

Title: Ritual, Mimesis and the Animal World in Early China (revised version of accepted manuscript, October 2014)

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Author:

Roel Sterckx
Joseph Needham Professor of Chinese History, Science, and Civilization
Faculty of Asian and Middle Eastern Studies
University of Cambridge
Sidgwick Avenue
Cambridge CB3 9DA
United Kingdom

e-mail: rs10009@cam.ac.uk

tel. +44 1223 335137

Abstract

Early Chinese texts frequently link the origins of ritual, play, dance, and music to patterns of behaviour observed in the animal world. Moralising readings of animal behaviour proliferate in texts and iconography from the classical age of the Warring States and early empires (5th cent BC-1st cent AD), when China's masters of philosophy were drawing up the contours of their ethical theories. The animal world inspired models for human ritualised conduct that became codified in the classicist (Confucian) ritual canon. This paper examines representative examples of this and tries to identify some of the conceptual schemes used in early China to subsume the animal world into moral frameworks that were meant to guide human conduct.

Key words:

Early China – animals – ritual - play

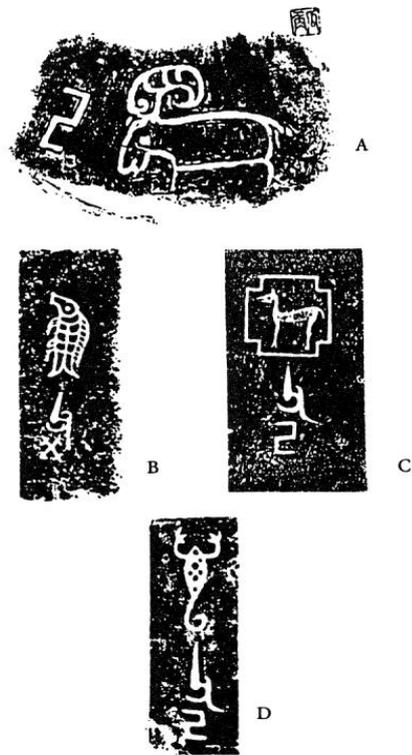
The animal world is omnipresent in textual and archaeological sources from pre-imperial and early imperial China. The zoomorphic is embedded early on in the Shang-period oracle bone script (1200-1000 BC) that includes numerous pictographs representing animals (Yang, 2000b, p.90, p.114; Li, 2002, pp.208-10; Figure 1). Zoomorphic motifs pervade Shang and Zhou period (10th -3rd cent. BC) bronze vessel décor; and scenes depicting hunts, animal combat, husbandry and games involving animals abound in Han period (2nd cent. BC- 2nd cent. AD) murals and on decorated ceramic bricks (Figure 2). Early China's masters of philosophy, its lexicographers, poets and historiographers all drew intensively on observations of animal behaviour to draw moral analogies, formulate philosophical arguments, and construct models for human behaviour. While the information preserved in early Chinese texts was anchored, at least partly, in observations and practices of the time, it should be noted nevertheless that these texts represent mediated evidence in that they were compiled by authors whose audience consisted mostly of statesmen and elites preoccupied with the creation of social order and politics during an age when China transformed from a polity of contending feudal states into a unified empire (221 BC).

When invoking the animal world, the early Chinese blend biological and socio-religious models. Only rarely do observers dissociate the biological properties of animals from social perception. Detached zoological inquiry did not develop as a distinct branch of learning comparable to, for instance, the empirical and theoretical program found in Aristotle. The general paradigm is one of contingency between the human and animal realm, that is, an understanding that the boundaries between the human and the natural world are not necessarily always clear and distinct. Human conduct – as evinced in social and political life-- was thought to have a moral impact on the natural world at large. The

boundaries of what was seen as distinctively ‘human’ or ‘animalistic’ were subject to change.

 Figure 1 here

𧈧	蜀、蚕
𧈨	龟、蛙
𧈩	罗
𧈪	凤、鹰
𧈫	鸣
𧈬	豚
𧈭	渔
𧈮	鲁
𧈯	齿
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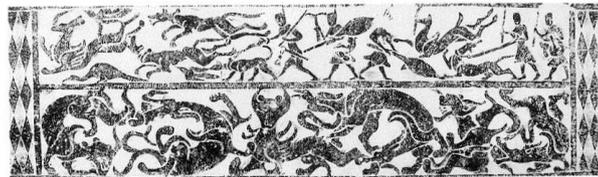


Metaphor and analogy were much used tools to describe animal behaviour and project it onto the human world, or vice versa. Yet behind this anthropomorphic language lurk signs indicating that behavioural patterns among animals were interpreted as meaningful models for regulated human behaviour. This is evident in at least three areas. First, the Chinese ritual canon shows that animals were socialized into a world in which their behavioural,

physical and anatomical qualities were described in terms of human virtues and ritual requirement. Second, the animal world inspired the orchestration of human forms of controlled violence. Third, the origins of music, movement and dance were closely linked to animals.

