INTRODUCTION

Getting Our Ontological Assumptions Right

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How is it that we are able to take our experience and knowledge of the world and render it coherent? Humans are apparently unique in the degree to which they consciously organise experience into overarching sets of beliefs and principles about the universe, according to which all the contingencies and irregularities of life can be made sense of; that is, in anthropological terms, humans are remarkably concerned with cosmology. In what is now China, since the last few centuries BCE, many people have attempted to make sense of the cosmos by understanding it in terms of constant principles of change, correlating all beings and sensible phenomena in relation to one another in a complex, unified system that allows navigation of the world and prediction of what will happen next. This book examines this cosmological tradition historically and in contemporary practice, in order to address the question of how cosmological thought can be analysed as an aspect of human behaviour.

In social anthropology, this capacity for people to organise knowledge and experience into a coherent cosmology has often been taken at face value. Practices of ritual, kinship, exchange, morality, warfare or whatever other sphere of human activity have all been understood by anthropologists at some point as obtaining their character from the cosmological beliefs shared by the group or 'culture' in question. Indeed, in his monumental work *Beyond Nature and Culture* (2013), anthropologist Philippe Descola gives explicit voice to this, arguing that the cultural variation we see in human social relations and practices of all kinds stems ultimately from mental 'schemas' concerning assumptions about relations of continuity or discontinuity between beings. He calls this a 'mode of identification', or 'ontology', and it can be taken in this sense as a kind of root cosmological principle. More will be said about Descola's ideas elsewhere in this book, but for

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Endnotes for this chapter begin on page 33.

now, it represents perhaps the most ambitious attempt to present cultural variation as flowing from different fundamental assumptions about the world, according to which all experience is understood and rendered coherent.

But what if this kind of approach puts the cosmological cart before the cognitive horse? Although cosmological beliefs undoubtedly influence human behaviour, often strongly, it does not follow that they have an instrumental role in governing the quality of immediate experience or perception in a way that makes experience and behaviour follow a coherent cosmological logic. What if, rather, cosmology is an explicit, contingent frame of reference by which individuals, and especially cosmological experts, occasionally reorganise knowledge and experience so that it makes sense *in retrospect*? If so, cosmology is a phenomenon not of human experience as a whole, but primarily of certain forms of reflective cognition, and one which, while it influences behaviour, generally occurs 'downstream' from immediate perception. As will be shown, evidence from the cognitive sciences strongly suggests that this, rather than the more traditional anthropological view of cosmology, is much more likely to be the case.

What This Book Aims to Do

This book is about the relationship between cosmology and cognition, and it explores this in terms of the ideas of cosmological experts – Chinese diviners putting ancient knowledge into practice in a rapidly changing world. Thematically, the book is concerned with what can be said about ontology and epistemology in relation to cosmological coherence: how can cognition help explain the way in which individuals create coherent cosmological theories, and under what circumstances do they do so? Answering this question requires extensive consideration of cognitive science, and doing so in relation to the explicit ontological and epistemological concepts of diviners requires consideration of the wider tradition of cosmological knowledge in which they participate. This means that this is not a conventional ethnographic monograph. Rather, in this book the role of ethnography is to illustrate a theoretical approach, in terms of what ethnographic and historical evidence can and cannot tell us about cosmology and cognition. The focus is on the content of cosmological representations – that is, explicit concepts and the extent to which they produce coherent accounts – rather than on divinatory cosmology as a window onto wider themes in Chinese society, or a comprehensive account of divination as a social practice. This book is therefore empirically concerned with the explicit ideas of individual cosmologists about the nature of the cosmos, the internal dynamics of those ideas and their relationship with cognition. In examining this, the book also approaches the analogous problem of linking comparative anthropological theory to the details and subjectivities of specific ethnographic cases.

The forms of Chinese divination discussed fall broadly under the rubric of 'Eight Trigrams prediction' (*bagua yuce*), a collection of various predictive meth-

ods held together by common assumptions of a cosmos knowable through correlations between phenomena, focusing on the cosmic principles found in the text of the *Yijing*, a classical work on divination and cosmology based on three-line diagrams called trigrams (*gua*). My work with two diviners in particular, Master Tao and Ma Jianglong, informs my discussion of Eight Trigrams prediction in practice and in terms of the different approaches of individual diviners. I spent a total of approximately ten months in the east Chinese city of Hangzhou between 2013 and 2015, conducting ethnographic fieldwork with these two diviners and their students and clients, and have continued to return to Hangzhou regularly. Conducting research into these practices necessitates close engagement with classical Chinese sources, not least the *Yijing* itself, in order to understand the relationship between contemporary practice and the longer history of its development, and to facilitate broader comparison. As such, this book also draws on close readings of relevant cosmological texts, particularly in its discussion of the changing ontological and epistemological assumptions that accompanied the development of the early Chinese empires in the first three centuries BCE, and the long-term effects that this development had on the nature of predictive practice.

The book has two main goals. The first is empirical: I describe the logics of ontology and epistemology as articulated by the diviners I worked with, as examples of individual cosmological exegesis as a reflective process. Similarly, I analyse historical examples of cosmological texts to situate Eight Trigrams cosmology in a wider historical tradition and to develop an epidemiological account of cosmological variation among individuals and change over time. The book's second goal is theoretical: to illustrate how a focus on individual cognition, particularly in terms of dual process theory, can advance the comparative anthropology of cosmology and ontology. My hope is to help this area of anthropology move beyond an apparent opposition between cognitive/evolutionary and culturally focused accounts, and to do so by taking inspiration from the way in which Chinese diviners themselves think reflectively about similarity and difference. The remainder of this introduction presents a background and overview of Eight Trigrams prediction in China, including the context of my ethnographic work and the historical texts examined, followed by an extended discussion of the book's approach to cognition, ontology and cosmology.

Chinese Divination and the *Yijing*: Historical Evolution and Contemporary Practice

History

The earliest confirmed written records from China are records of divination: the 'oracle bone script' (*jiaguwen*) inscribed on turtle plastrons and ox scapulae, recording the exchanges between the Shang dynasty (*c*.1600–1046 BCE) kings

and their ancestors and high god. Even at this early point, time was reckoned by the sexagenary cycle of 'stems and branches' (*ganzhi*), which would come to form a key part of the correlative system that underpins Eight Trigrams prediction and related practices. Sociopolitical change from the end of the Shang kingdom up to the formation and consolidation of the Qin and Han empires in the third to second centuries BCE precipitated significant changes in cosmological ideas and, by extension, divination methods. By the ninth century BCE, during the Western Zhou (1046–771 BCE), the divination manual on which the *Yijing*[1] is founded, the *Zhouyi* (*Zhou Changes*), existed in its present form (Rutt 2002: 30–33). This book contains the sixty-four hexagrams, originally sets of odd and even numbers but later comprising diagrams of six broken or unbroken lines, themselves constructed by pairing eight trigrams of three lines each: ☰☷☳☵☶☴☲☱. Together with the hexagrams, the *Zhouyi* documents the hexagram names, terse judgements on their meaning and statements concerning their component lines (*yao*). Divination, then as now, consisted in employing some sort of mechanism to obtain a hexagram. Originally, this involved the manipulation of yarrow stalks, introducing a randomising element. Today, it is more common to use coins, three of which are thrown together six times to produce each of the six lines. Still other methods rely on using the cosmological correlates of elements of the environment (see below), such as the date, a name, spatial configurations and so on.

Until the third century BCE, when it began to acquire explicitly cosmological significance, the *Zhouyi* appears to have been used 'exclusively for divination' (Smith 2008: 7). References to its use in the *Zuozhuan* historical chronicle, covering the later eighth to mid-fifth centuries BCE, suggest that the line statements themselves were used as prognostications, and not yet incorporated into a correlative system of the kind that would become central later (Shaughnessy 1999: 341–42). By the third century BCE, the hexagrams, now consisting of the broken and unbroken lines, were being speculatively linked to *yin* and *yang*, negative and positive principles. During the Warring States period (475–221 BCE), the *Zhouyi* was increasingly understood in relation to developing cosmological theories resting on correlating different groups of phenomena, and to concepts of *qi*, at this point referring to vapours with various effects on the world and on human behaviour. These theories in turn were developed not only for use in day-to-day mantic practices, but also to provide cosmological justification for political control and military conquest – something of crucial importance to establishing the legitimacy of the Qin dynasty, which unified the Warring States through conquest, and the Han dynasty, which overthrew the Qin and established long-term imperial rule.

The commentaries added to the *Zhouyi* to create the *Yijing* – officially canonised as one of the 'five classics' (*wujing*) underpinning imperial ideology in 136 BCE under Han emperor Wu Di – trace their origins to the late Warring States period. They are known as the *Ten Wings* (*Shi Yi*), and add an explicitly cosmo-

logical dimension to the hexagrams, laying out a conception of a dynamic cosmos based on the *dao* ('Way'), according to which the cosmic forces of yielding *yin* and active *yang* interact. The dynamics of this cosmos are knowable via the sixty-four hexagrams of the *Yijing*, which are held to encompass all possible situations. The commentaries of the *Ten Wings*, particularly *Explaining the Trigrams* (*Shuo Gua*), explicitly correlate the hexagrams and trigrams with all manner of phenomena, which are in turn correlated with one another. Thus, in *Explaining the Trigrams*, each trigram is correlated with a natural form, an action, a direction, an animal, a body part and so on.

These developments occurred in the context of a wider shift towards correlative cosmology of the kind that still forms the basis of Eight Trigrams prediction, *fengshui*, Chinese medicine and similar practices. In the early Han period, the cosmology laid out in the *Ten Wings* was increasingly integrated with an idea of a universal energy substance, *qi*, transforming through the Five Phases (*wuxing*). By the Eastern Han (25–220 CE), this constituted a comprehensive cosmology that held that the cosmos in its entirety is composed of *qi*, which is dynamic and differentiated according to the Phases at different cosmological scales. The Five Phases are Metal (*jin*), Wood (*mu*), Water (*shui*), Fire (*huo*) and Earth (*tu*), and operate according to two cycles, one of 'production' (*sheng*) and one of 'conquest' (*ke*), relating to secondary cycles of masking and control (see Feuchtwang 1974: 41–42). Wood produces Fire; Fire produces Earth; Earth produces Metal; Metal produces Water; Water produces Wood. Wood conquers Earth; Earth conquers Water; Water conquers Fire; Fire conquers Metal; Metal conquers Wood. The Phases are best understood as processes – Fire 'flaming upwards', and Water 'soaking downwards' (Lloyd 2014a: 23) – and can be considered in terms of spatiotemporally variant configurations of *qi* correlated with phenomena, processes, directions and so on, the salience of which depends on scale in the same manner as the trigrams. That is, while a given object in space-time may be considered, say, Fire at a certain scale, that scale nonetheless manifests an aggregate configuration of *qi*; the object in question will contain within it, at lower scales, *qi* in all five Phases. At the same time, *qi* transforms according to the Phase cycles.

