

Knowing Animals in China's History

An Introduction

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In the year 1864 William Alexander Parson Martin (1827–1916), English teacher and professor of international law at the Beijing School of Combined Learning (*Tongwen guan* 同文館) proposed that, etymologically, it would be more correct to use the (by then) customary terms for animals (*dongwu* 動物) and plants (*zhiwu* 植物) to refer to two types of property, namely, goods and objects that are movable and non-movable.¹ Indeed, animals by then went by many terms. Whereas classical literature had used morphological groupings such as ‘birds-beasts-insects-fish’ (*niao-shou-chong-yu* 鳥獸蟲魚), contemporaries of Martin also addressed animals as the ‘hundred beasts’ (*bai chong* 百蟲 or *bai shou* 百獸). For one short-lived moment, lexical debates laid bare the ambiguous role of ‘animals’ in human knowledge debates.

Animals hold a vulnerable place in historical human practices and thought, not only in terms of name or meaning. As research in the field of animal studies since 1990 has shown, historically, individuals, societies and cultures debated what an animal was and where it belonged, how animals should be interpreted, explored, used or owned – as a spiritual, intellectual, economic or physical resource, human enemy, companion or prey. This research has also shown that only rarely, though, can animals be entirely ignored, as they impacted ecologies, economies and states as much as individual and social practices and knowledge ideals. Sinologists and historians of China have shown the central importance that Chinese actors placed on animals as a window onto human society and natural change. Such research addresses a broad spectrum of topics, ranging from the symbolical and philosophical to the practical. Literature, material culture and art studies have drawn attention to animal iconography, studying accounts of foxes which transformed into female beauties to cheat on lonesome scholars and analysing the role of dragons and phoenixes as symbols of the sky on bronze vessels. Historians of economy, society, technology and science have unfolded the complex

¹ Used in 1864 in *Wanguo gongfa* 萬國功法 (*juan* 2, f. 17r). Quoted in Masini (1993), 48. See also his appendix.

entanglements of humans and animals in agriculture and the use of horses and cattle in military affairs, and have studied pests such as locust plagues, which threatened their crops.

This book aims to open a door into the rich field of animals and knowing in China, offering a selection of essays over the *longue durée*. Environmental historians in particular have turned our attention back to expanded chronologies of natural change, thus showing that something new can be told about human history through animals. These studies have usefully contributed to a globally diverse view of the cultural and historical dynamics that made animals be perceived as wild or cultures as civilized. We now know, for instance, that Ming literati considered reindeer and hunted wildlife to be the quintessential ‘wild’ (野 野), avoided forests and did not hunt game, whereas Manchu elites celebrated their homelands’ wilderness and lush vegetation for ‘nurturing civilization like the emperor himself’ and strove to keep some hunting territories devoid of human influence to ‘purify’ a Mongol steppe.² Within Chinese history, nuanced accounts of environmental change illuminated the diverse regional practices of animal care (from full domestication to various forms of animal taming and cross-breeding) and lifestyles (from seasonally mobile cultivators to sedentary hunter-gatherers), and thus usefully expanded simple dichotomies that, emerging from dynastic historiography, depicted a civilized society of settled farmers and literati-officials surrounded by nomadic and belligerent hunter-gatherer tribes.³

Stories of receding elephants and forests, the increasing impact of horses, water buffaloes and farming, clearly indicate the tensions between, on the one hand, natural continuities and changes and, on the other hand, the power of humans who approached and constructed animals through language, idiom and genre, material representations and bureaucratic means.⁴ Geology, topography, bones and the remains of other material culture often focus on ways to vocalize the animal’s role: how it resisted or refused human desires or adapted and affected nature beyond human intentions and means. The comparison to texts provides glimpses into how historiographical tradition tended to obliterate the social and cultural realities of human–animal relations. While animals thus emerge as powerful agents in human life, much less is known about their role in human knowledge practices, in particular how such an animal’s role may have persisted or changed over the long term in relation to natural change.

We suggest that, with its rich array of both material culture and written sources, the region that we now call China lends itself in particular ways to a diachronic view of the co-existence and co-construction of human and animal

² Schlesinger (2017), 3. ³ Allsen (2006), 4–7; Harris (2008), 83.

⁴ Elvin (2004), 308. See also Bello (2016), 3.

worlds, in both spiritual and physical terms. It is also a region in which actors themselves adopted the diachronic perspective regularly to frame and shape what knowledge or knowledge practices were.⁵ The relations between past and present, lived and literary reality and imagination, were central for the processing and evaluation of information, knowledge and know-how. With this agenda in mind, the *longue durée* does not simply address a calendrical notion or an observer's perspective on history as a continuous process. Rather it takes seriously the idea that, in Chinese history, scholars and elites collated and drew connections between things, concepts and notions based on a historical context – framing them sometimes in terms of chronologies, but, more often than not, without any Braudelian implication vis-à-vis the continuities and breaks that the modern history of science has come to avoid almost entirely.⁶

Beyond anthropocentric approaches, studies that span centuries or even millennia have indeed become unusual and are also quite rarely seen in research on animals and knowledge change.⁷ Research on the European ancient, medieval or early modern period habitually either explores spatial and physical distinctions, or examines an animal's role as an exotic or utilitarian entity, a discovered or familiar creature in human life.⁸ Analyses of changing approaches to knowledge about animals – or knowledge gained through them – mainly focus on European imperialism and the creation of grand collections: curiosity cabinets and then natural history museums. The nineteenth and twentieth centuries, when evolutionary biology emerged and agricultural mass production initiated mass globalization, dominate this field of research.⁹

Historians of China have thus far followed two approaches – either to study an animal across varied sources and times,¹⁰ or to focus on specific dynasties (mostly the Song and Qing) alongside historians of the West who choose a nation-state or another concrete political entity as a framework

⁵ Notwithstanding global history, most animal histories indeed choose a regional framing. Few and Tortorici (2014), 1–30, highlight the absence of animals in studies on Latin America, in particular for periods beyond the grasp of written accounts.