Congruity between animal and human behaviour manifests itself in both physical and conceptual forms of mimesis. The former includes re-enactment, imitation or mimicry of animal behaviour while the latter involves more abstract derivations of moral values from physical or biological features (e.g., physiognomy) through mechanisms such as analogy, allegory, metaphor, homology, inference, and metonymic projection. The hermeneutics operate in two ways: first, animal behaviour and links to habitat and environment are analysed following a sociology of human communities; second, human values, postures and feats of civilisation are inferred from patterns observed in the animal world.

Figure 2 here





Play, ritual and ritual propriety

The classical Chinese textual tradition has a limited vocabulary to describe ‘play’. Both graphs used in modern Chinese to refer to play today --*you* 游 and *xi* 戲-- are etymologically linked to the fluttering of military flags and the use of army banners (*Shuowen*, 7A.19b, 12B.38b). If we can draw any conclusions from etymology at all, these terms suggest that play denoted some form of free movement within boundaries. In sharp contrast with references to ‘play’, texts are replete with discourse on ‘ritual’. ‘Ritual’ refers to the notion of *li* 禮. *Li* on the one hand comprises repeated, guided, rule-regulated behaviour; on the other hand it covers the more abstract virtue of morally appropriate conduct and propriety. *Li* also represents the interplay of both ‘form and conduct’, as well as ‘etiquette’ in the narrow sense. *Li* is a formal and performative concept as well as a psychological disposition. The presence or absence of ritual ‘propriety’ was often taken to distinguish human from animal nature. Yet it was also acknowledged that formal/ ‘ritualised’ behaviour was inherent in human and animal societies alike.

Let us turn first to moral distinctiveness. What separates humans from animals is a sense for moral reasoning and ritual propriety. Xunzi 荀子 (ca.335-ca. 238 BC) attributes humans’ capacity to instruct and subdue physically superior animals to their sense for social organisation. This ability to form social flocks (*qun* 群, a graph that is

etymologically related to a herd of sheep) is said to derive from man's capability to draw social distinctions (*fen* 分), which, in turn, originates from a sense for righteousness (*yi* 義, a character that also includes the grapheme for bovids/caprids; *Xunzi*, 9.164-65). The idea that a sense for propriety can curb the supposedly animal aspects of man was based on the premise that animals were endowed foremost with physical power (*li* 力), whereas humans possess an inborn sense of morality or 'ritual propriety (*li*)' (*Guanzi*, 4.118). The philosopher Mencius (fourth century BC) remarks that human failure to reciprocate ritual propriety, benevolence and loyalty would put them on a par with birds and beasts (*Mengzi*, 5B.3b, 8B.5a-b). The *Spring and Autumn of Master Yan* (a late Warring States text) notes that a morally cultivated gentleman who loses his sense for ritual propriety lapses to the level of common folk, and common folk without ritual propriety equal birds and beasts (*Yanzi chunqiu*, 2.170, 4.241). That animals (and petty humans) lack a sense for propriety can be seen when they group together and give in to instinctive physical intercourse failing to distinguish between young and old, species or kin. Deer lack ritual propriety because stag and calves mate with the same doe (*Yanzi chunqiu*, 1.6, 7.430; *Liji*, 1.11a; *Lüshi chunqiu*, 16.946).

Some Warring States and Han thinkers argued that the human capacity to organize oneself socially derives from the fact that humans are a more or less homogenous species group as opposed to animals (cf. Sterckx, 2005). The *Guanzi* notes that 'relations among a flock of crows may seem good, but they are never really close'. A variation on this theme is the observation that animals of prey do not flock together (*Guanzi*, 1.17; *Huainanzi*, 17.568; *Wenzi*, 1.37b). Birds and beasts cannot form flocks because their species are different (*qi lei yi* 其類異); tigers and deer cannot play about together because their physical strength is disproportionate (*Huainanzi*, 9.286). Animals lack a sense for kin affinity that reaches

beyond their own species, which is why adopting a clan-name and upholding social distinctions based on gender and marriage are attributes that emancipate humans from a state of primordial bestiality (*Bohutong*, 9.401). Relationships of parenthood and pedigree among animals lack the integrity of a human father-to-son relation. A distinction between male and female exists among animals, yet it does not induce a separation between the sexes (*Xunzi*, 2.21).

While narratives that insist on a moral distinction between humans and animals are numerous, it is equally clear that a number of highly valued core human virtues were detected, in simile and metaphor, in the animal world. Ritualised animal behaviour was taken to inspire human gestures and performance. Some examples. The disgorging of food by certain birds (translating the expression *fan bu* 反哺 ‘reverse feeding’) is interpreted as a sign of filial piety, that is, an unconditional commitment to offer physical and moral sustenance to one’s parents and elders. Filial bird behaviour appears in a verse of a prose-poem entitled ‘Rhapsody on the Spirit Crows’ (*Shen wu fu* 神鳥賦), recovered in 1993 from tomb no. 6 in Yinwan, Jiangsu province (interment ca. 10 BC):

Among all animals that can fly
The crow is the most dignified.
Its nature is to love to be humane.
Repaying [their kindness] it nourishes its [old] parents.
It acts according to righteousness, purity, vigour
And always walks on the way of man.
(van Ess, 2003, p.612; Sterckx, 2002, p.251n.63).