The classical texts examined in this book date from this formative period, from the late Warring States to the early Han – one in which many cosmological ideas competed with one another, and were variously taken up and combined or rejected by different scholars, and mobilised in relation to the military conquest and political centralisation of the first imperial dynasties. Texts from this period are worth considering in relation to contemporary divination for three reasons. First, some, such as the *Yijing* itself, are referred to and interpreted by modern Eight Trigrams diviners, and directly inform their ideas and practices. Second, examination of sources from the origin period of correlative cosmology helps guard against the idea of a fully formed, single, coherent notion of cosmology that historically

developed without significant variation. Third, as shown in Chapter 4, examining these texts is instructive in illustrating the variation, limits and affordances of evidence for understanding the existence of specific ontological conceptions or their absence.

The methods of Eight Trigrams prediction discussed in this book all rely on shared basic principles of correlative cosmology, integrating it with the *Yijing* such that each trigram and its constituent lines are also correlated with one of the Five Phases. The 'six lines' (*liuyao*) method used by Master Tao can be traced to the scholar-official Jing Fang, credited with the development of 'attached stem divination' (*najia shifa*), which integrated the *Yijing*'s trigrams into the *qi*-based system. The Han dynasty saw a flourishing of cosmological scholarship on the *Yijing*, which exerted a continuing influence on subsequent dynasties. In particular, during the Song period (960–1279 CE), scholarly culture turned again to the text as a source of political, moral and cosmological guidance (Smith et al. 1990), and divination based upon it continued to play a significant role in Chinese society during the later Qing period (see Smith 1991). The text was widely seized upon as a means of making sense of the profound changes that hit China at the end of the Qing dynasty, and particularly as a means of reconciling newly imported Western ideas with China's cultural heritage (Smith 2008: 196–201). This trend continued into the Republican era, an intriguing example being the scholar Liu Zihua's use of the *Yijing* to predict the existence of a planet (Homola 2014). After the communist revolution of 1949, and especially during the Cultural Revolution (1966–76), the *Yijing* and divination in general were vigorously supressed together with other remnants of 'feudal superstition' (Smith 2008: 205–7; see Bruun 2003: Chapter 3 on *fengshui*).

Divination in the Reform Era

In spite of its official condemnation as superstition, divination has experienced a massive resurgence in the four decades since Mao's death and the implementation of Reform and Opening Up (*gaige kaifang*) under Deng Xiaoping. By the time of my fieldwork from 2013–15, though still officially considered 'superstition' (*mixin*), practices like Eight Trigrams prediction were continuing to increase in popularity and were freely practised in public. However, local government policies and enforcement vary; when I returned to Hangzhou in 2018, Master Tao was still allowed to practice freely but could not do so visibly at the roadside, being required instead to operate concealed behind a hedge. This coincided with a general assertion of party-state control of religious activity under Xi Jinping, as well as government efforts to 'clean up' cities by removing street vendors.

The post-Reform trend of religious revival ought to be understood in terms of shifting state attitudes to 'religion' (*zongjiao*) and 'superstition' broadly con-

strued, at times coercive and at times laissez-faire – and often both, depending on the practice in question, the location, the people involved and the attitude of local government. Overall, though, the environment for divination has become much more open since the mid-1980s, when diviners and *fengshui* masters were targeted for re-education during a crackdown on 'spiritual pollution' (Goossaert and Palmer 2011: 324).[2] However, the political designation of 'superstition' compels diviners to seek legitimacy, both through asserting the 'scientific' (*kexuede*) and cultural merits of their practice and through forming formal associations (Li 2015, 2019; Matthews 2017a; see Homola 2013 for a parallel account from Taiwan).

The *Yijing* itself has seen a resurgence in popularity, typified by the '*Yijing* fever' (周易熱 *Zhouyi re*) of the 1980s and 1990s (Redmond and Hon 2014: 188–90; Smith 2008: 207; again, see Homola 2013: 138 on Taiwan), which saw a proliferation of books, training courses and societies amid a general fascination for matters cosmological (Goossaert and Palmer 2011: 275–81). This can be seen as part of a broader enthusiastic revival of practices and traditions supressed during the Mao era, including the rapid development of popular religion, particularly in rural areas (Chau 2006; Goossaert and Palmer 2011: Chapter 10), and the revival of folk traditions, such as paper-cutting, storytelling and spirit cults (Wu 2015), *qigong* breathing practices (Chen 2003; Palmer 2007), self-cultivation techniques (Farquhar and Zhang 2012) and Confucianism (Bell 2010; Billioud and Thoraval 2015; Hammond and Richey 2015; Sun 2013: Chapters 8 and 9). In many cases, the revival of these practices, including Eight Trigrams prediction, has been accompanied by claims that they are 'scientific', which can be seen as part of a longer tradition of attempts to reconcile Chinese cosmology with modernity (see Lackner 2012). This is often motivated not only by concerns for legitimacy but also by intellectual curiosity; both the correlative cosmology of Eight Trigrams prediction and, for example, the cosmology of modern physics are seen as accurate accounts based on human observations of recurrent patterns in nature.

Anthropological and Sinological Approaches to Chinese Divination and Cosmology

The study of Chinese divination in anthropology and sinology is inseparable from the study of correlative cosmology. Even forms of Chinese divination which do not rely on correlative cosmology as an explanation for their efficacy, such as spirit possession or asking questions of gods using tools such as divination blocks, nonetheless operate in a social context in which correlative cosmological ideas and practices are salient (and are often used in conjunction with explicitly correlative methods). This section provides a brief review of studies of Chinese divination and cosmology as relevant to this book's arguments, in order to con-

textualise the following sections on ethnographic fieldwork and cognition in the wider comparative anthropology of divination and cosmology.

Anthropological studies of Chinese cosmology and divination have by and large focused on their sociopolitical context, as opposed to cognition and the content of representations. These studies include accounts of the social function of cosmological ideas in Chinese society (Freedman 1979a; Granet 1977; Wolf 1974; Yang 1961), and more specific accounts of the social situation of *fengshui* (Bruun 2003); the interplay of popular religious cosmology with community formation and politics (Chau 2006; Feuchtwang 2004; Sangren 1987) and the history of spatial organisation (Wang 2009); ritual and ethical aspects of cosmology (Ahern 1981; Steinmüller 2013) and their relation to kinship (Freedman 1979b, 1979c); cosmology as a lens through which to view migration (Chu 2010); and the role of cosmology in shaping medical practice (Farquhar 1996; Hsu 1999; Zhang 2007). While such studies have necessarily dealt with the content of cosmological representations, this has not been their primary focus. Stephan Feuchtwang (2014a), however, provides an overview of core concepts in correlative cosmology broadly considered, focusing on practices of centring. Likewise, Feuchtwang's *An Anthropological Analysis of Chinese Geomancy* (1974), which systematically maps out the central cosmological ideas of *fengshui* and their practical application, focuses on these principles as understood by practitioners (see also Bruun 2008 for an overlapping account, and Chao 1946 for a comparable overview of *bazi* horoscopy). Also writing about *fengshui*, Maurice Freedman (1979d, see also 1979e), like Feuchtwang, touches on certain 'psychological' aspects, including emic perceptions of the relationship between psychology and cosmos and issues of scepticism. Cognition per se, however, has not been a focus of sustained engagements with Chinese cosmology, the exceptions being Charles Stafford's references to divination in his discussions of pattern recognition in thinking about the future (2007) and numerical cognition (2009), and Stéphanie Homola's comments on analogical reasoning in Liu Zihua's linkage of the *Yijing* and astronomy (2014: 738–41).

Fengshui and the numerological divination systems described by Stafford are cognate fields with Eight Trigrams prediction. Feuchtwang (1974: 195) comments that *fengshui* practitioners 'consider themselves as natural scientists and literati and scorn religion and priests'; similar attitudes are held by Eight Trigrams diviners, and I have described them in detail elsewhere (Matthews 2017a). This relates to the question of legitimacy in the context of divination's politicisation by the state as 'superstition', both in the People's Republic and Taiwan, where local authorities attempt to concentrate diviners' businesses into specified streets (Homola 2013). Meanwhile, Li Geng's (2019, see also 2015) study of the methods by which *Yijing* diviners seek legitimation, including through joining formal associations that can then issue certificates of membership, stands out as one of the few anthropological studies of Eight Trigrams prediction itself.

Discussions of cognition and its relation to the content of cosmological theories continue to constitute an important domain of sinology, particularly in discussions of the intellectual history and philosophy of early China (considered extensively in Chapter 4). Crucial to these discussions is the ongoing debate concerning the character of 'correlative thought', which has primarily been concerned with whether the correlative ordering of phenomena according to concepts such as *yin* and *yang* and the Five Phases betrays a way of thinking distinctly different from that historically prevalent in the West (Bodde 1981a; Graham 1986, 1989, especially Part IV; Hall and Ames 1995; Lloyd 1996: Chapter 5; Matthews 2021a; Schwartz 1985, especially Chapter 9), and consideration of the origins of a comprehensive correlative cosmology, often discussed in relation to the formation of the unified Qin and Han empires (Henderson 1984; Lloyd and Sivin 2002: 253–72; Needham 1956; Nylan 2010; Puett 2004; Wang 2008). Related concerns regarding mind–body dualism considered in light of cognitive science are pursued by Edward Slingerland (2013, 2018; Slingerland and Chudek 2011), and Steve Farmer et al. (2000) have proposed a research framework for the comparative study of correlative cosmologies that attempts to ground the cross-cultural recurrence of this way of thinking in neurobiology. In summary, these debates have focused on whether or not a meaningful distinction exists between a 'Chinese' way of thinking that is relational and holistic, and a 'Western' way of thinking that emphasises essences and linear causation. These questions are dealt with throughout this book when they arise (notably in Chapters 4 and 5), including in the following section on dual process theory, and directly parallel questions of cosmology and cultural difference in anthropology as discussed below. Slingerland (2018), whose approach shares considerable common ground with that of this book, has provided a thorough, critical review of these debates from the perspective of cognitive science and linguistics.