⁶ Environmental historians focus on Braudel's notion of structures (1977, 55) mostly in terms of geographical and climatic conditions. See e.g. Koselleck (2000), 96.

⁷ See Holmes (2003), 465.

⁸ Studies of the 1990s in particular emphasize the symbolic and representational function of animals, e.g. Cohen (2003). For an overview of the literature see DeMello (2012). See also Pluskowski (2007).

⁹ This is true not only for Europe. See Chakrabarti (2010); Hoage and Deiss (1996). Nearing modern times, the time periods under discussion shorten. Grote (2015), 6, exemplifies by way of Hansjörg Rheinberger and Staffan Müller-Wille's study (2009) that one century can be considered *longue durée*.

¹⁰ Such studies are in the minority and all rather recent. See, for instance, Hou Yongjian, Cao Zhihong et al. (2014). For a recent study with a *longue durée* view on China see Silbergeld and Wang (2016).

(usually England or Great Britain). Both approaches invite discussions on the role that political history plays in the analysis of knowledge dynamics. Exposing the intended and unintended causal relationships between natural and socio-political change, there is a need to understand what makes animal approaches to nature knowledge (or knowledge of nature through animals) relate to any particular dynasty and, ultimately, to being ‘Chinese’. This raises questions such as what effect a dynasty or a social group’s perception of animals – including their social, political, material, temporal and geographic presence – had on ‘knowing nature’; how we should understand tensions between historical China’s literary and physical animal worlds; and how they affected the animals’ role in scientific and technological change.

In the rapidly growing field of human–animal studies, the chapters in this volume tackle the various contexts and value systems that defined animals’ roles in society, state and thought. Authors analyse why and how elites and commoners, herdsman and farmers, poets and literati have all sought to give different meanings to the realization that animals occupy human space, while humans intrude on animal space and habitats. Arranged in a rough chronological order, the contributions describe the histories of individual species (e.g. cats, bees, horses), discuss animals in literary genres (such as treatises on farming, ‘treatises and lists’, i.e. *pulu* 譜錄, or morality books) and explore language, institutions and ideals. *Longue durée* explorations of particular species are combined with studies on specific periods (pre-imperial, Song, Qing). This arrangement aims to highlight the different regimes of attention – historical ideals and methodological choices – that shaped (and are still shaping) historical human–animal relations and thus also the historical view of animals and animal knowledge: what actors considered could be known about animals, as well as the knowledge they could impart. Opening up to such concerns reveals two important themes in the study of historical human–animal relations and knowledge dynamics: (1) how social and political practices influenced knowledge about and through animals, and (2) the role of both morality and physicality in this knowledge.

Knowing ‘Chinese’ Animals: Creatures of Society and State

In one of the early Western studies of Chinese approaches to nature conservation, Edward H. Schafer noted in 1969 that ‘the study of the history of man’s knowledge of plants and animals is all the more necessary in that it has been neglected in favour of the study of the development of tools’. Schafer revealed how ‘men of the T’ang’ expertly handled animals and learnt about them. While he considered an inquiry into these types of engagement as informative, Schafer also noted that ‘scientific’ aims (which he used to address approaches

for understanding living creatures' habitats) or efforts 'to gain other sorts of knowledge as a motivation for conservation measures did not, it seems, exist for the men of the T'ang'.¹¹

From a quantitative view, it could well be argued that not much has changed. Fifty years on from Schafer's account, there are still very few studies on China's historical animal knowledge. Research on the pre-dynastic and dynastic eras regularly focuses on animals as spiritual beings and sources of nutrition.¹² Historians of science in China have mainly looked at the role that animals have played in the making of modern science. What has substantially altered, though, is the qualitative view of what constitutes the nature of knowledge and animals. Studies from the 1990s, when the anthropological method gained ground, began to emphasize the different nature of Chinese approaches to animals. Others have touched upon some of Schafer's themes, such as the protection of animals, their role in humanitarian efforts and religion, as well as their impact on environmental change, thereby showing when and how classifications and understandings of animals, their uses and abuses, started making an impact and caused scientific and technological change.¹³ Most importantly, such research has suggested that Chinese scholars, farmers and elites considered animals as significant tools to 'think with' (*bons à penser*), *pace* Lévi-Strauss.¹⁴

Meanwhile, research on China's cosmology and philosophy has intervened by illustrating these 'ways of thinking'. John Major explains that the cosmology of the *Huainanzi* 淮南子 (The Master Huainan), for instance, greatly values an animal's existence (among others, the behaviour and attributes of many carnivores such as foxes or racoons, or insects such as silkworms or cicada) showing that, in fact, animals set Chinese scholars thinking in significantly new ways about time, space, life and death. The diversity of animals in that classic verifies the principle of differentiating between *yin* and *yang*, alongside the Five Phases theory. According to this view, animal gestation discloses numerological principles, and seasonal animal behaviour provides the structural grid for daily life.¹⁵ Thus, while animals were rarely explained or analysed on an individual basis in early thought, an inquiry into intellectual discourses, as well as the practices of daily life, shows that knowing animals was an integral part of the larger picture of understanding the 'why' and the 'how' in life generally.