Reversely, the cuckoo's habit of having its eggs hatched by other birds, or the owl's instinct to devour its own mother, are condemned as un-filial conduct (*Xinlun*, 6b, 21b-22a; *Shuowen*, 6A.66a). Some animals show piety perpetuated after death. Elephants spontaneously tilled the tumulus of Emperor Shun, and crows laboured the fields where Yu the Great was interred. Shun was a legendary sage ruler credited, among other achievements, with settling disputes among farmers, fishermen and crafts folk. Yu dredged rivers and controlled flood waters thereby fashioning civilisation (*Han Feizi*, 15.795; Mencius, 2A.8, 6B.15; Lewis, 2006, pp.38-47). Another group to attract the spontaneous attendance of animal acolytes were immortals. The legendary Pengzu, alleged to have lived eight hundred years, attracted the presence of tigers. The immortal Zhuji Weng or 'The Old Man Who Beguiled Chickens' raised chickens for over a hundred years and gave them all names. In his seclusion, he was said to be flanked permanently by hundreds of white cranes and peacocks (Kaltenmark, 1953, pp.82-3, 127-28). Animals show emotions or respond to human feelings. In the *Analects*, Confucius' disciple Master Zeng notes that 'When a bird is about to die its call is mournful, when a man is about to die his words are good' (*Lunyu*, 8.4). Compassionate mountain birds come fluttering down in response to Master Zeng's unhappy cries (*Yantie lun*, 5.143). When the king of Linjiang (mid-second cent. BC) kills himself several tens of thousands of swallows pick up earth in their beaks to pile up his grave mound (*Shiji*, 59.2094; *Hanshu*, 53.2412). Swallows descend to fill up the burial pit of Empress Ding (consort of Aidi, r. 7-1 BC) after her tomb had been desecrated (*Hanshu*, 97B.4004).

In reading these stories, we must of course be aware of their literary and rhetorical contexts. Yet the sheer frequency with which animal behaviour is described either as a metaphorical referent to human values or, more importantly, as behaviour that was inspired

in response to human conduct -- or even political events-- suggests that dismissing all of it simply as analogical reasoning or anthropomorphism may be untenable. Even if one would opt to do so, it is hard to dismiss that some analogies were firmly based on observations of actual animal behaviour. I will discuss movement and sound in more detail below. First we turn to three other areas in which such projections appear: descriptions of the ritual gift exchange, the portrayal of ritual sacrifice and origin narratives of violence.

In stipulating when, how, and what animals were to be used in sacrificial procedures and ritual exchanges, ritual texts infer interesting data on animal behaviour. Some passages start from the premise that certain modes of animal behaviour were 'ritually' meaningful. In a chapter entitled 'Gifts to Superiors' in a Han work known as the *Luxuriant Dew of the Spring and Autumn Annals* we are reminded that in presenting gifts to superiors or friends, a minister should use a lamb and a senior officer a goose. The text justifies the use of these particular animals by linking their natural behaviour to the social conduct desired of the human officer in question:

A goose is of the same kind as the honourable man. An honourable man stands above the people and must, in a reserved manner, follow the order of first and last. He ought to be reverent and possess the capability of controlling rank and order. Therefore a senior official uses the goose as a gift. A lamb has horns but does not use them; it sets out preparations but never uses them; and it resembles someone who likes benevolence. When one catches a lamb it does not cry; when one slaughters it, it does not wail. It resembles someone who dies for righteousness. When lambs feed from their mother, they have to kneel to get (to the milk). This resembles someone who knows the rites. Therefore

the word for ‘sheep’ (*yang* 羊) also means ‘propitious’ (*xiang* 祥). Hence a minister uses it as a gift (*Chunqiu fanlu*, 16.394).

Similar examples occur elsewhere: the common officer is associated with the pheasant because it cannot be inveigled by food or subjected by force, and common people are associated with the tame duck that cannot fly off (*Shuoyuan*, 19.485; *Bohutong*, 8.356-57; *Liji*, 5.25a). The analogies inferred here are based on more or less plausible observations: the goose serves as an image for orderly conduct, a lamb evokes the idea of subservience by administrators. The image of the morally accomplished person who ‘stands above the people’ may allude to the idea that geese on seasonal passage fly at higher altitudes than common birds. ‘Following the order of first and last’ refers to the image of geese flying in formations, a concept also seen when precision formations of flying birds are used to name army formations (*Zuozhuan*, 1429; *Mozi*, 31.342; *Han Feizi*, 1.43). To be sure it is not possible to establish the cognitive sequence in which these sorts of parallels may have come into being. Is it biology that inspires the imagination of a ritual category, is it an understanding of the formalities of ritual that is used to explain certain forms of locomotion among animals, or a mixture of both processes? To claim that meaning construction here is entirely devoid of empirical observation may be too strong. But it is equally clear that by explaining animal conduct in function of their possible use within a ritual order, the interpreter has transformed the lamb and the goose into socially meaningful creatures.