Ethnography: Two Contemporary Diviners in Hangzhou

The Role of Ethnography in This Book

Most of the above-mentioned anthropological studies of Chinese divination are primarily concerned with how it fits into a wider social context, as revealed via long-term ethnographic fieldwork. The study of subjects such as how legitimacy is established, or the role of *fengshui* in local politics, is necessarily driven by extensive ethnographic description as a key means of empirical documentation. This is particularly so given that such subjects are inherently broad in scope; 'local politics' or 'legitimacy' are not readily identifiable as objectively defined scientific objects, but are shorthands for a whole range of phenomena that allow an ethnographer to build up a 'thick description' (Geertz 1973) of a particular time

and place. When such accounts engage with theory, it is often by using theoretical concepts as heuristics or exploring the interpretive potential of salient local concepts. This book takes a somewhat different approach, using ethnographic insights in two specific ways – as an illustration of broader theoretical principles, and as a source of theoretical concepts.

A traditional ethnographically driven interpretive approach is not sufficient for an explanatory account specifically focused on the relationship between cosmology and cognition. This is not because ethnography is not valuable (indeed, it is part of the inspiration for the argument), but because, like any research method or form of data, it is limited. Explaining the role and effects of individuals' cosmological concepts in relation to cognition requires evidence that ethnography alone is simply unable to provide. I expand on this later in this Introduction and throughout the book; here, though, I want to note that it has implications for the role of ethnography in the argument. The role of ethnography here is primarily illustrative. The complexities of human cognition mean that it is not enough to derive insights solely from observed behaviour or interviews; instead, these must be analysed in light of an informed understanding of how the relevant aspects of cognition operate, including as revealed through psychological experiments.[3] In this sense, this book analyses ethnographic examples in light of such understandings, and does not pretend to offer a comprehensive ethnographic account of Eight Trigrams prediction and its wider social context. This is considered where necessary, but the primary focus is on what can be learned from individuals' explicit cosmological ideas, and their relationship with a wider cosmological tradition of transmitted knowledge. I believe that some of these ideas, particularly concerning scale, are also extremely valuable for anthropological comparison (the focus of Chapter 5); for this purpose in particular, they are best considered as specific concepts which form parts of explicit cosmological theories, rather than as lived practices, and in considering their potential as theoretical concepts in anthropology (as in Chapter 5), I thus treat them as I would the concepts of other scholars.[4]

The Ethnographic Context of This Study

Most of the ethnographic data presented in this book derives from a total of around ten months' fieldwork conducted for my PhD, from September to December 2013, January to March 2014, and August to September 2015.[5] This concentrated on understanding explicit cosmological beliefs and the process of interpretation used in divination, primarily through working with Master Tao, and later Ma Jianglong. All fieldwork was conducted independently in Mandarin. Over the course of fieldwork, I generally visited Master Tao at his roadside spot three to four times per week, typically for several hours at a time, if not the whole day (specific times and days varied from week to week). Fieldwork thus primarily took the form of par-

ticipant observation. Master Tao taught me foundational concepts of the six lines prediction method he used, and I would ask him questions emerging from specific consultations. Fieldwork thus proceeded organically, and through Master Tao I got to know various of his students, most of whom study six lines prediction as a hobby, and regular clients, who were happy to answer questions and for me to take notes during the course of participant observation; this was my preferred method, though I arranged a small number of semi-structured interviews with students and other individuals who were not regularly present in the neighbourhood, including on Master Tao's recommendation.

Master Tao's consultations took place by the side of a pedestrian street a few kilometres north of Hangzhou's West Lake, part of a network of such streets along a stretch of the Grand Canal (connecting Hangzhou and Beijing) around twenty minutes' cycle ride from the shared flat I was staying in to the west (unfortunately, it was not possible, certainly in the city, to arrange accommodation with diviners). Master Tao lived close to the street where he worked, having moved to Hangzhou some years prior to my fieldwork. He took up six lines prediction full-time after he retired, having originally been taught the method by a Buddhist master on the eve of the Cultural Revolution. Master Tao was well liked and respected both by his students and clients and by the local community ('master', *shifu*, being a respectful form of address rather than a formal rank). He would offer roadside predictions for 50 RMB (around £5 at the exchange rate of that time), rather more than the 25–30 RMB charged by other roadside diviners at the time, but people were willing to pay, and this pricing was low enough to reach a broad client base. He also offered private consultations and other services, including *bazi* fate calculation, name-giving (*qiming*) and changing (*gaiming*), stick divination (*chouqian*) and *fengshui* consultation.

The immediate surroundings of his workplace were occupied by new buildings in traditional style, serving as restaurants, teahouses, cafes and small shops (overall, a mixture of high-end independent shops, stalls selling religious goods such as incense sticks, a highly regarded ceramic shop that hosted various artistic events, a rice wine shop and so on). These businesses neighboured low apartment blocks and a large Buddhist temple. This combination meant that the street was frequent by a wide range of people, including local residents, patrons of these various businesses, local workers (including employees, street cleaners and security guards), monks and temple-goers. Several diviners worked on this street, though none of them did so for the full duration of my fieldwork, and they did not enjoy the same level of business as Master Tao.

Indeed, Master Tao was a popular diviner with many regular clients, some of whom lived locally and others of whom came from elsewhere or beyond Hangzhou. Alongside this, he was regularly consulted by passers-by, the busiest times being days on which large numbers of people visited the temple – especially

around lunar new year, significant dates in the Buddhist calendar (such as birth-days of the Bodhisattva Guanyin), other important dates in the lunar calendar and to a lesser extent the first and fifteenth day of each lunar month. As elsewhere in China, in this part of Hangzhou diviners therefore played an important role in the ritual economy of the temple's local area; on significant days such as those mentioned, many people would visit the temple to offer incense for good fortune, and combined this with divinatory consultations (to gauge, for example, their fortune for the rest of the year).

This context meant that Master Tao's work was a highly visible part of the local neighbourhood. He had commandeered a number of used beer kegs and abandoned chairs from the local businesses to serve as makeshift seats for clients, and one of the local cafes would allow him to conduct consultations under their awnings on particularly hot days. He was well known in the community, and many local workers and regular passers-by would stop to chat during the course of the day, or to observe consultations. A typical day of fieldwork with Master Tao would thus involve sitting with him and his various interlocutors at the roadside. Occasionally he would have considered in advance some key principles he thought I should know about, and would explain these to me between consultations; at other times, points he deemed important would arise from the nature of a specific consultation, or he would give me his take on various aspects of 'traditional culture' (*chuantong wenhua*). As consultations were conducted in public, typically clients were happy for me to remain present and observe and take notes on the nature of the enquiry and its interpretation and resolution; when they were not, I would absent myself. In fact, in good weather Master Tao's consultations would frequently attract onlookers, including his own acquaintances and regular clients, as well as interested passers-by. Given the informal and visible nature of Master Tao's practice, combined with the wider political context of divination,[6] I limited data collection with him to fieldnotes and occasional photographs.

My fieldwork with diviner and *fengshui* consultant Ma Jianglong proceeded quite differently. I met Ma Jianglong when a friend (whom I knew via Master Tao) took me to see a lecture on 'national studies' (*guoxue*) early in 2014. Master Tao had been taught six lines prediction by a master as part of a longer chain of oral teaching, and identified this with a tradition of divination traceable via Qing-era texts, such as Wang Weide's *Orthodox Divination* (*Bushi Zhengzong*; Wang Hongxu [Wang Weide] and Sun Zhengzhi 2012) and Li Wenhui's *Divining the Changes through Adding and Subtracting* (*Zengshan Buyi*; Li Wenhui 2012), ultimately to the work of Jing Fang the Younger in the Han dynasty (see Chapter 4). Ma Jianglong, in contrast, has developed his own approach to Eight Trigrams prediction through a reading of the *Yijing* focusing on the imagery of whole hexagrams rather than properties of specific lines, which are the focus of six lines

prediction. He combines this with *fengshui* consultancy and teaching, offering courses in person and online, has plans to establish a research institute, and has published a commentary on the *Yijing* with his wife Chang Weihong, *My Reading of the* Zhouyi (*Zhouyi wo du*; 2013).

Ma Jianglong caters to a very different clientele, primarily businesspeople, charging rates in the thousands of RMB for private consultations. Unfortunately, despite his willingness for me to attend a consultation if a client was happy for me to, no such opportunities arose during fieldwork. As such, my work with him consisted of long discussions, sometimes starting as semi-structured interviews, beginning at his office in the early afternoon and continuing into his home and late into the evening. These, and continued subsequent communication via WeChat and on return visits, provided an opportunity to understand his cosmological approach in detail. While Master Tao emphasised the 'scientific' nature of Eight Trigrams prediction, Ma Jianglong argues that it should be considered 'dark studies' (*xuanxue*), a combination of Confucian and Daoist approaches which emphasises intuition and practice rather than formalised theory, and in his view transcends the limits of science as a source of knowledge. Despite their differences, both men operated according to similar assumptions about the trigrams and hexagrams, and *qi*-based cosmos, as described later.