Early Chinese cosmological writing indicates the historical peculiarity of the modern dichotomous view about human and non-human animals. Thinkers commenting on such early texts during the Han, Tang, Song and Ming eras,

¹¹ Schafer (1963).

¹² Chen Huaiyu (2009). See also Fan Fa-ti (2004), 14, and Zhang Qiong (2009).

¹³ Handlin Smith (1999). ¹⁴ Lévi-Strauss (1962), 127–8.

¹⁵ Major (1993), 177, 217–56. See also Major (2008).

time and time again, concluded that the same fundamental principles governed all ‘things’ – which included animals, the heavens and people.¹⁶ This meant that all these principles were also potentially present in all things, and that differences between people and animals therefore could only be a matter of the degree to which such principles became apparent or were brought into effect. Such an approach manifested itself, for instance, in the notion of language as a continuum of all beings, in which animals, like humans, had the capacity to speak – in their own way. Humans differed from animals because people used language ‘as a way to establish distinctions’.¹⁷ At the same time, animals were substantial to human language and consequently its ways of knowing too – the foot tracks of birds and beasts, after all, inspired the mythological official Cangjie 倉頡 to develop writing.

Care needs to be taken, hence, when comparing China’s historical approaches to the human–animal divide against Western traditions or modern approaches. Whenever Chinese actors compared human and animal traits and found the same principle working in both, they aimed to assess the principle’s relevance and manifestation. This approach differs substantially from a modern anthropomorphizing view that attributes uniquely human traits, emotions and intentions to animals.¹⁸ Although such instances of anthropomorphizing can be found in Chinese historical accounts, they cannot be considered the norm. In fact, we can find the interest in identifying similar principles in humans and animals (rather than the use of humans as a yardstick) running through society, state and intellectual life, with variations depending on the divergent moral and natural qualities that the fragmenting statecraft schools (‘-isms’ of Confucian, Daoist or Buddhist tint) or individual doctrines over the course of time assigned to animals as a group or their specific representatives.

Political actors, despite much disagreement over cosmological ideals, show a propensity to discuss animal–human relationships in terms of knowledge and understanding. As exemplars of a higher order, animals could thus not be ignored. In particular, scholars in state service, the so-called *Ru* 儒, made sure to clarify, from the Song period onwards, that agency lay mainly on the human side: animals could productively instruct humans, if humans understood animals.¹⁹ For the Mongolian rulers of the Yuan, animals equally provided

¹⁶ For reflections on Asia in particular, see part IV in Waldau and Patton (2006). See also Sterckx (2002), 4.

¹⁷ See also Behr (2010), 575–6.

¹⁸ In fact, human–animal studies also identify a substantial break between the pre- and post-Enlightenment phases in European cultures. Anthropomorphizing turned into an accepted way to connect to animals. Of course, older forms such as fairy tales etc. continued. See Daston and Mitman (2005). Giorgio Agamben (2003), 33–8, named this growing gap in his philosophical approach the ‘Anthropological Machine’.

¹⁹ Zhao Xinggen (2013), 46.

a link to the cosmos and higher understanding, although it must be noted that this dynasty otherwise can also be singled out for its particularly strong utilitarian linkages to animals such as horses, cattle, donkeys, sheep and goats. Allsen also points out that, for Mongols, animals provided a cosmological link and thus animal caretakers could also be diviners and advisors to the court. A human's understanding of animals and his or her relationship to animals 'demonstrated influence over both natural and spiritual realms, skills not thought evenly distributed among humans'.²⁰

Knowing animals and knowing about animals thus impacted upon notions of human talent, expertise, and finally also the professions. Veterinary carers, breeders or doctors who caught horses, reared cattle, trained dogs, bred, domesticated, hunted or slaughtered any kind of non-human creature, were the everyday experts who *knew* their animals. In contrast, according to the Chinese cosmological view, the highest form of knowledge occurred when an animal made a person think about universal principles. Such was the capacity of the sages of the past and wise scholars and philosophers. Sometimes, knowing *with* an animal and knowing *how to* handle animals went hand-in-hand. This was apparent in experts such as diviners, who were able to predict omens using tortoise shells, snakes and birds; military strategists who developed defence and battle plans and led cattle and horses into warfare; and ritual masters who produced sacrificial and human feasts – not only preparing the meat but also rendering livestock 'edible' for the assigned spiritual and physical aim.

Connotations could certainly also change substantially among different communities to acquire shifting importance throughout time. For diviners, the nature and purpose of knowing animals was to manage the present, as much as predicting the future.²¹ They also emphasized the legitimacy of rule (in terms of capability). For *Ru*-scholars during the Song, an ordered, healthy animal world per se came to signify appropriate political rule, whereas extraordinary occurrences – such as fish jumping onto dry riverbanks or green snakes being sighted near the imperial throne – represented bad rulership. On a symbolical level, animal imagery, analogies and metaphors offered an opportunity to take a political stance, presenting direct and indirect criticism of individuals, social or ethnic groups, rulers and regimes or social ordering.