Animals were also central to sacrifice as animal victims. The offering of sacrifice constituted the single most important performative act in early Chinese religious practice. Leaving aside the intricate mechanics of the sacrificial exchange (cf. Sterckx, 2002, pp.58-

61; Sterckx, 2011, pp.83-166), it is noteworthy that sacrificial obligation itself was thought to be present in the animal world. Calendrical texts note that the hunting season was to be declared open only when the game animals themselves displayed their innate moral disposition. Hence fishermen are allowed to start fishing only when ‘otters sacrifice fish’. One may explain the image of sacrifice (*ji* 祭) here simply as a metaphor, or, as one commentary does, as based on an actual observation: there is an abundant catch, as a result of which remains of prey are scattered around on the river banks as if the otters were sacrificing to the four directions. Likewise hunts were to start only ‘when wolves sacrifice prey’. And the nets were set out only ‘when doves transformed into eagles’, one way of saying that seedeaters assume a carnivorous condition (*Liji*, 12.5b, 14.14a, 16.13a, 17.1b; *Liushi chunqiu*, 9.467). So the opening and closure of the hunting season is said to accord with the hunter's respect for the game animals’ innate sense of sacrifice.

Contrary to demonstrations of orderly conduct illustrated above, the origins of social disorder and the display of violence were also linked to the animal world. This is evident both in comments on animal psychology as well as through various forms of enactment. Early Chinese texts do not contain a uniform origin myth of animal domestication, that is, a doctrine crediting humans with universal supremacy over the animal world that was shared by most schools of thought. While several tales and origin myths acknowledge the domestication of the animal world as a civilising process in which humans distinguish themselves from bestiality, other accounts insist on various forms of primitive naturalness and advocate human-animal harmony over cultural edifice or civilisation (Sterckx, 2002, 93-6). Human behaviour is explained, on the one hand, as an emancipatory conquest over animal instinct, but, on the other hand, it is emphasized that human communities are doomed to relapse into bestiality when social, political, or indeed cosmic circumstances are

not right. The *Huainanzi* (139 BC) explains human recourse to the military and violence as an extension of what happens in the natural world:

Figure 3 here



Figure 4 here

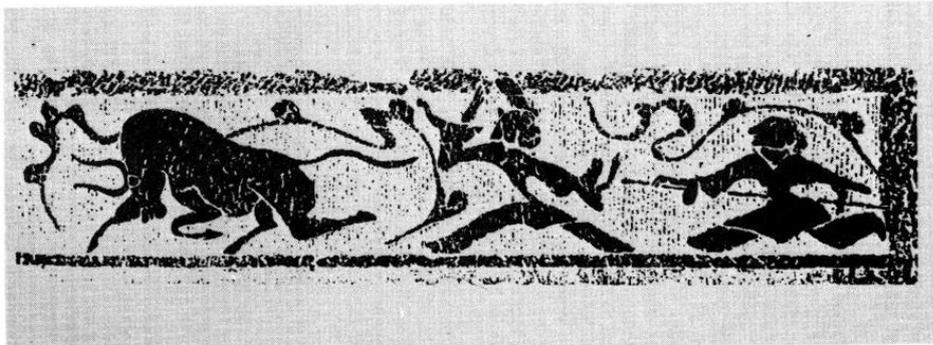


Figure 5 here



All beasts that have blood and *qi* are equipped with teeth and horns. They have claws in front and paws behind. Those with horns gore, those with teeth bite, those with poison sting, and those with hooves kick. When they are happy they play with one another; when they are angry they injure one another. This is their Heaven [born] nature. Humans have instincts for clothing and food, yet [material] things are insufficient to satisfy them. Thus they flock together in communities in various locations. When their divisions are not equal, and when demands are not fulfilled, they fight. When they fight, the strong threaten the weak and the brave attack the cowardly (*Huainanzi*, 15.489; Major et al., 2010, pp.580-1).

Several activities exemplified how the origins of violence and the command thereof were linked to the observation of animal nature. These included staged combats with wild animals in pens, bull fighting and bull grappling, and hunting (Figure 3). These events also functioned as ritual forms of military training in the same way as, for instance, horse polo did in later imperial times (Sterckx, 2012, p.36). Reference to wrestling and animal fighting games occurs across several Warring States, Qin and Han texts (cf. *Zhanguo huiyao*, 27.270-74). One among these has received considerable interest as it appears to have been an enactment of an animal fight by human actors. The so-called ‘horn-butting game’ (*jue di xi* 角抵戲) had fighters put on horns thereby imitating butting bulls or goats. The game, on record first for the Qin (208 BCE), may have been part of a series of wrestling games that became popular by Han times. The catalogue of the Han imperial library includes the title of a work, now lost, entitled *Hand Wrestling* (‘Shou bo’ 手搏, in six scrolls) that may have contained descriptions of this and similar games (*Hanshu*,

30.1761). The first literary account of these horn-butting matches is preserved in a post-Han work but we have several murals from the period possibly depicting the game (Figure 4; Yang Xiangdong, 2000a, pp.129-34; Du, 2010, 177-79).