Divinatory Procedure

Yijing-based divination or Eight Trigrams prediction can be conducted via various procedures, but all of them involve deriving a hexagram. The method described in the text itself involves the manipulation of yarrow stalks, separated into two bunches by hand to introduce some degree of randomisation. The *Appended Phrases* (*Xici*) commentary states that the legendary sage ruler Fu Xi (named Bao Xi in the text) derived the trigrams from his observation of natural patterns, providing the means for later non-sages to access cosmological knowledge. This idea is accepted by contemporary practitioners such as Master Tao and Ma Jianglong, but the yarrow stalk method is not often seen today – diviners like Master Tao who employ the six lines method will tend to use coins. Three coins are thrown together for each line, their outcome indicating *yin* (broken line), *yang* (solid), *yin* changing to *yang*, or *yang* changing to *yin*. Master Tao's own description of the procedure was as follows:

> 用中国清朝乾隆钱三只，用双手握住摇动丢下，有满文的为准，一个满文为一点，二个为两点，三个为一圈，三个都是"乾隆通宝"者为一X，一点为阳，二点为阴。一圈为阳，一X为阴，一圈为阳动，主过去之事，一X为阴，主未来之事，每一卦为六次称为六爻。前三次为下卦，后三次为上卦，然后上、下两卦点出卦名。[7]

> *Use three Chinese Qianlong coins* [round coins with a square central hole from the Qianlong reign, 1711–99, in the Qing dynasty; the *qian* character in the reign name is the same as the first trigram and hexagram]. *Using both hands, shake the coins and drop them. Take the Manchu script as standard. One Manchu* [side] *gives one dot* [ꞌ]*, two give two dots* [ꞌꞌ]*, three give a circle* [o]*, three all reading* 'Qianlong tongbao 乾隆通宝' [in Chinese characters] *give an X. One dot is yang, two dots are yin, a circle is yang, an X is yin. A circle is yang moving* [i.e. old *yang* changing to young *yin*]*, and governs past events. An X is yin* [old *yin* changing to young *yang*]*, governing future events. Each hexagram* [*gua*] *constitutes* [this being done] *six times, and this is called the six lines* [*yao*]*. The first three times are the lower trigram* [*gua*]*, the second three times are the upper trigram. Then the upper and lower trigram marks yield the hexagram name.* (Adapted from Matthews 2022)

Other methods are also used; given that the hexagrams are considered to be derived from observation, it is in theory possible to derive one for consultation from observing the environment. For example, the Plum Blossom method (*meihua yishu*) relies on numerological manipulation of features of the time or environment, such as the date and time, to derive a hexagram. Ma Jianglong's method, based on the correlates of each hexagram as a whole, resembles the Plum Blossom method insofar as it does not rely on randomisation, but on deliberate identification of the correlates of particular features of the context in question – such as a person's name, birth, family circumstances or appearance.

As will be seen, this results in quite different interpretive processes. For both Master Tao and Ma Jianglong, the cosmological correlates of specific phenomena are fixed and constant, and interpretation is constrained accordingly. However, Master Tao's six lines method imposes further constraints, because the hexagram is determined entirely by the fall of the coins. In contrast, Ma Jianglong is able to select what he considers the salient features of the context in question as the basis for deriving a hexagram, leaving greater room for intuitive identification of more complex situations with a particular hexagram. In all cases, however, the correlative system means that regardless of interpretation, there is a 'correct' answer to any given query.

It should be noted that these methods differ fundamentally from the conception of the *Yijing*'s use famously put forward in the West by Carl Jung (1989). That approach relies on direct consultation of the text, something not considered effective for specific diagnosis by the diviners with whom I worked, owing to its terseness and ambiguity. Jung's method hinges on an entirely different form of interpretation, in which the ambiguity of the line statements provides opportunity

for free association and subsequent derivation of subjective meaning, unlike the fixed meanings of the correlates understood by Master Tao and Ma Jianglong.[8]

This overview already illustrates a basic problem that this book attempts to address: how to consider individual variation within a tradition of cultural transmission of shared concepts. In spite of their many points of agreement on basic cosmological principles, Master Tao and Ma Jianglong employed distinct methods and held divergent epistemological ideas, particularly when comparing Eight Trigrams prediction to other forms of knowledge, such as science and religion. As will be shown, accounting for the reality of cosmological diversity means abandoning the idea that cosmologies or ontologies, as accounts of what exists, can be accurately considered on anything other than an individual level – and even then, they are contingent reflections limited to specific circumstances. Indeed, as one of this manuscript's reviewers observed, had I met different diviners during my fieldwork, the particulars of their ontological and epistemological accounts, while drawing on the common foundations provided by the long-term history of correlative cosmology, would undoubtedly have been quite different in their specifics.

Divination, Cosmology and Cognition

Eight Trigrams prediction is a practice based on the understanding of human situations in terms of cosmic principles as indexed by the hexagrams. Divination here consists in making diagnoses and predictions (Zeitlyn 2012) by understanding specific client circumstances as instances of these constant principles. It can thus be understood as a practice that follows from, and enacts, a culturally particular cosmology – and one which only makes sense in these terms. But is this the whole story? Much anthropological ink has been spilled over the possible ways in which cosmological beliefs can account for what is, from a typical modern anthropological perspective, the apparently bizarre or 'irrational' practice of employing randomised methods for gaining knowledge about the world, and what it means about the worlds imagined by cultural others.[9] A running theme of this book's arguments is that the explanatory power of cosmology with respect to behaviour should not be overstated. Cosmological concerns clearly motivate diviners, and many clients, but this does not mean that all aspects of divinatory reasoning or associated behaviour are ultimately traceable to the effects of adopting a particular cosmological view – a point discussed in Chapter 1 in relation to the concept of 'deep ontology'. As Pascal Boyer (2020) points out, a key shortcoming of the cosmological explanation for divination as a practice is that in comparative perspective, many divination systems exist which involve no cosmological elaboration at all. This is true, for example, in the classic ethnographic case of the Nuer poison oracle, where the idea is simply that divination works, even if it may

provoke questions as to the efficacy or potency of the methods and tools involved (Evans-Pritchard 1976).

Scholars of divination have long remarked on the interplay of intuition and reflection in the interpretive process, though not necessarily using these terms – I use them here following Dan Sperber (1997) and more generally the literature on dual process theory, discussed in the next section. David Parkin (1991), for example, presents a detailed account of the interplay of 'simultaneity' and 'sequencing' in three divination techniques, indicating the different ways in which the two cognitive styles are employed in different techniques and different associated belief systems. Similarly, Barbara Tedlock (2010) differentiates between 'presentational' and 'representational' symbolism, and Katherine Swancutt (2006) between 'representation' and 'conjecture'. The key difference between the two modes of thought is that the former, corresponding to intuition, relies on rapid judgements, the process of arrival at which is not accessible to conscious examination, whereas the latter, corresponding to reflection, involves conscious ratiocination and is slower. For now, it is worth making some orienting observations. First, both processes are involved in all manner of practices, though divination emphasises consideration of both, even if different forms grant more or less weight to one or the other in interpreting their results (Matthews forthcoming a). It is thus not helpful to describe divination as reliant on 'non-normal modes of cognition' (Peek 1991). Second, extended reflection need not amount to developing a systematic account of divinatory causation (hence Boyer's point), which has important implications for anthropological considerations of ontology. Third, as I argue below in relation to the anthropology of cosmology and ontology more generally, much confusion arises when anthropologists overemphasise one or the other kind of cognition, or mistake differences between intuitive and reflective judgements for evidence of a bafflingly 'other' mode of thought that they implicitly assume must be coherent.

Regarding the role of intuition, Boyer (2020) presents a convincing argument that what makes divination intuitively convincing, and thus accounts for its cultural recurrence regardless of its degree of cosmological elaboration, is that it creates what he calls 'ostensive detachment'. What marks divination out as a practice is that it generates statements about the world that do not appear to come from a speaker – that is, they are not perceived as originating with the diviner but from the process itself. The centrality of communication to human survival likely placed an evolutionary premium on 'epistemic vigilance' (Sperber et al. 2010), an intuitive sensitivity to the possibility of deception by other agents. As Boyer's argument goes, divination's intuitive credibility rests simply on removing an obstacle to doubt, as the statements it generates appear detached from a human source. This, Boyer points out, does not mean that divination will necessarily be considered persuasive in practice, only that in the absence of alternative, more convincing sources of information, it will intuitively appear authoritative.

Elsewhere, Boyer (1994a: 246) likewise identifies divinatory utterances as instances of 'nonintentional production', the content of which is determined by techniques – such as the derivation of a hexagram by the throwing of coins – rather than by the intention of the diviner; in most non-divinatory contexts, the veracity of an utterance would be judged based on the assumption that it conveys a mental representation on the part of the speaker which corresponds to (and is thus the effect of) a real occurrence (ibid.: 243–44). This forms part of a broader case he makes for the salience of abductive reasoning, or 'induction in the service of explanation' (Holland et al., cited in Boyer 1992: 208), which constrains 'the indefinitely large number of explanations compatible with any event' (Boyer 1992: 208). On this account, the experience of divinatory truth derives from 'direct causal interpretation' (1994a: 250–51), in which the mental representation of the diviner is irrelevant to the judgement of a divination's veracity, which is accepted owing to intuitive assumptions concerning mental processes and causality.

This accounts convincingly for the cross-cultural recurrence of divination and its intuitive credibility. What it does not account for is how persuasive divination might be when subject to careful reflection, though it does suggest the value of investigating whether cosmological elaboration becomes more likely in the presence of credible alternative sources of knowledge. Similarly, it does not address the role of explicit cosmological explanation from the perspective of the diviner (or, by extension, a client or observer with cosmological expertise). For the Eight Trigrams diviner, the causal account of a hexagram's derivation is explicit and specified in terms of cosmic *qi*, which is described as both energy and a constituent of phenomena. Moreover, the diviner is reflexively aware of their own mental representation of the hexagram during interpretation; from the perspective of the diviner, the efficacy of divination is not simply a matter of intuition, but also of systematic cosmological beliefs and the mental manipulation of explicit theoretical concepts. That, though, is absolutely *not* to say that every mental operation in which the diviner engages during prediction, whether intuitive judgement or protracted ratiocination, is determined by their cosmological knowledge – a contention that could hardly follow from the evidence afforded by ethnographic observation.