²⁰ Allsen (2006), 145. This is not necessarily unique to Chinese culture or history, it is also attributed to Native Americans. According to Ross (2011), 47, a sense for animals, i.e. expertise of care taking, is also occasionally referred to as a 'natural' skill or at least one less infected by civilization. Liu Shuhong (2013), 69, has recently noted that Ming politicians up until the 1550s still strongly promoted animal husbandry in parallel to agriculture (*yi nong yi mu* 亦農亦牧).

²¹ Raphals (2013), 143, 173.

The cosmological interest also explains that what we might consider continuity (in the sense of unchanging structures) was in fact for Chinese actors what Reinhart Koselleck identifies as ‘structures of repetition’ (*Wiederholungsstrukturen*) that human beings ‘consciously adopt, ritualize, culturally enrich and level to a degree of consistency that helps to stabilize a certain society’.²² Such repetition is different from stagnancy as it allows variations – in fact, it even embraces such repetition as a way to establish a universality that can exist in diverse local and temporal contexts. Looking at knowledge making as a process of repeated actions – rather than one of structural ruptures – also gives valence to the historical experience of change as a gradual development in which the familiar way of, for instance, cooking food informs chemical analysis or modern genetics helps recreate ancient pure blood horse types.

What then does putting the animal in the focus of a *longue durée* view on practices and concepts contribute? Similar to the world of objects and technologies in which David Edgerton has pinpointed the different life cycles of things and ideas, the temporality of animals is, in contrast to the technical things that Edgerton describes, equipped with both physical and behavioural continuities that humans perceive to be beyond the grasp of human wills and minds. Living with animals and knowing them defies any *easy* dichotomies of everyday, familiar practices (such as choosing companion dogs) and scientific means (such as genetic testing and breeding). This volume then presents an explorative grid, offering various lines of inquiry such as that of specific animal species, or human professions, or approaches to human–animal encounters and human knowing of and with animals.

This Volume

Organized chronologically, the chapters brought together here reflect different approaches to the role of the *longue durée* in studying practices and knowledge change. The first two chapters focus on ascertaining what can be grasped about knowledge and expertise from material culture, oracle bones and texts from China’s early period, from Shang period excavation sites (c. 1300–1150 BCE) to the dynastic reign of the Han (206 BCE–220 CE). Burial places are an important area for investigating how practices and cosmological views were related. Adam Schwartz’s contribution suggests a need to rethink significantly the landscape of expertise, in response to advances in archaeological excavation processes. A ritual culture hinging on animal sacrifices, he reminds us, required careful planning and preparation that yet again necessitated an intimate understanding of the animal’s

²² Koselleck (2000), 12, 20.

reproduction cycles. In Huayuan zhuang 花園莊 (located in modern Anyang), nobles undertook a 'private' form of divination practice – mostly related to ancestral worship – with regular sacrifices that required large numbers of animals be reared in captivity. Hence, princely and lower elite households had to watch carefully the economy of animals and regulate it by establishing a hierarchy of use in which boar could replace cattle but cattle never replaced sheep. Schwartz's study also shows that, while the value of wild animals depended on their gender and rarity – with exotic animals such as antelopes being more highly prized than others – penned sheep, cattle and pigs were evaluated on the basis of their successful breeding. Diviners prophesized by colour and honed their skills by consistently applying a numerological logic in patterns of ten odd or uneven numbers to predict personal and communal affairs.

This sacrificial animal economy operated within what one could call a professionalization of ritual procedure that, as Roel Sterckx explores, became part of a civilizing narrative which allowed humans to 'distance' themselves enough from the creatures to be able to consume them, physically and spiritually. Whether or not this practice now indicates a historical turning point in which a continuum perspective was transformed into a categorical difference between humans and animals may be subject to debate. In this particular moment actors clearly considered animals not per se as edible. Instead animals had to be *translated* into consumable items, for both spiritual and nutritional purposes. Archaeological excavations and textual sources document a special set of techniques that was applied to transform an animal from a domestic being into a suitable 'victim' for ritual sacrifice. This process included selection, de-animalization, de-animation and, finally, its reconstitution as an edible and spiritual tool. In pre-dynastic and early imperial times, the state established methods that allowed it to single out the provision of sacrificial animals in two ways: (1) by externalized control over procedures; institutionalizing a pastoral economy 'with ritual obligations', assigning specialized staff, codifying the herding of livestock by way of accountancy processes, management ethos or legal practice and managing the kill, and (2) by internalized standards of classification frameworks based on physical or moral markers or on timing regulations.

By the dynastic period, intellectual styles and schools had evolved, but we can also see some continuity in the style of debate. For Keith Knapp, the answer to Rodney Taylor's question about how animals were valued in Confucian thought – were they an exemplification of diverse life forms rather than something fixed in relation to humans, or was there a unified view of life? – lies in the role of all things to exemplify and express moral causes. Knapp shows how Confucians sanctioned patriarchal society and the validity of basic moral principles by arguing that human and animal approaches to filial piety

differed only by degree. Anecdotal evidence and philosophical texts verified animals' capacity for filial piety, demonstrating: (1) the reciprocity of caring, parent–child, child–parent relationships, (2) compassion, and (3) devotion and loyalty. He also explains the belief that animals acted on innate moral principles, whereas humans were obliged to master or take an adversarial stance to their intuitions. In this world in which all bodies, human or animal, were governed by universal principles, for Confucians civilization (as cultivation) rested on a human individual's mastery of their innate capacities. Humans then were different to animals only in their capacity to abstract moral concepts and behaviour beyond food and protection.