Several explanations of *juedi* have been offered ranging from the suggestion that it originated in a military dance to the idea that it was an enactment of the battle between the mythical figures of the Yellow Emperor and Chiyou, god of war (Loewe, 1994, pp.236-48). Horn butting and the wearing of a cap named after a horned beast (the *xiezhai*) also appears to be linked to legal procedure as several sources credit this creature with an innate sense of justice (*Han guan yi*, 1.16a-b; *Duduan*, 2.14b; *Lunheng*, 52.760). While evidence is not conclusive, the horn-butting game, as Mark Lewis has suggested, was not simply a military exercise or a demonstration of skills for the purpose of entertainment. It may have been a ritual display symbolising humans' capability to command cosmic powers through the ritual enactment of animal combat or the staged subduing of wild animals (Lewis, 1990, pp.150-60).

It is clear that the observation of the movements of animals within their respective biotope prompted interpretation. Reference to shamanic animal impersonation and the mimicry of animal postures to forge magical powers is well documented. In Shang oracle bone and Zhou bronze inscriptions the graph for the legendary master of music and dance, Kui 夔, represents, according to some scholars, a pictogram of an ape-like creature or a shaman disguised in animal skin and wearing a mask (Figure 5; Eno, 1990, pp.196). Adopting animal postures to tackle demonic illness was believed to generate apotropaic effects comparable to those produced by exorcistic animal dances, often involving masks (Sterckx, 2002, pp.187-89). Treatises on physical cultivation likewise contain gymnastic

animal postures and therapeutic animal pantomimes. Manuals found at Mawangdui (Changsha, Hunan province) describe sexual positions and movements such as the 'roaming tiger,' 'cicada clinging,' 'monkey's squat,' and 'rabbit bolts'. 'Guiding and pulling' exercises depicted on a chart found at Mawangdui and described in a manuscript excavated from a tomb at Zhangjiashan (Jiangling, Hubei, mid-second cent. BC), mention animal postures such as the 'bird stretch' and the 'bear ramble' (*Mawangdui*, vol.4, pp.95, 155, 165, 116-17; *Zhangjiashan*, pp.285-99; Fig.7). These titles may have been no more than imaginative names for these exercises, yet it is plausible they grew out of a belief that imitating animal postures had therapeutic effects on the body. A critical comment in the *Huainanzi* confirms this when it condemns these exercises as examples of a lower level of spiritual perfection: 'If you huff and puff, exhale and inhale, blow out the old and pull in the new, practice the Bear Hang, the Bird Stretch, the Duck Splash, the Ape Leap, the Owl Gaze, and the Tiger Stare. This is what is practiced by those people who nurture the body. They are not practices of those who polish the mind [i.e. the perfected person]' (*Huainanzi*, 7.230; Major 2010, 250). Yet, despite such comments, the great Daoist authors of the period used every opportunity to describe their ideal of the superior or perfected person through incisive analogies with the animal world (*Huainanzi*, 16.553; Major, 2010, p.663; *Zhuangzi*, 24.846-47).

Music and dance

Perhaps nowhere is the ritual enactment of animal movements and sounds more clearly pronounced than in early Chinese narratives on the origins of music and dance (cf. Sterckx, 2000). Music and dance were linked to the observation of sound and motion in the animal

world. Tone, rhythm, and melody were thought to be embedded in the natural world. The *Spring and Autumn of Mr Lü* (ca. 239 BC) records how music originated when people waved ox-tails and sang melodies while stomping their feet. Twelve pitch standards were created following the calls of the phoenix: six derived from the calls of the male phoenix, and six tones were based on the calls of the female (*Lüshi chunqiu*, 5.284). The phoenix was linked to the tuning of musical instruments and seen as the originator of wind-instruments. Phoenix calls were likened to that of pan-pipes, bells and drums (*Xunzi*, 21.389; *Lunheng*, 50.733). The transformation of wind into sound was also associated with the legendary emperor Zhuan Xu (fl.? 2514 BC) who commissioned Flying Dragon to give form to the sounds of the eight winds and then ordered Salamander to conduct by drumming with its tail on its belly (*Lüshi chunqiu*, 5.285). Scholars in East and West speculate at length whether a ‘real’ zoological referent for the Chinese phoenix or dragon is identifiable. To no surprise, there exists no conclusive evidence so the above statements embody an idea at most. Yet we do find references to more generically identifiable species in definitions of musical tone. A passage in the *Guanzi* identifies musical tones as homophones of the cries of birds and beasts. It associates each note on the pentatonic scale with animal sound:

Whenever one hears the *zhi* note,

It sounds like a hog that has become aware of being mounted by a smaller pig and squeals in alarm.