Likewise, it should be emphasised that texts involved in divination, including comprehensive manuals such as can be found for Eight Trigrams prediction, do not provide adequate evidence for developing comprehensive accounts of divinatory reasoning, even if they can provide evidence of particular reflective interpretations. However, texts do affect divinatory interpretation in other ways. David Zeitlyn (2001: 227) argues that in divination systems that rely on texts, 'diviners must satisfy themselves and their peers . . . that most diviners would agree with the interpretation given'. While the *Yijing* is not quoted directly in Eight Trigrams

prediction, the correlates of hexagrams are fixed and elaborated on in an extensive literature, constraining interpretation. Zeitlyn notes the similarity between text-based divination and literary criticism, given a fixed textual source necessarily subject to interpretation; this aspect is less the case for six lines prediction, given that no room for interpretation exists for the fixed line correlates – interpretation is possible only insofar as certain correlates are deemed relevant in a given instance. Discussing the *Yijing*, John Henderson (1999) argues that divination can be considered a form of exegesis, and this more precise description better fits the character of six lines prediction, in which every divination effectively amounts to the cataloguing of a new instance of phenomena described by one of the *Yijing*'s hexagrams.

Dual Process Theory and Cultural Epidemiology: Making Sense of Cosmology, Cognition and the Individual

Definitions

At this point it becomes necessary to define some key analytic concepts more clearly, and in particular the relationships between them. Following Sperber's (1996) usage, throughout the book I do not make any significant distinction between the 'social' and the 'cultural', which are used more or less interchangeably to describe behaviour that occurs in relation to and under the mutual influence of other individuals, and the associated transmission of ideas, practices and so forth. Throughout the book I refer to 'mental representations' or 'representations' to describe the conceptual content of cognition, following standard usage in the cognitive-scientific literature I engage with. These are to be understood ultimately in terms of functional descriptions of neurological processes.

'Cosmological' in this book is understood as referring to explicit conceptions of the various entities thought to exist in the cosmos and the relationships that exist between them, which may or may not be systematically integrated into a coherent, unified 'cosmology'. 'Ontological', meanwhile, refers to the most basic kinds of thing that are considered to exist and associated questions of fundamental similarity and difference, which may be explicitly discussed as such or may be implied, a point considered further in Chapters 2 and 3 and elaborated on below. Epistemology refers to explicit theories about whether, how and to what degree knowledge about the world can be obtained. In this view, cosmology (such as the correlative cosmology of Eight Trigrams prediction, which concerns the relationship between the differentiated forms of *qi* as manifest in the interactions between Heaven (*tian*), Humanity (*ren*) and Earth (*di*)) implies an epistemological stance regarding how humans are able to obtain knowledge about the world. With respect to the correlative cosmology employed in Eight Trigrams prediction, this would

concern, for example, the account of the trigrams being derived from natural patterns and the consequent reliability of resemblances between phenomena as a guide to their nature and behaviour. Meanwhile, both cosmology and epistemology thus defined presume certain ontological conditions. In Eight Trigrams cosmology, these are explicit in terms of the claim that all phenomena in the cosmos are a single type of thing, *qi*, which is dynamic. In the epistemology of the *Yijing*, implicit ontological assumptions include, for example, the existence of an observable world and of an observer as part of that world.

This conception of the 'ontological' differs from that associated with the 'ontological turn' in anthropology, as represented by the work of Eduardo Viveiros de Castro (1998, 2004), Martin Holbraad (2012) and others (Henare et al. 2006; Holbraad and Pedersen 2017), in which anthropology is recast as an exercise in asking 'ontological questions' about our own analytical categories and continually reformulating them as ontological expressions in light of local understandings. Instead, ontology in this book is understood in terms more similar to what Holbraad and Pedersen call 'deep ontology' (2017: 55–65). That is, it refers to the most basic categories of being, which might be explicitly identified or presumed by certain sets of ideas or perhaps practices. In examining the ontology of correlative cosmology I broadly follow the comparative, explanatory aims of many of the scholars that Holbraad and Pedersen associate with this idea (even if they do not frame it in terms of 'ontology'), notably Philippe Descola (2013) but also, for example, Michael Puett (2004, 2010, 2014, 2015) and Michael Scott (2007). However, I depart sharply from Descola and Scott in rejecting the idea of 'deep ontology' itself. While cosmology, as well as epistemological and ethical theories, inevitably involve ontological assumptions that may be more or less explicit, it is much less clear that *practices* necessarily do, particularly when not carried out by cosmological experts (such as diviners). Above all, I reject the idea, most explicit in Descola's work, that apparent coherence between ideas, practices and social organisation in a given cultural context stems from an underlying unifying ontological orientation somehow encultured in the mind of the individual. This is considered in detail in Chapter 1, drawing heavily on studies of human cognition in terms of dual process theory.

Dual Process Theory

The above account of divinatory cognition introduced the distinction between intuition and reflection. This distinction, also labelled in the cognitive-scientific literature as one between type one/system one and type two/system two processing, is the central idea of dual process theory, which comprises a large body of work in the cognitive sciences that strongly supports the existence of two distinct modes of human thought. Throughout the book, I use the terms intuition and

reflection (or intuitive and reflective)[10] to describe these two modes, as this terminology has been adopted by cognitive anthropologists who have engaged with this work (e.g. Boyer 1998; Sperber 1997). This terminology has the additional benefit that it simply describes two modes of cognition, which can be demonstrated empirically through experiment and are subjectively apparent (as, for instance, any Buddhist will tell you), without implying that all intuitive processing, say, shares a common origin or mechanism.

Put briefly, intuition or type one processing is characterised as fast, automatic, low effort and having a high processing capacity, whereas reflective or type two processing is slow, controlled, high effort and has a limited capacity (Evans 2009: 33; for a review of evidence and theory see Evans 2003, 2011; for a popular overview, see Kahneman 2012).[11] Intuition can further be described as 'associative' in that it relies on completing patterns based on perception using learned associations (such as stereotypes), retrieving information from memory based on immediate contextual cues, preconsciously insofar as the process of arrival at a judgement is not consciously accessible even though the judgement itself may be (Smith and Collins 2009: 201). Reflection, in contrast, is 'rules-based', 'consciously controlled and effortful . . . involv[ing] search, retrieval, and use of task-relevant information' to produce typically longer-lasting conclusions that are subjectively perceived as more valid (ibid.). Where associations based on ingrained stereotypes might characterise intuition in a social context, reflection might involve careful consideration of actual examples of a person's behaviour, something that involves 'maintain[ing] and us[ing] explicit representations of rules to derive . . . conclusions' (ibid.: 202).

While a strong 'dual systems theory' does exist in parts of the dual process theory literature, arguing that intuition and reflection describe two distinct, parallel systems, a more persuasive and widespread account is that intuition or type one processing encompasses a range of distinct processes that nonetheless share the features described above (Boyer 2015; Evans 2009; Stanovich 2009). However, reflective processing is a better candidate for a distinct cognitive system because unlike intuitive processing, it is based on a 'singular working memory system' (though not one simply equatable with working memory), accounting for its much more limited capacity and necessarily sequential nature, in contrast to the potential for parallel intuitive processing (Evans 2009: 37, but see Evans 2011 for a discussion of why it likely also comprises various different processes). Intuition and reflection, while distinct, should not be viewed as decoupled. As Evans points out, reflection (system two) 'must also include many other resources [apart from controlled attention and working memory], such as explicit knowledge and belief systems together with powerful type 1 processes, for identifying and retrieving data that is relevant in the current context, not to speak of the role of attention, language, and perception in supplying content for type 2 processing' (2009: 42).[12]

An important consideration in discussing intuitive processing is that it appears to be highly modular, involving specific processes tailored to specific domains of perception and the environment (Atran and Medin 2009; Boyer 2015; Mercier and Sperber 2009), alongside the presence of 'domain *general* processes of unconscious implicit learning and conditioning', 'rules, stimulus discriminations, and decision-making principles that have been practiced to automaticity' and 'behavioral regulation by the emotions' (Stanovich 2009: 56–57, emphasis original). While there has been a perceived tension between dual process accounts positing a domain-general reflective system on the one hand, and approaches from evolutionary psychology emphasising 'massive modularity', which downplay the role of reflection, on the other (Evans 2003: 457–58), more recent approaches concerned with matters relevant to anthropology indicate that functional modularity need not conflict with a recognition of the dual process nature of cognition. For example, Boyer emphasises that intuitions are domain-specific, comprising specific systems operating on specific principles related to areas such as mating, foraging, hunting and tool-making, in line with the evolutionary pressures exerted on a social species (2015: 191); meanwhile, his approach to religion in terms of minimally counter-intuitive beliefs (1994a) implies the reflective representation of intuitions from a variety of domains, including agency, naive physics and so on (see also Baumard and Boyer 2013). Hugo Mercier and Dan Sperber share a similar view of 'the human mind as made up of many specialized modules, each autonomous, each with a distinct phylogenetic and/or ontogenetic history, and each with its own input conditions, specific procedures, and characteristic outputs' (2009: 150; see also Cosmides and Tooby 2013), evidence for which can be found in humans and other animals for (for example) learned association of nausea with food, fear of snakes and incest avoidance (Al-Shawaf et al. 2019; see also Boyer and Barrett 2015). Mercier and Sperber (2009: 153–56) extend the modular view to reflection, arguing that the latter should be seen as a set of separate modules dealing with meta-representations (mental representations of mental representations), as might be expected evolutionarily from a species so reliant on producing and evaluating social communication; that is, reflective inferences rely on the representation of reasons that are themselves the outputs of intuitive inferences.

Whether or not reflection as a whole constitutes such a module is not in and of itself significant for this book's arguments; what is significant, though, is the fact that reflection relies on the capacity for meta-representation – for thinking about one's own thought processes – and that the thought processes it represents are themselves grounded in specific, evolved modular capacities.[13] In particular, this relates to Mercier and Sperber's (2009: 150–51) argument that attention should be seen in terms of favouring one or more modules dependent on context; we should expect intuitions to vary depending on the relevant cognitive domains activated by perceptual cues, and that reflective judgements will in turn be influenced

accordingly. In particular, as discussed at length in the next chapter, we should not expect coherence between the categories of phenomena implied by intuitive behaviour and those elaborated reflectively. We should also not expect consistence in reflective judgements across contexts that prioritise attention to different domains and corresponding intuitions (which is not to say that such consistence will never be found, but rather that it will be less common, given the demands it imposes on reflective capacity).