That such human–animal comparisons did not aim to attribute merely human characteristics to animals is also evident in Barrett and Strange's suggestion that basic virtues (and an answer to how fundamental these are to society) can be found in all creatures. Adopting the *longue durée* view of the Chinese cultural and geographical sphere, Barrett and Strange insist that animal portrayals seem indeed to have refused to acknowledge any arbitrary distinction between physical and behavioural characteristics. Social and intellectual approaches to cats evolved considerably. According to textual sources, cats were not domesticated until quite late, around the second century, swayed by the influx of Buddhist cultures (which were, themselves, possibly influenced by Egyptian traditions/practices?). Throughout the centuries we can see clear tendencies. Cats feature prominently in Buddhist monastic contexts and in magic accounts of the Sui to the Five Dynasties up until about the tenth century. They become more visible in political accounts and moral considerations from the eighth and ninth centuries. Cats are used in discourses metaphorically and are not real creatures in Chan Buddhist philosophical debates. Song era (960–1279) literature had cats changed from animated spirits that influence human behaviour to creatures that were governed by the same principles as humans. While cats (and their component parts) were used in multiple ways, it was only at this time that cats turned into a commodity that could be traded as companion animals for human pleasure.

Similarly, the diachronic view that Pattinson adopts with respect to bees emphasizes the ideological impact of attention and knowledge regimes. The perception of bees changes from a negative to a positive model organism in line with the growing interest in, and use of, bee products by the Song. With a shift in moral evaluation, bees also turned from an animal that humans studied for utilitarian purposes into a social model-organism (or a more allegorical entity), until finally becoming an object of knowledge that Song scholars attempted to grasp through a sophisticated taxonomy. It is important to know in this context that, whereas honey seems to have been part of the early Asian diet, Chinese farmers, like many other cultures up until the nineteenth century, did not domesticate bees. The political nature that specific animals were

ascribed in their role as exemplifications of a higher order, in this case, can hence not be related to different productive usages of these animals. Rather it seems that social and philosophical issues were at stake.

Clearly, throughout time, animal imagery, analogies and metaphors at a symbolic level offered an opportunity for indirect criticism of individuals, rulers and regimes, as well as social groups. Bee colonies provide a useful image of imperial courts, illustrating officials' duties to their superior, depicting the insects' venomous sting as a bad omen. Allegorical cats, Barrett and Strange note, could rid the state of unwanted officials in a form of political rodent-control.

Such examples underline Thomas Allsen's point that animals were considered valuable not only as representations of political creatures which generated wealth for their owners and enabled war. Their political power also lay in the way that scholars considered animals as sources of universal patterns. In addition, state power legitimized the use of animals and made animals 'known' – as many of the following chapters explain. Francesca Bray shows that this is particularly evident in state-related sciences such as agronomy. Examining the portrayal of animals in the genre of treatises on farming (*nongshu* 農書), Bray sheds light on the relation between ideologies of ruling, sustenance and land cultivation. *Nongshu* represent a dynastically approved genre that anchored culture and civilization in crop-centred farming, and relegated husbandry to frontier regions that were uncultured or unsuitable for arable farming. Whereas the *Qimin yaoshu* 齊民要術 (Essential Techniques for the Common People) validates animals as possessions with economic benefit, sources from the Song era consider animals as somewhat inferior to crops. At that time, livestock was no longer viewed as a source of nutritional value, but measured in terms of a work force. By the Qing, some included the pig from the viewpoint of a learned Confucian who discussed suitable tasks for a virtuous household. Bray concludes that, while earlier works meditated upon an economic context, political objectives informed later agricultural tracts. Animals disappeared and re-appeared from the *nongshu* genre in relation to political and economic desires and demands of the time. For lack of sources, it is nearly impossible to assess the impact of literary works on actual practice. We can say though that scholarly decisions made in relation to livestock management did not necessarily align with economic logic. They may even have contradicted it to fit primarily political aims.

First seen by Chinese bibliographers as an 'appendix' to *nongshu* writing, specialized monographs on material culture and nature studies developed into the *pulu* genre that provided a frame for scholars to address animal species in individual, stand-alone texts. These elites' texts became part of the Chinese store of knowledge on animals from the tenth century on. Apart from

assembling valuable information on naming, morphologies and habits of an animal species, they created distinct and separate animal realities, as Martina Siebert illustrates. Some authors in the *pulu* genre remained within the limits of scholarly debates (collating texts about animals), whilst others included individual observations. Authors using a textual discursive method approached animals in relation to humans (we could call this the affect approach) and grounded their knowing of animals in morphology, moral stance, habits or allegorical precedence, whereas for some species personal observations and direct encounters played the dominant role and authors emphasized phenomenological concerns.

Over time, literary genres paid varying attention to different animals. Institutional histories reveal, though, the continuous presence of animals in actual statecraft and central concepts of daily life. Schäfer and Han, as well as Aricanli, illustrate what it means to define one's political territory, authority and legitimacy by the absence or presence of a certain species or kind of animal.