Whenever one hears the *yu* note,

It sounds like the neighing of a horse in the wilds.

Whenever one hears the *gong* note,

It sounds like the mooing of a cow that has fallen into a pit.

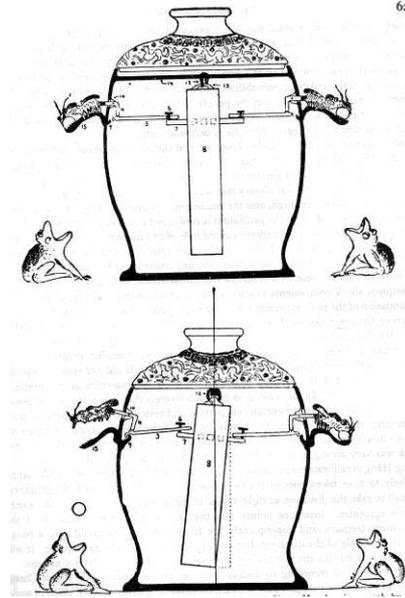
Whenever one hears the *shang* note,
It sounds like a sheep that has become separated from its flock.

Whenever one hears the *jiao* note,
It sounds like a pheasant ascending a tree to crow.

The sound is piercing in order to be clear
(*Guanzi*, 19.465; Rickett, 1998, p.263).

As the Zhuan Xu legend suggests, drumming was also linked to the animal world. The image of a drumming reptile bears testimony to the use of reptile skins to cover drums. This practice has been traced to archaic times in the form of alligator drums excavated from Neolithic sites in Shanxi and Shandong (Liu Li, 1996). One poem in the *Book of Odes* describes how King Wen (ca. 1099-1050 BC) celebrated the construction of his royal park with musicians rolling alligator drums (*Mao shi zhengyi*, 16E.7a). The same type of drum was used in the hunt (*Shiji*, 117.3014). Aquatic creatures and reptiles appear to be linked regularly to drumming or rhythmic motion. A thunder spirit said to ‘drum on its belly’ is described in some sources as a hybrid with a dragon body and a human head (*Shanhaijing*, 13.329, 14.361; *Huainanzi*, 4.150). The use of reptile skin drums and the image of amphibians stirring up rain and thunder were possibly inspired by the knowledge that amphibians move both on water and land and mediate between arid and moist zones.

Figure 6 here



The association of the zoomorph music master Kui with the origins of drumming and with the direction of the east is based on the identification of the east as a progenitor of movement, an idea some explained through paronomasia of the graphs *dong* 東 (**tung*) and *dong* 動 (**d'ung*)(*Shangshu da zhuan*, 1.3; *Chunqiu fanlu*, 16.414-5). Skins or hides were to be stretched on drums on the day when hibernating animals re-emerged. This was in early spring, when, following one commentator, hibernating animals could hear the thunder and started ‘moving’, precisely the effect drums were meant to cause (*Zhouli*, 40.24a). An early calendar confirms that alligators were caught in the second month to make drums (*Da Dai Liji*, 2.6a).

While animals were known to be receptive to thunder, their response to thunder was also presented as an act of drumming. Hence the observation of a pheasant ‘drumming its wings’ is taken as an indication of the emergence of thunder (*Da Dai Liji*, 2.3b-4a). The early Chinese were no doubt aware of certain animals’ sensory prescience of thunder, rain, lightning or earthquakes (*Huainanzi*, 10.337, 18.618, 20.663). Zhang Heng's (AD 78-139)

famous bronze seismograph illustrates the idea. It allegedly had an outer surface that was decorated with designs of mountains, turtles, birds and beasts. A bronze ball dropping from a dragon mouth into a toad underneath indicated a movement of the earth. The choice of reptiles and amphibians on the domed cover and body of the seismograph was inspired by the idea that these animals were capable of sensing motion and transmitting its vibrations (Figure 6; Needham, 1954-, vol.3, pp.627-35).

In addition to associating drumming with animal motion, the movement of animals itself was seen as a source for musical resonance. The steeds that pulled Zhou royal carriages had bells attached to them so that the pace of the horse would regulate the tolling of the bells. By ‘pacing’ his horse, that is, controlling the unbound instinctive motion of the horse, the ruler’s charioteer controls the sounds of the bells and hence, symbolically, the rhythm of the universe. Only when the pace of the horses was properly mastered by the driver would his ruler's reputation reverberate through the euphony of these bells (*Shuoyuan*, 16.384; *Xunzi*, 18.335; *Bohutong*, 12.588-89). Even the zoomorphic decoration of musical instruments may have been inspired by their link to sound and drumming. A technical treatise describing the design of animal motifs on clocks, bells, their stands and suspension bars, classifies animals into five groups: those with firm layers of fat (oxen and sheep), animals with soft fat (pigs), ‘naked’ animals (i.e. short-haired species such as tigers and leopards), feathered animals and scaly species (dragons and snakes). The last three of these groups are said to be used as decoration on music stands. Next follows a list of animals used as decorative carvings on instruments and ritual vessels. They are differentiated according to their bone structure, locomotion, and the way in which they produce sounds: animals that produce sounds by means of the throat (e.g., water-lizards), the mouth, the flanks (e.g., crickets), the wings, the thighs (e.g., grasshoppers), and the