It should be noted that the fact that cognitive modules or domain-specific intuitions constitute evolved predispositions – that is, adaptive mechanisms which respond to environmental (including social) pressures – does not necessarily mean that their specific content, or the way in which they develop in individuals, is innate, unchanging or universal – or, by virtue of being 'upstream' of explicit reflection, more 'real'. This point is essential to the book's arguments, and its implications for anthropology in general are extremely significant, particularly in terms of how cultural variation should be understood. Chapter 5 therefore brings this together with understandings of scale found in Eight Trigrams cosmology to present an analytical framework that can equally account for evolved cognition and cultural diversity.

Modules and intuitions as evolved predispositions are learning mechanisms whose exact nature depends on developmental context and environmental cues (incest avoidance, for example, relies on childhood co-residence with siblings and association of them with their mother; Al-Shawaf et al. 2019). As such, the content of intuition can be highly culturally variable, and at the same time, many reflective beliefs, such as some moral explanations, appear to share constant features across history and culture (Boyer 2010: 379–80). Moreover, human learning is characterised by a good deal of plasticity, and prolonged exposure to certain circumstances or active practice of certain skills can often allow initially reflective knowledge and processes to become intuitive (Kahneman 2012; Smith and Collins 2009). It is also worth noting that while the *capacity* for reflection is clearly the product of evolution (and possibly uniquely human; Evans 2003: 454), its content is obviously extremely variable dependent on learning. Indeed, whereas most intuitive propensities are in general likely to be evolutionarily adaptive, this is not necessarily the case for reflective responses, which are rational at the level of the individual with respect to explicit goals (Stanovich 2009: 56).

This of course means that situations arise in which intuition and reflection are in conflict, and this is a crucial take-home point for anthropologists. Dual process theory is perhaps best known for exploring these conflicts, in terms of the appropriateness of intuitive and reflective responses and cognitive biases (made famous particularly by Kahneman 2012). A classic example is the bat and ball problem (Frederick cited in Evans 2011: 94); a bat and ball together cost $1.10, the bat costing $1 more than the ball. How much does the ball cost? The intuitive

response here is \$0.10, but reflection will yield the correct answer of \$0.05.[14] While individuals vary in their cognitive styles in terms of preference for intuition or reflection (Evans 2011: 90), this should not be confused with cultural variability in what Evans calls 'modes of thinking' (ibid.: 89), such as the well-documented tendency under specific experimental conditions of respondents from East Asian countries to focus on contextual features and of Euro-Americans to focus on discrete elements, for example of landscapes (Buchel and Norenzayan 2009). As these involve explicit, deliberative reasoning, they constitute differences in reflective style rather than preferences for intuition or reflection (Evans 2011: 89); accounts, including those in anthropology and sinology, that characterise such differences in terms of a distinction between thinking intuitively or analytically risk presenting an unrealistic and unsupported level of cultural difference, as discussed in Chapter 5.[15]

This body of evidence has provoked significant interest in economics, giving rise to the discipline of behavioural economics, which emphasises the influence of psychological and social factors on decision-making, undermining the idea of straightforward rational self-interest as the driver of economic behaviour (see Kahneman 2012 and Thaler and Sunstein 2009 for popular introductions). Anthropology as a discipline would do well to take note of this, as dual process theory has a similar potential to transform anthropological theory, though in different ways. While anthropologists have rightfully long doubted the notion of *Homo economicus* as a rational self-interest maximiser, the discipline makes its own analogous assumptions about human behaviour. That is, there is also a *Homo anthropologicus*, characterised fundamentally by a total coherence of thought, elaborated on in Chapter 5. Of course, anthropologists routinely acknowledge (and it is hard to miss) the typical disjuncture that exists between what people say and what they actually do – but they nonetheless tend to take what people say (when being sincere) as a reliable indicator of what, and crucially *how*, they think. This raises issues for various domains of anthropological enquiry,[16] notably ontology and particularly the idea of 'deep ontology' as an instrumental factor in determining behaviour, as discussed in Chapter 1. Cosmology as a whole is an area of anthropology for which this is especially relevant, and is discussed in the next section.

Cosmology as Individual Cognition

In the opening chapter of his classic analysis of cosmological innovation in highland Papua New Guinea, *Cosmologies in the Making*, Fredrik Barth admonishes that anthropological analysis requires that we 'always struggle to get our ontological assumptions right' (1995: 8, emphasis removed; see also the Introduction to Scott 2007, who takes a very different approach). Barth's focus is on the role of

individuals as cosmological innovators, instantiating their ideas through practice and in a dynamic interplay between wider aggregate conceptions and individual reflection. With respect to the study of cosmology, getting our ontology right involves recognising the nature of cosmological theories as collections of mental representations on the part of individuals, which are nonetheless modified and generated via participation in a wider sociocultural environment. As Barth (1995: 80) argues, the making of cosmologies involves 'an interplay of (largely divergent) processes of individual creativity and modification and (largely convergent) cross-influence and borrowing arising from compelling ideas and charismatic initiators'. The relevant scale of analysis is thus the individual cosmologist, the dynamics of their representations, and the factors which contribute to the generation and modification of those representations. As Barth puts it, the cosmologist is 'an individual embedded in social relations engaged in producing his particular expression or representation' (ibid.: 87).

In a comprehensive review of recent anthropological engagements with cosmology, Abramson and Holbraad (2014, see also 2012) make the essential point that the study of cosmology in comparative perspective is itself necessarily a cosmological exercise (2014: 4). A central theoretical question concerning the study of cosmologies, then, is that of the cosmology (and of necessity, the ontology) which anthropology itself should adopt, as Barth (1995) argued. Abramson and Holbraad (2014: 10) opt ultimately for an approach in which the philosophical basis (rather than simply the content) of the anthropological position is continually up for grabs, facilitating experimental, non-explanatory engagement with ethnographic material that can reframe the terms of anthropological analysis. The extent to which such an approach is possible is open to question; it may be said, though, that its value is contingent on the assumed purpose of investigating cosmology. As a theoretical stance it is inadequate for the comparative analysis and explanation of cosmological production and variation as an aspect of human behaviour; nonetheless, it is worth considering here, as it represents an influential paradigm in anthropological engagements with ontology, and because it is set up in explicit opposition to cognitive approaches.

Abramson and Holbraad make three criticisms of other anthropological approaches to cosmology. Their first objection is to the tendency of such accounts to take cosmologies as 'wholes unto themselves', as indigenous accounts of 'their culture taken as a *totality*' (Abramson and Holbraad 2014: 5, emphasis original). The degree to which such totalising enterprises pertain to the purpose and scope of what might be called 'cosmologies' varies both between groups and individuals. An effect of this kind of approach has been to treat cosmologies as monolithic and static, which Abramson and Holbraad identify with concerns with classification, structure and cognitive schemas. It should be noted in relation to 'all-encompassing "systems of classification"' (ibid.) that certain cosmologies, as entertained and de-

veloped by certain individuals, do indeed do this – Eight Trigrams cosmology is an example – but again, this is not necessarily true of what has counted as 'cosmology' in general in anthropology, and as will be discussed, is manifest only in certain circumstances. Abramson and Holbraad's second broad criticism concerns the tendency to see cosmology as a part of a cultural whole that must be fitted together with other parts, such as kinship and economic organisation, a conception that makes the false assumption that 'cultures' as wholes are things that really exist, and that cosmology, kinship and so on can meaningfully be separated in this way.

Abramson and Holbraad's third objection deserves greater consideration here, as it is common in social-anthropological criticisms of cognitive and evolutionary approaches to 'culture', which this book seeks to address. The issue here is the degree to which approaches to cosmology assume a hierarchy of perspectives, in which that of the anthropologist is granted priority as an account of the world by virtue of its capacity to describe the others. This relates directly to the *purpose* of investigating cosmology. An explanatory approach which seeks to account for cosmology as an aspect of human behaviour is necessarily concerned with what variation exists and how it fits in with the rest of the cosmos, including what is known about humans as psychological, biological and physical organisms. While few cosmologies exist for this precise purpose, any cosmological system necessarily rests on certain assumptions about what exists.

Understanding a given cosmology requires taking such assumptions seriously, and while this does involve adapting one's own conceptions as necessary to understand these claims in their own terms, as Abramson and Holbraad argue, nonetheless, to maintain explanatory value an analytical account cannot adopt a contradictory account of reality. Taking cosmological assumptions 'seriously' thus amounts not, as Abramson and Holbraad hold, to stretching our own concepts in an attempt to validate them and thus undermining the original purpose of comparative analysis, but rather to subjecting them to the same rigorous assessment that would be expected of the anthropologist's own claims – and adequately contextualising them in relation to cognition and learning in other domains of people's lives (Astuti 2017). Of course, this is something that anthropologists, including Abramson and Holbraad, do all the time in advancing claims against the cosmological assumptions of other anthropologists and scholars from other disciplines, which at times come from very different perspectives. It is not clear why the intellectual standards should differ when it comes to assumptions from other contexts – particularly if cultures do not exist as discrete wholes, but cosmologies rather vary dynamically as much as individuals do. Put another way, this means that a realistic and productive approach to understanding cosmological variation must allow for the fact that people, including anthropologists, differ in their goals and cannot all be right (and to insist that they can is generally indicative of a moral

or aesthetic stance based on assertion rather than an empirical one based on evidence). It does not follow from this that such an explanatory approach is thereby concerned with disproving the cosmological claims of others – but insofar as it makes claims about reality, it necessarily privileges certain perspectives based on their empirical merit. Whether this is 'ethnocentric' in the sense that the goal and attendant empirical claims are not universal, providing it does make efforts to understand indigenous conceptions on their own terms, is irrelevant to the empirical value of the enquiry (and the purpose of explaining the external world is hardly limited to members of the anthropologist's own society).

