Rochat de la Vallee 1999; Unschuld 1986; Unschuld 2003)

Appendix 1 (cont.)

Database	Search terms	Date of search	Total results (articles included)
General internet search	'ovarian reserve, <i>jing</i> , Chinese medicine' (various combinations)	27/04/11	6 (Brown 2009; Lewis 2011; Lewis 2011a; Horne 2011; Brown 2011; West 2011)

Appendix 2: Extended quotations and definitions of *jing*

Huang Di Nei Jing Su Wen, Chapter 1

'When a girl is fourteen, she comes into her prenatal vitalities [*tiangui*], her controller vessel moves and her thoroughfare vessel is abundant; her menses flow regularly and she is able to bear children. . . . When [a boy] is sixteen, his kidney *qi* is abundant and he comes into his prenatal vitalities. His seminal essence overflows and drains; he is able to unite *yin* and *yang* and so beget young'. (translated by Wu 2010, p. 90)

Nan Jing (Difficult Issue 36)

'(1) Each of the depots is a single [entity], except for the kidneys which represent a twin [entity]. Why is that so?

(2) It is like this. The two kidneys are not both kidneys. The one on the left is the kidney; the one on the right is the gate of life. (3) The gate of life is the place where the spirit-essence lodges; it is the place to which the original influences are tied. (4) Hence, in males it stores the essence; in females it holds the womb. (5) Hence one knows there is only one kidney.' (translated by Unschuld 1986)

World Health Organisation 2007

1.2.1 essence 精 (1) the fundamental substance that builds up the physical structure and maintains body function; (2) reproductive essence stored in the kidney

1.2.2 innate essence 先天之精 the original substance responsible for construction of the body and generation of offspring, often referring to the reproductive essence, also called prenatal essence

1.2.3 acquired essence 後天之精 the essential substance acquired from the food after digestion and absorption, and used to maintain the vital activities and metabolism of the body, the same as postnatal essence

1.2.4 kidney essence 腎精 the original essence stored in the kidney

Wiseman and Feng 1998

‘Essence 精 *jing*: That which is responsible for growth, development, and reproduction, and determines the strength of the constitution, and is manifest physically in the male in the form of semen. Essence is composed of earlier heaven essence (congenital essence) which is inherited from the parents and constantly supplemented by later heaven essence (acquired essence) produced from food by the stomach and spleen.’

Maciocia 2005

‘*Jing* is said to be stored by the Kidneys (with which it has a close relationship), and controls birth, growth, reproduction and general constitutional strength.’

Sivin 1987

‘The *Ching* is the foundation of life; it is a fundamental substance that shapes the human body and maintains every kind of vital activity, directly affecting growth, development, aging, and death.’

Shanghai College of Traditional Medicine 1981

‘Essence (a *Yin* characteristic) is that aspect of the body which is the basis for all growth, development and sexuality. Congenital Essence is that part of the body’s Essence which is inherited from the parents. After birth this Essence, which is akin to an inborn constitution, determines each of our growth patterns. Congenital Essence can never be replaced if lost, but can be supplemented by acquired Essence, which is derived from food. Essence also has the narrow meaning of semen.’

Dharmananda n.d.

‘*Jing* is the Chinese designation for the essential fluid of our physical body. . . . The basic *yin* (matter) from which all *yang* (physical action) springs is *jing*. In classical Chinese medical texts, *jing* is sometimes referred to as the body’s “original water” with water representing the ultimate *yin* (“original fire” being the ultimate *yang*). . . . Although the word *jing* is synonymous with the Chinese word semen, the seminal fluid represents only one form of *jing*. Other dense fluid essences such as saliva (particularly the kind that gets spontaneously excreted during meditation), vaginal fluids, breast milk or blood are all regarded to be different transformations of one and the same *jing*; these are refined essences.’

Kaptchuk 2000

‘The texture most closely associated with life itself; it is the source of life and its unfolding. . . . It is the texture that gives organic life its specific character. It is the stuff of growth and development. Essence is the potential for differentiation into life’s *Yin* and *Yang*. Essence, in one form or another, is the primordial seed of the life process, the life process itself, and life’s final fruit.’