chest. Finally each animal sound is connected to an appropriate musical instrument. Naked animals, producing large and spacious sounds, are the appropriate decoration for the stands of bells. Birds, producing sounds that are light, rising and far-reaching, are appropriate decorations for stone chimes (*Zhouli*, 41.13a-16a; Sterckx, 2000, pp.18-19). In other words the sound produced by the instrument reflects the natural sounds of the animal(s) depicted on it.

Concluding remarks

I end with another passage from the *Huainanzi*, a twenty-one chapter anthology compiled under the auspices of an imperial kinsman and presented to Emperor Han Wudi in 139 BC as a comprehensive synthesis of all contemporary knowledge:

What *yin* and *yang* produce [from] the essence of blood and *qi* [are] creatures that have a mouthful of teeth and a head bearing horns, front claws or rear hooves, soaring wings or clutching talons that advance by wriggling or move by crawling. When happy they are harmonious, when angry they are quarrelsome; seeing benefit, they pursue it, avoiding harm, they withdraw from it; their instinctive responses in this respect are one. Although in their likes and dislikes they do not differ from people, nonetheless, though their claws and teeth are sharp, though their muscles and bones are strong, they cannot avoid being controlled by people [since] they cannot communicate their intelligence to one another, and their abilities and strength cannot be made to act as one. Each has its natural propensity that is not endowed or received from the outside. Thus their strengths have boundaries, and their accomplishments have

limits. Now the wild goose follows the wind to fly in order to preserve its energy and strength. It holds straw in its mouth while soaring in order to fend off tethered arrows. Ants know how to build hills; badgers make their winding tunnels; tigers and leopards have lairs of grass. Wild boars have grassy nests, rows of felled trees, and burrowed holes that join one another in the manner of palaces and rooms; they provide protection to guard them from the rain and shield them from the hot sun. Thus even birds and beasts know ways to seek out and accord with what brings them benefit (*Huainanzi*, 19.645-46; Major, 2010, pp.777-78; see also Major, 2008).

This passage reminds us that, for all the socialising features Chinese literati may have observed in the natural environment surrounding them or gleaned from canonical texts, a recognition remains that a distinctive degree of cognition and intelligence separates humans from the animal world. Origin narratives may well link the mimicry of animal sounds to the beginnings of music, yet, to stay with *Huainanzi*, parrots' mimicking of human speech does not put them on a par with their owner who commands control over them and possesses a modicum of intelligent speech (*Huainanzi*, 16.524; Major, 2010, p.628). In the end, the analysis of the world remains firmly human-centred and a main undercurrent of early Chinese thought is one in which the natural world serves to a large degree as a utility for the explanation of human behaviour. Yet these texts show equally that animal behaviour was perceived in various modalities -- directly and indirectly, positively and negatively— to inform certain forms of regulated human conduct. It is clear that a more or less advanced degree of abstraction and symbolism is at play in many of the explanations on offer. Yet, just as not all animal behaviour was understood as symbolically meaningful beyond its physical environment, not all identifications of bestiality in the

human world were necessarily symbolic either. For instance, barbarians and tribes living on the periphery of the civilised ‘Chinese’ heartland were regularly referred to as animals: they dress in hides, eat raw meat and speak the ‘language of birds and beasts’ (Sterckx, 2002, pp.158-61; Sterckx, 2011, pp.20-21). Likewise, in their judgment of others, Chinese moralists did not refrain from mentally relegating those who lacked virtue and propriety to the world of birds and beasts. Even China’s First Emperor had to succumb to the judgement of Han historiographers keen to point out that the man had the physiognomy of a beast: a puffed-out chest like a hawk, the voice of a jackal, and the heart of a tiger or wolf (*Shiji*, 6.230).

It remains uncertain to what extent this rich bestiary documented in texts and illustrated in art reflects deeply rooted social or religious orientations, possibly linked to pre-historic times. To start exploring this would require a step-change in archaeological work on pre-Shang China, not in the least in the field of zoo-archaeology. It would also require a much more intensive dialogue between experts who work on the early historical age --who tend to be literate in the languages of the period but fall short when it comes to analysing material evidence-- and scholars working on pre-Shang China who tend to shy away from language and the written word. This paper has drawn on data from a highly literate civilisation, a society that has left behind a copiously annotated and continuous textual canon that stretches across the first millennium BC and that, on many counts, does not fit past or revisionist definitions of so-called primitive society. Yet our understanding of human and animal behaviour as gleaned through a textual corpus is dominated by *perceptions* of nature, *perceptions* of behaviour and *narratives* or *representations* of human-animal conduct that are deeply anchored in conventions of literary genre and ideology. The same can be said of visual narratives, for instance, as they appear in tomb

murals. These images are not value free, many express prescriptive conduct or desired behaviour, and many are in fact based on stories documented in the written canon (cf. Powers, 1991).