The horse, which features prominently in both Schäfer and Han and Aricanli's accounts, is probably the example *par excellence* for shifts in Chinese views of animal agency, achieving importance as a status symbol, a prestigious pet, and an agricultural or military tool.²³ The horse also stands for the dynasty as a spatially shifting and politically vulnerable entity. In the 1970s, Creel attributed the very existence of China's dynasties as autonomous empires to the invention of the cavalry horse, noting that Chinese dynasties, despite enormous investment, often failed to breed horses themselves.²⁴ Both the Song and the Qing exemplify political reigns that gave substantial agency to the horse by making it a source of authority and imperial legitimacy. Hence, its well-being and supply had to be secured. Thus, when the Song lost control over the steppes, they invested heavily in the development of new fencing and breeding methods in the south. Managing animal space, as many legal texts indicate, was generally vital for the agrarian state, and the movement and resettlement of animals in pasture lands was subject to careful, state-sponsored supervision. During both the Song (a dynasty that had continuously to ward off northern intruders) and the Qing (the era of a northern people who conquered the Ming dynasty with superior horsemanship) managing livestock became an integral part of running an empire.

But this is also where the similarities end. While knowing about horses became an important lever of political influence in both dynasties, different approaches were taken to the question of how to turn this into practice. Whereas the Song scrambled for the resources and expertise to breed and rear horses to

²³ Bower and Harrist (1997). ²⁴ Creel (1970), 185.

unify the empire, institutions for equine care under Manchu Qing rulers proudly represented the diversity of cultural influences and traditions that comprised their empire: Manchu, Mongol and Chinese. Methods included practices from Mongol 'nomadic' and Chinese 'sedentary' lifestyles. Aricanli identifies such influences in looking after horses, before tracing multiple influences on the expert terminology of equine care. Language reveals a close linkage between politics and modes of expertise. The Manchu language was the gauge (and indicator) of the knowledge of horse types and horse medicines. Aricanli suggests that Manchu emphasized the 'Mongolian' origin of certain methods of looking after horses also, within claims for legitimate cultural succession (although Ming contemporaries had continued to use these terms too). Chinese precedents informed institutional structures. Mongolian practices, Manchu language expertise and identity debates are reflected in Qing dynastic equine care. Such examples indicate that there were multiple ways to explain and describe animals, and that these explanations often existed alongside each other, because context rather than content defined their being.²⁵

Zheng illustrates the ambiguities of Manchu attitudes towards animals in Emperor Qianlong's (1711–99) efforts to realign the textual and empirical knowledge of animals, their life cycles and habitat. Confident in animal care, as minority leaders to a Chinese majority they were hesitant to displace pre-dating cultural norms. Qianlong expected to see what the classics told him and, to remedy his disappointment upon finding that things were otherwise, he wrote corrective commentaries, leaving the canonical text unchanged. Just as in Europe the medieval bestiary tradition continued to influence early Renaissance models of animal taxonomy,²⁶ in China classical texts, lexicographies and etymological works preserved repositories of knowledge that would be recycled and commented upon through the centuries.²⁷

Qing approaches, as described by Aricanli and Zheng, suggest an increasingly dichotomous approach to the moral and physical causes of animal life that, as the final two chapters explain, translated into a standoff between

²⁵ For an example of the potential of communication through visual imagery see the excellent study of the 'emo' or cassowary by Lai (2013).

²⁶ On the continuities and diversification of medieval attitudes towards animals in Renaissance Europe, see Boehrer (2007).

²⁷ Ptak (2011), 3–17, is more confident in the definitional role of close observation behind animal nomenclature in the Chinese classics but his claim hinges on the assumption that zoological investigation occurred mostly in oral traditions now lost to us. As early Chinese medical literature shows, the early Chinese certainly did not shy away from accounting for personal experience, invoking regional traditions, and involving experiment. That a similar curiosity with reference to animals is not reflected in texts of the period therefore remains a more complex question. Many species in our texts and commentaries are probably part literary, part real. As several contributors to this volume show, an important and revealing question in this context is when and why authors choose to explain animals and their behaviour either by literary precedent or verifiable observation, or by both.

'scientific' or 'modern' approaches and any moral concerns in the nineteenth and twentieth centuries. During the socially and politically stressful periods of the Taiping era (1850–64), as Vincent Goossaert shows, animal companionship and care thus became an important site for debates over morality. Within texts from genres such as the late imperial morality books (*shanshu* 善書) Goossaert identifies several central themes: respect for life, considerations on wastefulness and greed, condemnation of releasing animals from human care, taboos regulating the pastoral economy, and caring for animals. Actors utilized and synthesized Christian, Buddhist and Confucian ideas about welfare and life and, at the same time, through creative misunderstandings as much as adaptive interpretations, invented new ideals in which animal slaughter called for an equal extinction of human life.

Goossaert then illustrates that, by late imperial times, specific genres and actors monopolized morality debates on animals as much as others only looked at physiological issues. Over the twentieth century this divide between the moral and physiological view would gain ground. It culminated, as Mindi Schneider illustrates, in utilitarian and scientific approaches to feeding and breeding pigs in the post-1978, market-reformed People's Republic of China. She also shows that, until the late 1970s, isolation from the international community had slowed down the extinction of local breeds.²⁸ It had also reduced China's capacity for producing chemical fertilizer. Adhering to Mao's promotion of pigs as small-scale fertilizer factories, modern economics and society have come to embrace the pig fully as a standardized creature. In modified regimes of biology and environment, scientific knowledge and know-how, the pig is subservient to society as a meat machine and as a living being largely detracted from human views. The wheel has turned full circle when, as Schneider elucidates, contemporaries anchor their practices and knowledge in human pasts, looking back nostalgically to long traditions of human–animal relations in politics, knowledge and identity debates.