The approach I have just set out is precisely of the order of that which Abramson and Holbraad criticise as evident of a 'reductive impulse' (2014: 8), which they argue has led to the neglect of cosmology in certain areas of anthropology, as supposedly in the case of cognitive anthropology and its tendency to 'traduce' cosmological reckonings 'merely as instances of cognitive processes at work in the human brain' (ibid.). Were such an objection to cognitive approaches to stand, it would need to answer the questions of what, if not cognitive processes, constitute cosmological reckonings, and where, if not in brains, they are located. Of course, alternatives are seldom given, and neither are explanations of how exactly such understandings diminish rather than add to the understanding of cosmology as an aspect of human behaviour. Rather, one might suspect that some anthropologists' horror of cognitive and, God forbid, evolutionary explanations for sociocultural behaviour stems rather from a moral-aesthetic attachment to a mystical notion of irreducible difference (Matthews forthcoming a). At the same time, however, there does exist a risk of seeing more ultimate evolutionary explanations as somehow more 'real'; both positions are detrimental, and this book seeks to avoid both through developing a dynamic understanding of similarity and difference in terms of scale, taking inspiration from Eight Trigrams cosmology.

As Sperber (1996: Chapters 1 and 2) demonstrates, social anthropology has primarily been concerned with interpretation over explanation, its hostility to 'reduction' stemming from often-unexamined ontological assumptions. Assuming a materialist perspective, *explanation* requires that anthropology's analytical categories correspond to the 'natural joints' (ibid.: 6) of the social domain, something that is rarely true of the interpretive family resemblances typically identified as objects of anthropological analysis, such as 'religion', 'marriage' (ibid.: 23) and, indeed, 'divination' and 'cosmology'. This in itself is not a problem, and such interpretive terminology can play a crucial role in explanatory accounts; the terms themselves, however, do not necessarily correspond to natural categories. Sperber thus proposes an 'epidemiological' account of culture, in which cultural phenomena are understood as dynamic distributions of mental representations among individuals. This account has the explanatory advantages of being grounded in material phenomena – in Sperber's words, 'mental representations are brain states

described in functional terms, and it is the material interaction between brains, organisms and environment which explain the distribution of these representations' (ibid.: 26). As for reductionism, as Sperber points out (ibid.: 59–60), it is not the case that cultural phenomena *reduce* to psychological phenomena, but equally not the case that they pertain to a separate domain of reality – rather, they are 'ecological patterns of psychological phenomena'. However, when it comes to the subject of a particular 'cosmological reckoning', as Abramson and Holbraad put it, then this *is* a psychological phenomenon insofar as it pertains to the beliefs of an individual, something that in no way discounts the influence of distributed beliefs and institutions on the mental representations involved.

Here, it is worth returning to Abramson and Holbraad's charge that accounts of cosmology based on cognitive schemas and similar notions assume holism and stasis. Such criticism is mistaken; the fact that cultural behaviour, including that labelled 'cosmological', depends on mental representations (including schemas and models) *in no way* assumes this. All that such accounts suggest is that humans produce and manipulate mental representations via common cognitive mechanisms, not that this results in unchanging uniformity of representations across individuals. Human cognition is inherently dynamic (van Gelder 1998) and mental representations are continually modified (Connell and Lynott 2014). All organisms, humans included, are shaped via the continuous interaction of their biological inheritance with environmental and developmental contingency. Cognitive and evolutionary approaches are thus more than capable of accounting for 'cultural' variation, including in intuitive beliefs (Boyer 2010).

Interpretation in anthropological analysis is essential and inevitable. However, a principal aim should be to ensure that what is interpreted is compatible with an explanatory account which accommodates cognition; as Bloch argues, 'cognition is *always* central to what is at issue' in anthropological discussion (2012: 7, emphasis original). An important point in this regard is made by Boyer (1994a) in his cognitive account of religious belief. He argues, in a similar vein to Barth's comments on ontological assumptions and Abramson and Holbraad's concerning holism, that anthropological accounts of religion have tended towards a 'theologistic bias', explaining religious beliefs as 'integrated and consistent set[s] of abstract principles' (ibid.: 40). Against this, Boyer distinguishes between 'epistemic' and 'cognitive' viewpoints (ibid.: 46–52), the former describing religious representations as statements about the world, and the latter describing the processes by which those representations come about (ibid.: 50). The problem is that epistemic accounts are often unwarranted, describing what people might say were they prompted to make sense of their own religious behaviour. However, cosmological experts, especially in literate societies, *are* likely to engage in this kind of systematic consideration and establish comprehensive theories of what the world is like. These, however, as highly abstract representations of the cosmos, must

be distinguished both from lower-level representations *and* the means by which they are produced; therefore, in Chapter 1, I draw a distinction between reflective ontological assumptions and systematic ontologies as objects of analysis. The discussion of the content of explicit cosmological theories, such as those developed by my informants, is 'epistemic' in Boyer's sense, and given that it is the preserve of dedicated cosmologists whose personal understandings vary, it necessitates an adherence to methodological individualism.

Similarity and Difference across Scales in Divination and Anthropology

I am not the first anthropologist to take inspiration from divination in developing an approach to anthropological comparison; indeed, from a quite different perspective, Martin Holbraad does precisely that in his *Truth in Motion: The Recursive Anthropology of Cuban Divination* (2012). However, rather than using ideas from divination to reconceptualise anthropology's project, my argument is that the approach to scale found in Eight Trigrams prediction, from the cosmos and its constant, universal principles to the level of contingent, dynamic and subjective life experience, offers a model for anthropology to approach cultural difference in a way that simultaneously allows for common evolved cognition and the influence of cultural variation, without presuming the analytical primacy of either. This approach to scale in Eight Trigrams prediction is elaborated in the subsequent chapters, and its application to anthropology is specifically discussed in Chapter 5, but I make some brief points here in anticipation of the argument that follows.

As Holbraad (2012) points out, one of the reasons that divination proves perennially fascinating for anthropologists is that it raises problems of the order of Evans-Pritchard's classic discussion of the Nuer claim that 'twins are birds'. That is, divination often involves ideas or conclusions that appear strange, confused or entirely 'other' – or so one narrative goes. In divination we find ontological and epistemological claims that, while appearing rational within the terms of their cosmology, might appear self-evidently false to a differently minded observer. The problem is how these apparent divergences in understanding of fundamental concepts, like 'truth' in Holbraad's case, can be reconciled with the obvious fact that communication across cultures, even regarding divination, is entirely possible, owing to common constraints and predispositions of human thought and behaviour.

To generalise, the question of human universals and particulars produces, if not outright conflict, then mutual hostility between those who lean to either side of the divide. Approaches emphasising universals, typically informed by arguments concerning evolution and cognition (though they could also be historical-materialist, for example), may be dismissed as crude and reductive, denying the

subjective richness that characterises the ethnographic encounter. Conversely, stronger relativist claims risk ridicule as hopelessly naive or ill-informed in light of biological and psychological evidence. So, if the Nuer say that twins are birds, is this because they are mistaken, because they are using a metaphor or because they have a distinct ontological conception of what counts as a twin or a bird?

A key argument of this book is that this kind of ethnographic phenomenon in fact presents no such problem – and I address the 'twins are birds' problem specifically in Chapter 5. In describing and analysing the cosmology of Eight Trigrams prediction, I present a perspective that views reality as what I call 'homological', in which resemblances between phenomena are understood to indicate underlying ontological affinity and common causal mechanisms, and in which similarity and difference can be understood according to a set of universal principles that are nonetheless acutely attuned to scale. In Eight Trigrams prediction this amounts to different cosmological aspects of phenomena becoming relevant at different scales, from the emotional effects of a specific human relationship, to an ongoing set of life circumstances, to an individual life or place, and ultimately to the cosmos as a whole. Divination is about accounting for the subjectively felt contingencies of individual lives and problems – the relativity and richness of day-to-day experience – but it is also at its core about establishing accurate knowledge of this in terms of the cosmos as a whole. It thus offers the ideal lens through which to consider the problem of reconciling the universal and the particular.

The approach of Chinese correlative cosmology, its sensitivity to scale and the importance it places on relationality and coherence offer anthropology an excellent model. To be sure, mine is a 'universalist' approach in that it assumes the existence of a single reality that is more or less knowable. Likewise, it draws heavily on the cognitive sciences to make its case – but in doing so emphasises that talk of cognitive universals is itself a matter of scale, in terms of the object of analysis (an individual, a group, a society, a species), and that cognition is best characterised not as a universal 'natural' substrate onto which sociocultural particulars might be added, but as a dynamic learning system that relies on the continuous interplay of development, life history, memory, social relationships, evolutionary heritage and continually shifting environmental conditions. What this approach does not do is deny the 'reality' of subjective experience and particular understandings of the world. The ultimate problem with the dichotomy between the universal and the relative is that both sides rely on a claim that the phenomena they pay attention to are somehow more 'real'. Human cognition, however, is a matter of tendencies and propensities rather than absolute universality or relativity, and is not best understood by denying or avoiding more ultimate (e.g. evolutionary) explanations based on fear of reduction, or by assuming that more ultimate causation is somehow purer by virtue of its being less proximate. The approach set out in Chapter 5, through its attention to scale, allows for the

reality of all levels, emphasising not their degree of reality or purity but their relevance to particular phenomena.

Structure of the Book

The book is structured to arrive at the concluding discussion of scale via the ontological and epistemological conceptions employed in Eight Trigrams prediction.

Chapter 1 asks what can actually be concluded about 'ontology' from ethnographic observation. Considering a *fengshui* practice of keeping fish tanks to encourage good fortune – an example broadly analogous to others from different ethnographic contexts that have been used to bolster claims for the influence of ontology on lived practice – this chapter argues that such claims of 'deep ontology' are made too hastily. The case of *fengshui* fish tanks reveals that the differences between lay and expert understandings are such that they cannot straightforwardly be taken as indicative of a common underlying ontology. The question of whether experience and practice are organised according to a 'deep ontology' that renders them coherent thus pertains to the level of the individual actor. However, even on this level, intuitive and reflective cognition need to be differentiated, and the latter differentiated again on the basis of the degree of systematic reflection to which ontological assumptions are subjected. This leads to a framework for understanding ontology on the level of individual cognition that distinguishes intuitive ontological categories, reflective ontological assumptions and systematic ontologies.