Finally, on a more general note, we ought to be conscious of the fact that the contours of some of the core analytical concepts we use to scrutinize our evidence, such as there are 'ritual', 'belief', the 'sacred' versus the 'profane', etc. derive mostly from a Western academic canon (albeit one that has drawn on anthropological work). This complicates matters significantly when we are dealing with the Chinese tradition that has developed its own theoretical vocabulary. Take the case of 'ritual' or 'regulated' behaviour. It goes without saying that a historian, archaeologist, anthropologist, psychologist, or ethologist would have no problem sourcing a gamut of Chinese historical data to fit the characteristics of what she or he would like to typify as ritual: repetition, performance, encoding, communication, formality, relative invariance, conformity, constraint, time, space, doxy, praxy etc. All of these elements are explicitly or implicitly present in the ways in which the Chinese tradition itself has conceived of behaviour that approximates the many definitions of "ritual" on offer. I do not believe however that such definitions --often drawn from a paradigmatic smorgasboard of a-historicized and de-localized civilisations and societies-- always adequately reflect indigenous and historically contingent conceptions. If measured in terms of volume, China has perhaps left behind more scholarly writings on *li* 'ritual' or 'regulated' behaviour than most other societies. Ritual specialists throughout more than twenty centuries of exegesis have been motivated to zoom in on the pragmatics, the philosophies and the economics of ritual. As late as the nineteenth century literati were still elaborating commentaries on treatises that had attempted to define the contours of regulated behaviour two thousand years earlier. One could argue that scholarly

debate about ritual and the ritual canon itself in dynastic China was one of its most enduring rituals. In the Chinese context, one could justifiably emend one anthropologist's contention that "ritual is the authority of repetition" (Feuchtwang, 2010, p.71) to read "ritual is the authority of a repeated exegesis of its canon". In trying to get our analytical vocabulary right for cross-cultural analysis in the case of ritual, let alone the ways in which ritual drew on animal behaviour, the existence of an indigenous scholarly preoccupation with the topic complicates issues in interesting ways. One would be hard-pressed for instance to find an acknowledgment in the Confucian ritual canon to the tune that ritual should or can be minimally defined as repeated performative action. Ritual in early China is intricately --indeed almost umbilically-- linked with moral judgement. The animal world clearly furnished a great deal of examples on which authors could draw to make just that point. Likewise while the classical Chinese language lacks a linguistic equivalent corresponding to the Platonic notion of animal (*zoon*, ζῷον) and surviving texts of the period carry a low share of theoretical discourse on animals (Sterckx, 2002, pp.16-21), it is quite clear that the ancient Chinese, *pace* Claude Lévi-Strauss, were "thinking with" animals when describing ritualized behaviour. In that sense, for the early Chinese, understanding animals was a human science much in the same way as, for us today, "touring the cages of a zoo is to understand the society that erected them" (Baratay and Hardouin-Fugier, 2002, p.13).

Figure 1. Left: zoomorph oracle bone graphs (Guo Fu 1999, p.30). Right: bronze animal pictographs (Late Shang, early Western Zhou; Yang 2000b, p.109).

Figure 2. Top left: Cockfight (Han; Zhengzhou; Li Song 2001, p.208). Top right: hunting scene (Han; Shandong, Cangshan county, Qianyao; Xia Henglian 1996, p.86). Bottom left: hunting and fishing scene (Han; Sichuan, Peng County; Xia Henglian 1996, p.68). Bottom right: husbandry scene (Han; Shaanxi, Hengshan; Li Song 2001, p.320).

Figure 3. Top: fight with tigers (Rubbing of a Han mural; Nanyang, Henan; Xiao Kengda 2010, p.253). Bottom: bull fight (rubbing of a Han mural; Nanyang, Henan); Xiao Kengda 2010, p.253).

Figure 4. Top left: wrestling (juedi?) scene (Dahuting tomb. no.2, Mixian county, Henan; late Eastern Han, ca. AD 160-90; Xiao Kengda 2010, 246). Top right: juedi as drawn in *Sancai tuhui* (AD 1565). Bottom: scene interpreted to represent juedi (Nanyang; Han; Loewe 1994, p.240).

Figure 5. Oracle bone graph for Kui 夔 (following Eno 190, p.196).

Figure 6. Left: drawing of Zhang Heng's seismograph (Needham 1954, 628). Right: Zhang Heng seismograph mechanism (Needham 1954, p.629).

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