Animals, China and Ways of Knowing

Notwithstanding all due associations to movable property, historically, animal mobility as well as their mutability was not easily owned or appropriated. It is no coincidence that modern archaeology takes a special interest in probing how much DNA the modern domesticated pig shares with ancient breeds.²⁹ Here as elsewhere, human–animal relations and knowledge practices emerge as closely interlinked.

²⁸ Epstein (1969), 70, had already noted a substantial reduction of local types, some of which, he writes, 'have become extinct during the last 15 years through grading up'.

²⁹ Yuan and Flad (2005) and Larson et al. (2010), 7688.

This collection underlines that the historical study of human–animal relations can profit from a broad historical view moving beyond the current focus on the early modern or modern periods that presently dominate animal studies and historical accounts. A study across regions and times that avails itself of many sources – including books, bones and landscapes – promises clear methodological challenges, but also substantial new insights into how humans know animals and how animals affect human practices and thought.³⁰ For instance, the chapters of Schwartz and Sterckx exemplify how productive it can be for archaeologists to modify the view of production and use, directing us away from ‘a utilitarian perspective on animals as sources of food, raw materials, and transportation to a more expansive and nuanced appreciation’, as Erica Hill has proposed.³¹ This change of perspective gives a clearer picture of ‘meaning as it is constructed socially and expressed materially’.³²

The *longue durée* view adopted by Knapp, Barrett and Strange, and Pattinson emphasizes the importance of paying attention to the variety of historical records and co-existence of moral and physical concerns that elite actors produced when reflecting on human and non-human bodies and minds. Co-construction of political and intellectual ideals emerges, as Bray, Siebert and Zheng illustrate, in the eras from the Tang to the Qing, within specific genres. Equally, as Schäfer and Han and Aricanli show, administrative records matter in the historical study of human–animal relations. A comprehensive view of source materials such as private, legal and trade records, indicates that while – as many studies of the environment have emphasized – some animals became extinct, it is also worthwhile understanding why and how others propagated and prospered.³³

The *longue durée* views included in this volume stress the need to reflect critically on narratives of linear ‘historic turns’. Barrett and Strange suggest that the history of the cat fits well into a civilizational trajectory, and their transformation from functional animal to leisure companions almost entirely replicates the much faster nineteenth-century modernity shift. Their contribution as well as Pattinson’s also show that it would be overly simplistic to claim that instrumentalist and sentimentalized views of animals in China were (and are) mutually exclusive. Or that it is only an outcome of modernity that civilization or being civilized is related to cruelty or empathy towards animals. Although the modern Mandarin term for ‘pets’ (*chong wu* 寵物) may only have appeared in dictionaries in the late 1980s, animal companionship and care was not unknown before that time. History is equally full of examples of the bad treatment of animals such as we can also find in the present, as Deborah Cao has very recently documented in her study: fur farms, a breeding industry

³⁰ Shelach-Lavi (2015), 92–4. ³¹ Hill (2013), 117–36. ³² Hesse (1995), 205.

³³ Zhang Qiong (2009).

supplying laboratory animals, trafficking in endangered animal parts and wildlife, intensive meat farming, illegal hunting, wildlife consumption, mistreatment of animals in zoos and circuses, etc.³⁴ It is not that sympathetic or sentimental attitudes towards animals in China gained traction over utilitarian views generally at one point in time. Instead such attitudes often developed and co-existed at the same time or in the same place. The interesting problematic for future research is how shifting ethics and ideals relate to changes in knowledge and practices.

Scrutinizing changing views of knowledge about and of animals in relation to the dynastic scheme and state control in a diachronic view illustrates how the changing geographies of livestock affected imperial decision-making. But we must also be aware of the many methodological flaws. Studies of domesticated animals such as horses, pigs, goats, mules, dogs and cats suggest that we have only just scratched the surface of understanding how such developments impacted society, politics, landscapes and human approaches to nature. For instance, as the Song moved to the south, pigs, goats and cattle had to move too, meaning that officials and farmers had to experiment with new breeds as well as new animal-keeping methods – stabling, housing, fencing and forest roaming. Little is known about how such changes affected biodiversity, because the rubric of ‘dynastic territory’ effectively disguises shifts in actual animal landscapes as well as how much effect state intervention actually had. This makes it unclear whether the impact affected dynastic territories under imperial control that were as small as a couple of hundred square miles around the imperial court – or areas as vast as East Asia and the entire Central Asian plain.

In this sense, the chapters in this volume showcase avenues for future research on the fascinatingly rich field of animals and knowing in Chinese history. Barrett and Strange as well as Zheng or Siebert, for instance, show the need to study metaphors, analogies, parables, song and poetry, as well as the vast arsenal of animal imagery, to understand how Chinese scholars addressed the conflict brought about by the clash of personal observation and textual precedent in relation to knowledge on animals. Schwartz and Sterckx, as well as Schneider highlight the wide array of possible sources as well as the difficulty of their availability. Clearly many historical sources represent an elite or even more restricted state view. And archaeological and ethnological method time and again ‘lent the impression of scientifically dependable facts’ alongside legends and presentist ideals.³⁵ China’s early archaeology of human–animal relations is still an emerging field struggling with many issues, including an overbearing need for rescue archaeology, incomplete source materials and changing scientific approaches.³⁶ Previously focused on

³⁴ Cao (2015). ³⁵ Schmalzer (2008), 49. ³⁶ Shelach-Lavi (2015), 92–4.

consumption, it now needs to move from a utilitarian perspective to address other dimensions of human–animal co-existence. While the finer details of the shifts in early Chinese historical approaches to knowledge and animals may still need further research, Schwartz and Sterckx exemplify into which direction such research could proceed. They also reveal the potential of studying China's early culture in order to carry out a historical study of human–animal relations that takes on board meaning as it is constructed socially and materially.