Chapter 2 takes this framework forward, focusing particularly on the level of systematic ontology as understood by experts. This is characterised as 'homological', based on an understanding of resemblances between beings and phenomena indicating underlying ontological similarity. This chapter presents key tenets of Eight Trigrams cosmology, particularly the implications of a monist understanding of *qi* as the fundamental constituent of the cosmos, the role of cosmogony and the attitudes of diviners towards the compatibility of Eight Trigrams cosmology with other cosmologies, notably that of modern physics. All of these ideas are implicit in divination practice (here Master Tao's six lines prediction is presented as an example), but divinatory interpretation in fact involves the interplay of different levels of cognition, and strictly speaking the coherence of divinatory practice and cosmology is a product of retrospective reflection. The particular homological character of Eight Trigrams cosmology, and the relationship between different cognitive processes in its application, are then discussed in terms of Philippe Descola's influential comparative approach to ontology based on conceptions of continuity or discontinuity between beings.

Chapter 3 concentrates on diviners' epistemological accounts of divination. Here, the broader ontological claims of Eight Trigrams cosmology are brought together with the practice of divination itself. Both diviners, Master Tao and Ma

Jianglong, make important distinctions between principle, relying on the key epistemological claim that resemblances between phenomena indicate underlying commonality in terms of *qi*, and practice, which must account for the inevitable fallibility of human observation. The former makes divination possible in the first place, and is ultimately derived from the *Yijing* itself, while the latter leads the diviners to place emphasis – and ethical importance – on being 'accurate' (*zhun*). Both Master Tao and Ma Jianglong were concerned with establishing the cosmological coherence of phenomena investigated during divination, including consideration of modern phenomena unknown to the creators of the hexagrams. However, they did so in different ways, emphasising human fallibility to different degrees and placing greater or lesser emphasis on following intuitive connections in divinatory interpretation. Thus, the investigation of the two diviners' ideas indicates some of the potential range of epistemological claims that can be supported by a common set of ontological and cosmological assumptions.

Having both established an analytical framework for understanding ontology as a phenomenon of individual cognition and demonstrated the homological character of contemporary diviners' ontological claims and its effects on their epistemological accounts, Chapter 4 turns to the historical development of homologism and recurring debates in sinology concerning the character of Chinese correlative cosmology. Correlative cosmology has often been contrasted with 'Western' or 'European' 'causal' thinking, scholars having emphasised its focus on relations and analogy rather than essences and causation. Examples from several early Chinese texts indicate that, like contemporary Eight Trigrams cosmology, cosmological treatises did assume causal relations between phenomena, and in doing so also allowed for some form of reductionism. In light of this, it is necessary to draw an analytical distinction between correlative schemas that apparently served simply as taxonomies, on the one hand, and those that were intended as cosmological claims. During the Warring States period and continuing into the Han dynasty, a shift from an analogical to a homological ontology can be discerned, leading to a change in the nature of divinatory practice, to one which emphasised explanation in terms of cosmological causes.

Chapter 5 draws together the ethnographic and historical material presented so far to advance a comparative approach to ontology and cosmology – one which accounts adequately for the role of universal cognitive mechanisms while retaining due sensitivity to ethnographic and historical specificity. It does so by taking inspiration from the way in which resemblance and scale (from the human to the cosmic) are understood in *Yijing* cosmology. Homology provides a productive lens for looking at cross-cultural similarities and differences, which is also scalable down to the level of individual cognitive variation. Consideration of humans' shared evolutionary heritage and behavioural plasticity suggests that recurrent social forms indicate underlying common patterns of response to envi-

ronmental circumstances. There is no obvious reason to assume that this would be any less true of recurring structural resemblances between cosmological beliefs; a scale-focused approach facilitates investigation of the degree to which variations between individuals, and between societies as aggregates of individuals, reflect underlying similarities and differences. At the same time, though, taking inspiration from Eight Trigrams cosmology's conception of scale, and its ability to understand human experience as simultaneously subjective and reducible to underlying cosmic principles without compromising either level, this approach to variation in cosmology allows for the richness of local understandings while also preserving what is known about universal propensities. Understanding these as aspects of human behaviour that become more or less relevant at different scales of analysis (from different individual behaviours to variations between individuals, groups, societies and so forth) allows for explanation while avoiding the problem of a reductionism that maintains that the finer and more specific proximate details of human behaviour are somehow less significant or 'real' than more ultimate explanations.

So, overall, the argument opens with an ethnographic vignette of the kind that is typically employed as evidence of an underlying ontology guiding behaviour. This is presented in conjunction with a discussion of cognition, to demonstrate the problems with existing anthropological approaches and establish the necessary groundwork for the subsequent analysis, in particular the reflective nature of ontology. Chapter 2 uses this qualified notion of ontology to present common ontological perspectives taken by diviners, while also showing how individual diviners' accounts diverge. Having established this, we are in a position to bring together Eight Trigrams cosmology and the practice of divination itself; Chapter 3 therefore illustrates the ways in which diviners reflectively bring together ontological, epistemological and ethical understandings to present coherent cosmological theories. Having thus shown how cognition and cosmology relate to one another and the circumstances in which reflective accounts of cosmological coherence are established, in Chapter 4 the focus moves on to the transmission of cosmological representations, presenting an epidemiological approach using examples from early Chinese texts. This illustrates different scales of ontological reflection in a historical context, and situates cosmology as a property of individual cognition in a wider temporal and spatial scale, as part of group-level patterns of transmission. So, by Chapter 5, an account of Eight Trigrams cosmology has been developed which illustrates an explanatory framework for cosmology as a product of individual cognition on different scales (intuition and reflection), contextualised in an epidemiological account of its historical development. Chapter 5 itself recapitulates the conceptions of scale that diviners use to understand resemblances between phenomena across scales, and combines it with the cognitive

approach to present an analytical framework for understanding shared, evolved cognitive capacities and cultural diversity.

First, though, the relationship between ethnographic evidence and conclusions about ontology and cognition needs to be examined. So we begin in the next chapter, naturally, with fish tanks.

Notes

1. The reader is referred to Smith's (2008) English-language history of the *Yijing* and Zhu Bokun's (1995) four-volume account of its exegesis from the Spring and Autumn to Qing periods for comprehensive studies.
2. It remains to be seen how far this will continue, given the major reassertion of party-state control of religious affairs under Xi Jinping, at its most extreme in forced re-education of Muslims in Xinjiang, but also apparent in other religious practices throughout China.
3. This approach broadly follows Maurice Bloch's (2012) argument for anthropology in general to pay far more attention to cognition.
4. That is, I consider their merits and demerits as theoretical concepts, rather than dwelling on the social context of their production as ethnographic objects (for the same reason that anthropologists take, say, Foucault's concept of biopower as a concept rather than as an ethnographic object). While this approach shares the idea of adopting ethnographically derived concepts with the 'recursive' project of using local concepts to reframe anthropological analysis advocated by Martin Holbraad and others (Holbraad 2012, 2013; Holbraad and Pedersen 2017), it does not adopt the key premise of the latter approach, that such reframing is inherently based on radical cultural difference and requires 'ontological' reconceptualisation of anthropological concepts. That approach is extensively critiqued in Chapter 5, and in the anthropology of divination, specifically in Matthews (forthcoming a). Rather than treating the concepts of diviners as useful due to their exoticism, I believe they are useful because diviners' epistemological concerns are not especially far removed from those of anthropologists, and to that extent, diviners are also social theorists, despite obvious differences in the practical uses to which their knowledge is put.
5. Fieldwork focused on Eight Trigrams prediction, but also included time spent with volunteers at a nearby Buddhist temple, and from 2014, with a group of 'national studies' (*guoxue*) activists concerned with promoting the study of the Chinese classics. This, together with my wider experience spending time and conversing with friends in Hangzhou, has informed my understanding of wider, non-expert perceptions of divination and its broader social context, which I have discussed elsewhere (Matthews 2017a).
6. Though I never witnessed this during fieldwork, Master Tao informed me that occasionally the police would move diviners along. As already mentioned, between my 2015 and 2018 visits he had been forced to conduct consultations less visibly. This reduced the number of spontaneous consultations for passers-by, but also compelled him to start operating via the social media app WeChat, which had resulted in a much fuller schedule.
7. Transliteration: *Yong Zhongguo Qingchao Qianlong qian san zhi, yong shuangshou wozhu yaodong diuxia, you Manwende wei zhun, yige Manwen wei yi dian, erge wei liang dian, sange wei yi quan, sange dou shi 'Qianlong tongbao' zhe wei yi X, yi dian*

wei yang, er dian wei yin. Yi quan wei yang, yi X wei yin, yi quan wei yangdong, zhu guooquzhi shi, yi X wei yin, zhu weilaizhi shi, mei yi gua wei liu ci chengwei liu yao. Qian san ci wei xiagua, hou san ci wei shanggua, ranhou shang, xia liang gua dian chu guaming.

8. For further discussion of this difference in forms of interpretation, see Matthews (forthcoming a).

9. The problems of the 'rationality' debate have been ably assessed with respect to the problems posed by divination by Martin Holbraad (2012: 18–74; see also Shaw 1991). Chapter 5 returns to the problem of 'bizarre' beliefs in detail.

10. Throughout the book, these terms are used in the specific sense outlined here.

11. This section concentrates on presenting an overview of dual process theory, its relationship with modularity and some broader considerations of relevance for anthropologists. Evidence relevant to questions of ontology is discussed in Chapter 1, and in addition to the works cited in the text here, the reader is referred to Chaiken and Trope (1999), de Neys (2017), Evans and Frankish (2009) and Sherman et al. (2014).

12. To better account for this, Evans (2009) proposes a category of 'type three' processes, defined functionally in terms of recruiting working memory and resolving conflict between type one and two processing; while important for understanding the cognitive mechanisms at work, this distinction is of less direct relevance to the arguments made in this book. A similar distinction between the 'algorithmic' and 'reflective' levels of system two is proposed by Stanovich in the same volume (2009).

13. Modules and representations here can be considered in functional terms; they should not be taken, as I use them, as making any definite statement about the neurological architecture underlying cognition.

14. Note that while in this case, reflection yields a normatively correct answer, it should not be assumed that cognitive biases are simply a product of intuition (Evans 2011: 87–88).

15. See also Matthews (2021a, forthcoming a, forthcoming b).

16. Not least ethics and morality – see Haidt (2001) for an especially relevant discussion of the interplay between intuition and reflection.