New access to local archives and private accounts, as well as the possibility of electronically researching across vast corpora, enables historians nowadays to ask questions about animals in texts in new ways and follow terminologies and their standardization across imperial spheres. Schäfer and Han as well as Arincali show accordingly how animals appear as subjects of state rule and care in communion with humans and how animals in reverse shaped the state. Administrative regulations and legal codes reveal notions of animal-related expertise and what was considered necessary for regulating and caring for animals.³⁷ The imperial bureaucracy not only issued laws on domestic livestock, but also meted out punishments for offences against non-domesticated species – such as trespassing and hunting in imperial parks or negligence in locking up wild animals. This opens up an array of important questions on animals' legal status in crime and punishment or what obligations the ownership of an animal implied.

As mentioned above, according to Chinese mythology, when Cangjie invented writing by observing animal footprints and tracing birds' claw marks on the sand, he did so for the administration of society and state. The written records produced by his successors in the course of administering the state reveal shifts in daily practices and notions of animal-related expertise. They also contain information on changing nature-knowledge, human habitat and animal environments, while interpreters of the Chinese classics may have insisted on the continuation of a literary view. We must also be aware that, while certain animals, such as cattle and pigs, were continuously pivotal in the creation of ritual, social and political hierarchies, these very animals also frequently disappeared from scholarly literature, state and agricultural practice and everyday use.³⁸ Such observations complicate a historiographic view of a functionally stable biodiversity against which to assess literary accounts. Administrative sources show that animals not only disappeared. Certain populations also increased in density. Huge herds of cattle were based around the Pearl River in the south by the end of the Song.³⁹ Equally Kuo Chunghao's

³⁷ For examples in the Tang code, see Johnson (1979–97), vol. 2, 179–97; Cao (2015), 19–23; for Qing examples see Bodde and Morris (1967), 282–6, 350 (cases from the *Xing'an huilan* 刑案匯覽 [Conspectus of Penal Cases], covering the period 1736–1885).

³⁸ Steinbrecher (2009), 264–86. ³⁹ Zhang Xianyun (2009), 202.

culinary study of ham consumption during the sixteenth century implies that pig farming spread widely around Jinhua 金華 and Huizhou 徽州, even though agronomic accounts of the same period almost entirely ignored the pig.⁴⁰

The particular language and geography of our textual and material records of humans and animals define, to a large extent, the ‘Chinese-ness’ of animals and knowledge in historical studies. Animals and animal practices clearly were, as Aricanli’s chapter indicates, equally strongly influenced by non-Chinese actors. Their sources need to be incorporated and their views revealed. Ultimately what constitutes ‘Chinese animals’, however, cannot be a question addressed exclusively by the *internal* view (i.e. given by Chinese sources on China) that this book provides, considering the matter mostly in terms of the existing biodiversity within a territory defined by modern politics and the historical legacy attributed to this geographical and cultural space. It is equally important that a study of ‘animals in China’s history’ considers what one could call the *external* view. As Roderich Ptak and others have shown, scholars carefully observed the variety of land and sea animals when travelling for leisure or as roving servants of the empire.⁴¹ Animals exchanged via diplomatic missions dominate our current understanding of the animal empires that inhabited Eurasia in pre-modern times. There is, though, also the wide range of animals that were continuously collected and recorded by tributary missions on regular journeys. As the empire ruled varying territories, a wide range of animals such as water buffaloes, camels and goats, crickets, goldfish and singing birds were mobilized and replaced, too.

Animals are regionally and temporally diverse. As elusive as this diversity often seems to be in historical accounts, the knowledge cultures built from and around animals were often quite distinct. The waning and waxing geography of sericulture – how the domesticated silkworm wiggled its way through human cultures and thinking – may be one other indication of the huge shifts that affected biodiversity on the Eurasian-African plain. While such changes are less abrupt than the discovery of new continents, they may not have been less influential. From the Han to the Qing, silk production first centred in China’s north (modern Shandong) and Sichuan until, by the eleventh century during the Song reign, it increasingly moved south of the Yangtze partly due to climate change. Even while the domesticated silkworm remained within Chinese imperial boundaries, it moved through at least one macroclimate and multiple microclimate zones. The silkworm was also a desirable commodity beyond Chinese imperial boundaries, and animal exotica – from dragons to water buffaloes and crickets – were coveted by Persian, Mamluk, Prussian and French early modern courts, just as panda bears are part of cultural diplomacy in modern times. Habitat changes in Eurasia may not have been as disruptive

⁴⁰ Kuo Chunghao (2013). ⁴¹ Ptak (2010).

for a species as that brought about by the discovery of the Americas, but it might be worthwhile studying their subtle as well as their more dramatic short- and long-term effects, too. Within the rich confines of Chinese history, animals and knowledge developments hence still remain to be explored much more. The various species, periods and perspectives addressed in this collection provide possible points of departure within this complex but fascinating research field.